Coastal Branch

Water Management Strategies

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Acronyms and Abbreviations

AFY Acre Feet per year

CCWA Central Coast Water Authority

CEQA California Environmental Quality Act

CESA California Endangered Species Act

DWR Department of Water Resources

EIS Environmental Impacts Statement

EIR Environmental Impacts Report

ESA Endangered Species Act

FESA Federal Endangered Species Act

FONSI Finding of No Significant Impacts

GSA Groundwater Sustainability Agency

GSP Groundwater Sustainability Plan

IRP Integrated Resource Planning

NEPA National Environmental Protection Act

NOAA National Oceanic and Atmospheric Administration

PPWTP Polonio Pass Water Treatment Plant

SBCFCWCD Santa Barbara County Flood Control and Water Conservation District

SGMA Sustainable Groundwater Management Act

SLO San Luis Obispo

SLOFCWCD San Luis Obispo County Flood Control and Water Conservation District

SWRCB State Water Resources Control Board

SWC State Water Contractors, Inc.

SWP State Water Project

USBR United States Bureau of Reclamation

Contract Terms

This report uses terms related to the SWP contract as defined below:

Allocated Table A or Table A refers to how much DWR allocates to the SWP Contractors. It is discussed as both a quantity (acre-feet when discussing a specific SWP Contractor and year) and percentage (of Annual Table A Amount when referencing broader context).

Annual Table A Amount is the amount of SWP water set forth in Table A of the Water Supply Contract and is defined in Article 1(l) of the contract. In summary, it is used to determine each SWP Contractor's share of SWP water service such as water supply allocations, access to conveyance, repayment for water services, etc. The word "Annual" is in the front of Table A Amount because there was a "build up" period whereby SWP Contractors did not have to pay for their ultimate share of the SWP during the early years of its construction and operation.

SWC refers to State Water Contractors, Inc. which is defined by the SWC website as an association formed of 27 of the public water agencies and represents the legal, policy and regulatory interests of the SWP Contractors, who are responsible for the capital and operations and maintenance costs of the SWP. The SWC works in partnership with other water organizations, and coordinates with Department of Water Resources on behalf of its members.

SWP Contractor is a Public Water Agency (PWA) that has entered into a long-term contract with DWR for water service from the SWP. To avoid confusion, this document uses the terms SWP Contractor(s) rather than the ambiguous term Contractor(s).

Coastal Branch Contractors are the two SWP Contractors on the Coastal Branch, specifically CCWA and SLOFCWCD. Their constituents are referred to in this study as Participants.

Water Supply Contract is defined as the water service contract between DWR and each individual SWP Contractor. The Water Supply Contract is officially titled as: "Water Supply Contract Between The State of California Department of Water Resources and …" followed by the name of the PWA.

1 Purpose

Evolving State Water Project (SWP) regulatory conditions and conveyance capacity availability in the SWP's Coastal Branch provide an opportunity to reevaluate how SWP allocations can be optimized to meet the needs of both Coastal Branch Contractors, Central Coast Water Authority (CCWA) and San Luis Obispo County Flood Control and Water Conservation District (SLOFCWCD). This report develops and evaluates potential water management alternatives such as storing, exchanging, and transferring SWP water and other supplies to optimize the yield of SWP water for Coastal Branch Contractors in both Santa Barbara and San Luis Obispo counties.

Since 2008, severe operational constraints on the SWP have resulted in limited periods of surplus water availability. These regulatory changes, such as the recently adopted Federal Biological Opinions, limit the availability of SWP water such that SWP water will be more available during wet periods and less available during dry periods, which will cause storage constraints in the San Luis Reservoir. Similarly, state and federal fish regulatory restrictions are anticipated to increase, thus constraining the SWP's delivery capability. Both CCWA and SLOFCWCD also store current year SWP allocation that has not been delivered in the SWP San Luis Reservoir as "carryover water" for subsequent years. However, anticipated storage limitations in the San Luis Reservoir mean that this carryover storage is at risk of being displaced and pose a challenge for both agencies. Additional projects and facilities associated with the SWP, such as the proposed "Delta Conveyance Project", are anticipated to further reduce the ability to use San Luis Reservoir for carryover storage.

While the periods of SWP water availability are limited, when they do occur, the quantities of available Article 21 Water or at-risk carryover water (Article 56 Water) can be relatively large and exceed the capability of Central Coast Contractors (defined here as SLOCFCWSD and CCWA Participants) to fully utilize their available supply. In recent years, occasional periods of wet conditions in the Sacramento-San Joaquin Delta, coupled with significant quantities of water carried over by Contractors in San Luis Reservoir, resulted in lost opportunities by Central Coast Contractors to take advantage of excess flows.

Several opportunities may exist to optimize the yield of SWP water for Central Coast Contractors such as exercising more management flexibility through the 2021 SWP Water Management Contract Amendment, maximizing retention of Table A amounts, using excess physical capacity in the Coastal Branch, potentially partnering on the benefits of the Delta Conveyance Project, and developing emergency interconnections between CCWA and SLOFCWCD.

The growing number of factors that will impact future SWP supplies require all SWP Contractors to constantly adapt their water management strategies. To assist with such adaptation, Department of Water Resources (DWR) and the SWP Contractors negotiated in 2018 to amend the SWP Service Contract (2021Water Management Tools Amendment) to increase water management flexibility and expand the range of options available for SWP Contractors and their member agencies. The SWP Water Management Tools Amendment allows additional management options, including one-year purchases and sales of SWP water, that were previously limited by the SWP water supply contracts.

Both Coastal Branch Contractors are interested in exploring how Table A amounts may be used to maximize their use of available SWP water. For example, SLOFCWCD has a total Table A amount of 25,000 AFY, but only has contracted conveyance capacity for this amount through Reach 31A of the Coastal Branch Phase I facilities, and only contracts with CCWA to treat and deliver 4,830 AFY through the Polonio Pass Water Treatment Plant (PPWTP.) CCWA has a current total Table A amount of 45,486 AFY and has considered reacquiring 12,214 AF that was suspended in the 1980s to bring a new total Table A amount to 57,700 AFY.

Concurrent with evolving SWP supply and regulatory conditions, operational experience with the Coastal Branch has identified frequent opportunities for more opportunistic use of the Coastal Branch conveyance. Other opportunities for optimizing allocation of water may include partnership between the agencies to receive

some of the benefits of the Delta Conveyance Project if SLOFCWCD decides to participate in it, and operational interconnections between the agencies. The additional conveyance capacity, together with the 2021 Water Management Tools Amendment, provides an opportunity to identify, evaluate and select water management strategies to meet the needs of the Coastal Branch Contractors, their Participants, and water users.

2 Executive Summary

The Coastal Branch Contractors seek to optimize their use of SWP supplies while meeting their overall water supply needs and financial goals. These Coastal Branch Contractors are the Central Coast Water Authority (CCWA) and San Luis Obispo County Flood Control and Water Conservation District (SLOFCWCD) which contract for SWP Table A water supplies on behalf of their constituent Participants in both San Luis Obispo and Santa Barbara counties. In the context of evolving State Water Project (SWP) regulatory conditions and additional conveyance capacity in the Coastal Branch, CCWA and SLOFCWCD, as the two Coastal Branch Contractors, are taking the opportunity to reevaluate how their SWP allocation can be optimized to meet their needs. This report develops and evaluates potential water management alternatives such as storing, exchanging, and transferring SWP water and other supplies to optimize the yield of SWP water for Coastal Branch Contractors in both San Luis Obispo and Santa Barbara counties.

This report was prepared under the direction of CCWA, representing SWP Participants in Santa Barbara County, and SLOFCWCD, representing SWP Participants in San Luis Obispo County. Coastal Branch Participants have been engaged as stakeholders in the development of this study through participation in a needs assessment survey as well as a series of five stakeholder meetings.

Chapter 1 describes the purpose of this study and Chapter 3 provides background on the entities, responsibilities, water supply goals, and water supply amounts of the entities involved in the Coastal Branch. Chapter 4 assesses, and documents regional water management needs gathered from the needs assessment survey of Coastal Branch Participants (stakeholders) including the needs of water supply, water storage options, conveyance capacity, water quality, cost control, and other unique needs of individual Participants. This needs assessment provides the basis for evaluating the ability of potential programs to meet identified needs

Chapter 5 summarizes rules and regulations of the SWP and other regulatory agencies affecting potential management actions. Management of State Water Project water by SWP Contractors, such as Coastal Branch Contractors within SLOFCWCD and CCWA, is subject to a variety of formal and informal regulatory constraints relating to water rights in the State of California, SWP Water Supply Contracts including different types of transfers, exchanges and how exchanges are impacted by the 2021 Water Management Amendment, storage and the implications of Article 56 on storage, and conveyance and delivery priorities identified in Article 12(f). SWP considerations and constraints are also described relating to use of conveyance, groundwater storage and environmental permitting including CEQA, NEPA, federal and state endangered species regulations and the Delta Plan.

Water management activities by SWP Participants in San Luis Obispo and Santa Barbara Counties (Central Coast Contractors) will frequently require use of conveyance capacity in the California Aqueduct and the Coastal Branch Aqueduct which are operated by different agencies, with different patterns of availability and different rules. Chapter 6 describes the conveyance facilities, their physical and operational capacities, constraints upstream and downstream of San Luis Reservoir, analyses of CALSIM-2 and historical capacities for the California Aqueduct, comparison of design capacity and historical deliveries for the Coastal Branch, and finally, presents a high-level summary of available capacity in various reaches.

Chapter 7 discusses SWP supply capability using CALSIM-2 studies in DWR's 2019 SWP Delivery Capability Report to estimate present SWP supply capability conditions and quantify available SWP supplies for both counties. The 2019 SWP DCR indicates that CCWA has available SWP Table A and carryover supplies of about 59% of its Table A contract amounts. SLODCWCD has slightly lower SWP Table A and carryover supplies of about 58% of its Table A contract amounts. Chapter 7 documents water supply quantities that the SWP is capable of providing for Coastal Branch Contractors.

The selection criteria for the identified water management strategies are intended to be utilized subjectively to guide decisions on how to best implement management measures that align with participant constraints and

goals. Chapter 8 first summarizes regional objectives from the Santa Barbara County and San Luis Obispo County IRWMPs and then identifies seven subjective selection criteria to determine if a management measure should be implemented. These selection criteria are water supply, water quality, ability to permit, cost, proximity, equity and reliability.

Chapter 9 identifies and evaluates several water management components to provide an initial indication of the water management capabilities available to the Central Coast area. This section begins by describing the scope and limitations of the Central Branch Integrated Resource Planning (CBIRP) Analysis Tool and application. A focused subset of nine water management components is described and then combined into five portfolios, each defining a reasonable range of potential actions and operations. Each portfolio is analyzed using the CBIRP Analysis Tool (Model) and then evaluated based on three selection criteria of water supply, cost and reliability. The report ends with a set of conclusions based on the analysis and a brief recommendations summary.

3 Background

The Central Coast Water Authority (CCWA) operates and manages the Coastal Branch and delivers water within both Santa Barbara County and San Luis Obispo County to Coastal Branch Participants (Figure 3-1). CCWA is the de facto SWP contract holder for SBCFCWCD because it provides operational and financial responsibility for Santa Barbara County's SWP contract. SLOFCWCD is the SWP contract holder for San Luis Obispo County.

According to the operational relationships and agreements between DWR, CCWA and SLOFCWCD, SLOFCWCD receives water supply and conveyance capacity from DWR but interacts with CCWA for water delivery requests. According to the 1963 original SWP Water Supply Contract, DWR owns the Phase II Coastal Branch conveyance facilities. The extent of the Phase II Coastal Branch conveyance facilities, which originally ran to the San Luis Obispo County line near Santa Maria, were adjusted to run through San Luis Obispo County to Tank 5 in northern Santa Barbara County in a 1992 SWP Contract Amendment (Figure 6-2). CCWA owns and operates the Polonio Pass Water Treatment Plant (PPWTP) in northeastern San Luis Obispo County and CCWA operates and maintains the conveyance systems for DWR between PPWTP and Tank 5. Due to the location of the PPWTP, all turnouts on the Phase II Coastal Branch conveyance facilities receive treated potable water.

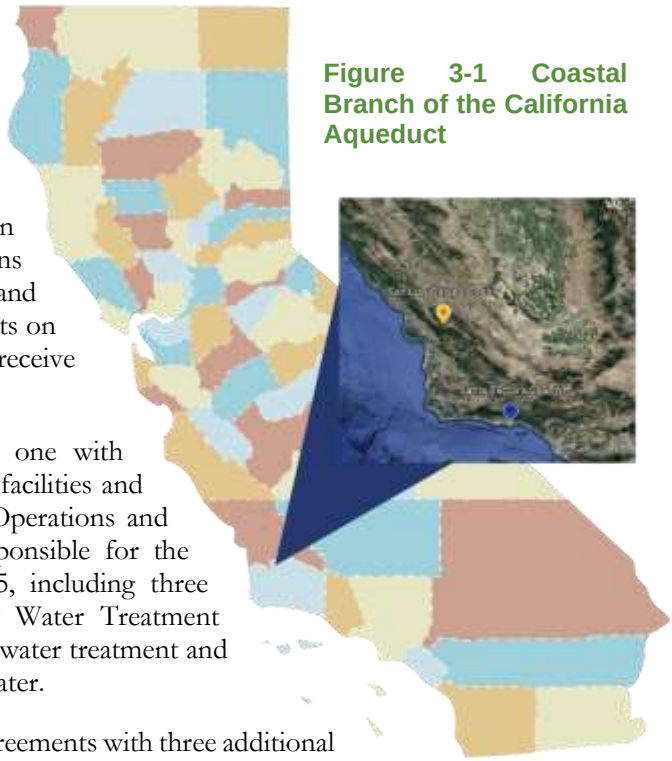


Figure 3-1 Coastal Branch of the California Aqueduct

CCWA has two agreements, one with DWR and one with SLOFCWCD for the operation and delivery of SWP facilities and water treatment on the Coastal Branch. Under the Operations and Maintenance Agreement with DWR, CCWA is responsible for the DWR pipeline from the PPWTP outlet to Tank 5, including three turnouts in San Luis Obispo County. The Master Water Treatment Agreement between SLOFCWCD and CCWA details water treatment and conveyance operations for San Luis Obispo County water.

CCWA has eight member agencies and water supply agreements with three additional agencies and two companies. The 13 SWP Participants represented by CCWA have a combined Table A amount of45,486 AF comprised of 39,078 AF base Table A amount, and drought buffers[1] of 6,408 AF.

The 11 water purveyors with contractual rights to SWP water from SLOFCWCD have a combined funded Table A amount of 4,830 AF, which is their Water Service Amount subscription, plus an additional drought buffer of 5,707 AFY for use in years when DWR's SWP water allocations to the SLOFCWCD are less than 100%. The maximum SWP allocation to SLOFCWCD is up to 25,000 AFY according to the 1963 long-term water supply contract with DWR. SLOFCWCD Participants pay for all SWP costs associated with their water service subscription and drought buffer amounts while the costs associated with the unsubscribed portion of their contract, 14,463 AFY of "excess allocation" is funded through the ad valorem tax on real property in the district.

[1] Drought buffers have limited conveyance and treatment capacity in Coastal Branch facilities

The agencies and companies receiving SWP water directly through CCWA are referred to in this study as CCWA Participants while those receiving SWP water through SLOFCWCD's contract are referred to in this study as SLOFCWCD Participants. In this study, Coastal Branch Participants refers in a general sense to entities which have agreements to take SWP water from either CCWA or SLOFCWCD. Additional entities could become Participants in the future.

The Integrated Regional Water Management Plans (IRWMPs) for both Santa Barbara County and San Luis Obispo County contain regional objectives for water supply, groundwater monitoring and management, ecosystems and watersheds, flood management, and water resource management (Table 8-1). Santa Barbara County's IRWMP objectives include protecting, conserving and augmenting water supplies by increasing reliability, maximizing storage capacity of existing surface reservoirs, maximizing conjunctive use of surface and groundwater, and strategically restoring or replacing water infrastructure.

San Luis Obispo County's IRWMP water supply goal includes improving water supplies and ensuring their long-term sustainability as well as optimizing regional use of SWP water. In addition to SWP facilities, major water related infrastructure in San Luis Obispo County includes the Nacimiento Water Project, Whale Rock Reservoir, Lopez Lake/Reservoir, Santa Margarita Lake/Salinas Reservoir, Chorro Reservoir, and desalination projects. San Luis Obispo County's IRWMP water management goal includes promoting open communications and regional cooperation in the protection and management of water resources, water allocations and other regional water resource management efforts.

4 Needs Assessment

The Central Coast State Water Project (SWP) Contractors (Central Coast Contractors) include a broad group of water users (Participants) who are seeking to optimize their use of SWP supplies through their contracts with CCWA and SLOFCWCD while meeting their overall water supply needs and financial goals. The Central Coast Participants include all existing or potential users of SWP Table A water in both San Luis Obispo and Santa Barbara counties. A thorough evaluation of both the variety of water management opportunities and the strategies available to the Central Coast Participants to achieve those opportunities begins with a Needs Assessment of the specific needs of each of the Participants. This initial Needs Assessment provides the basis for evaluating the ability of potential programs to meet identified needs.

4.1 General Categories of Needs

The specific needs of the Central Coast Participants fall into a number of categories including water supply, water storage and regulation, conveyance capacity, water quality, and other needs such as cost control. The following sections describe the general categories of needs that have been identified among the Central Coast Participants.

4.1.1 Water Supply: Access and availability of an amount of water

In a broad sense, the basic water supply need of each Central Coast Contractor is straightforward. Simply stated, each Central Coast Contractor needs to have sufficient water to meet the demands of their service area. However, the specific water supply needs of the Central Coast Participants are quite varied as they each seek to optimize the use of the groundwater and surface water supplies uniquely available to them to meet their local demand in the near term and the foreseeable future.

A common need among many SWP Contractors is to adapt to the decline in the long-term availability of the historic groundwater supplies that have provided a baseline supply for their service areas. This could be a result of several factors including implementation of Groundwater Sustainability Plans (GSP) under the Sustainable Groundwater Management Act (SGMA), adjudication decisions, or simply increased demand in the area resulting in groundwater extractions that exceed the safe yield of a basin.

Surface water supply needs relate to access and availability. Some Central Coast Participants have little or no access to surface water and are considering acquiring new or additional surface supplies to meet their demand shortfalls. Other Participants with substantial surface water supplies are considering programs that would increase their current access to surface water to meet demands.

There are also situations where a Participant has plenty of surface water to meet demands, but those supplies are not available at the same time they are demanded. For example, in a wet year, a Participant may have access to more SWP water than they can use in their service area. However, in a dry year, that same Participant could be short on SWP supplies because of low yield on the SWP.

4.1.2 Water Storage Options: Placed or programs to store or regulate surface water supplies

When assessed on an average annual yield basis, a Participant's access to SWP supplies may appear sufficient. However, when actual annual water supply variations are considered, the Participant will often have inadequate water supply in dry years. Participants facing these dry-year water supply shortages, who currently lack storage options, may need to develop new "homes" for their water in the wet years to provide supply regulation

between wet and dry years. These new "homes" for water allow for the wet-year water to be stored and then returned at a later date to meet future dry-year needs in the Participant's service area.

Water Storage Options (Homes) are places or programs to store or regulate surface water supplies. The most common water storage options are groundwater banks and surface water reservoirs. Both of these types of physical storage facilities require permitting, design, construction, and operation costs. Contractual arrangements, such as exchanges and transfers, can provide homes to surface water in much the same way as physical facilities. An exchange is a contractual arrangement where water is delivered from one SWP water Contractor to another SWP water Contractor for use within their service area. The receiving SWP Contractor then returns some agreed portion of that water in a future year. Transfer agreements can be used similarly, with water sold in wet years when it cannot be directly used and purchased in dry years when it is needed. Unlike physical facilities which require construction, these contractual regulation programs do not require construction of new physical facilities, however they do require permitting and can incur some operating costs.

4.1.3 Conveyance Capacity: Facilities and rights that enable water supply to be delivered on a desired schedule

Participants need assured access to sufficient capacity in the water conveyance facilities to deliver water to their service area or regulatory program facilities. This conveyance capacity is necessary whether they have sufficient surface water supplies to meet their demands or are considering programs to acquire additional surface water supplies. Some Participants may have sufficient rights to conveyance capacity in existing facilities to accommodate their future needs and to implement any necessary regulatory programs. Other Participants may need to acquire the conveyance capacity that they lack from other entities that have surplus capacity in those existing facilities. Participants may need to acquire the use of capacity in the California Aqueduct, the Coastal Branch, or existing local conveyance facilities.

Where capacity in existing conveyance facilities is insufficient or unavailable, those facilities may need to be expanded or new facilities may need to be constructed. Participants will need to evaluate the feasibility and cost effectiveness of these more capital-intensive options to meet their conveyance capacity needs.

4.1.4 Water Quality: Measure of factors relating to purpose of water

Some Participants rely on the relatively high quality of SWP water to improve the quality of water in local groundwater basins. These Participants need to be certain that such water quality improvements, realized through the importation and recharge of SWP supplies, continue into the future to ensure compliance with a variety of regulatory compliance programs.

The SWP supply is an important source of drinking water for a large portion of the Participants' service areas. Participants using the SWP to meet drinking water demands need to be certain that SWP deliveries will be of sufficiently high quality to meet their long-term drinking water demands without incurring inordinately high treatment costs.

4.1.5 Cost Control: Affordability and financial relief

Participation in the SWP, and supporting regional or local conveyance facilities, comes with significant costs to the participating Coastal Branch Participants. In some circumstances, individual Participants have had a difficult time paying current SWP costs and have identified an inability to absorb all the anticipated cost increases expected in the future. All Participants are concerned with the rate of cost increase for the development, operation, and maintenance of local water supply. There is a need to identify an implementable strategy for addressing such a financial shortfall in much the same fashion that a water supply optimization strategy is required for a supply shortfall.

4.1.6 Other Needs: Unique to individual Participants

While this needs assessment identifies the categories of needs that are common to all or a significant group of the Participants, the needs assessment recognizes that in addition to these common needs, there may be unique needs for individual Participants that must be considered in order to develop a SWP water supply optimization strategy that benefits each Participant. Those types of needs can be varied. Unique needs of individual Participants could include considerations such as unique regulatory compliance assistance or promotion of local stakeholder interests.

4.2 Stakeholder Needs Assessment

Each Participant was asked to complete a Needs Assessment survey. All completed surveys from responding Participants are included in Appendix C. In addition, a number of previous reports, studies and other documents were compiled into a summary of Participant Needs, which can be found in Appendix A. Appendix B presents a summary of the needs identified by the individual Participants (where a survey was completed by the Participant) or identified in the various resources listed in Appendix A. Key findings of the Needs Assessment review are summarized in the following sections of Central Coast Water Authority and San Luis Obispo County, each with three sub-sections.

4.2.1 Central Coast Water Authority

Since CCWA serves as a wholesaler of SWP water to its member agencies, it has no additional water supply demands apart from those of its Participants. Despite having no direct water supply needs, CCWA does share a common need with all of its Participants, which is the need for cost control. Like all water agencies, CCWA consistently looks for means to reduce costs to all of its stakeholders. Examining opportunities to increase affordability of SWP supplies and reduce costs for stakeholders will continue to be a need for CCWA, as well as for all CCWA Participants. The three subgroups of member agencies within CCWA are North County, Mid County, and South Coast.

North County: City of Santa Maria, Golden State Water Company, City of Guadalupe

The City of Santa Maria is the largest single Participant for SWP in CCWA. The City identified a significant need to protect or improve the quality of SWP water that is delivered to their service area. The City relies on the quality of the SWP supplies to enable it to comply with wastewater discharge permits and other regulatory requirements in their groundwater basin. The City of Guadalupe highlighted their need for cost control.

Mid County: City of Buellton, Santa Ynez RWCD Improvement District #1, City of Solvang (through SYRWCDID#1), Vandenberg Space Force Base.

In the Mid County portion of CCWA the Santa Ynez RWCDID#1identified a need for additional water supplies to meet demands during dry years. Participants that identified a similar need for dry year supplies were also assumed to have the need to consider the implementation of storage programs to meet that dry year supply need. Additionally, during recent summers when deliveries south of Coastal Branch Tank 5 are low, the State Water Project has had water quality issues of concern to users.

South Coast: Goleta Water District, City of Santa Barbara, Montecito Water District, Carpinteria Valley Water District, La Cumbre Mutual Water Company.

All Participants in the South Coast portion of CCWA also identified a need for dry year supplies.

4.2.2 San Luis Obispo County Flood Control and Water Conservation District

SLOFCWCD needs relate to addressing the needs of SLO participants, the needs of countywide taxpayers that are paying for the unallocated amount of Table A water, and the needs of potential future Participants in the county The three geographic subgroups of Participants within SLOFCWCD are North SLO, Central SLO/Chorro Valley Turn Out and South SLO/Lopez Turn Out.

North SLO: County of SLO C.S.A. No.16, I.D. #1 (Shandon)

The SLOFCWCD identified that it had adequate supplies to meet the long term demands within C.S.A. No. 16 and I.D. #1 (Shandon), however it did identify a need for cost control associated with the SWP supplies allocated to this area.

Central SLO/Chorro Valley Turn Out: California Men's Colony (State), County of SLO (Op Center and Reg. Park), City of Morro Bay, SLO Co. Comm. Coll District (Cuesta College)

All of the Participants in the Central SLO region of the SLOFCWCD have a need for additional water supplies during dry conditions and cost control.

South SLO/Lopez Turn Out: Avila Beach Community Services District, Avila Valley Mutual Water Company, Inc., Oceano Community Services District, City of Pismo Beach, San Luis Coastal Unified School District, San Miguelito Mutual Water Company

With the exception of Oceano Community Services District, all of the Participants in the South SLO region of the SLOFCWCD have a need for additional water supplies during dry conditions. All of the Participants in this region also share the same need as the rest of the Participants for cost control.

Countywide Taxpayers and Potential Future Participants

Countywide taxpayers need to be relieved of the cost of reserving the unallocated amount, ideally in a way that puts the unallocated water to use to meet needs in San Luis Obispo County. Potential new Participants are coming forward that are looking at State Water as an option to address the requirements of SGMA and/or other vulnerabilities in their existing water supply.

5 Rules and Requirements

This section provides an overview of rules and regulations affecting potential management actions. Management of State Water Project water by SWP Participants, such as agencies within SLOFCWCD and CCWA (Central Coast Contractors), is subject to a variety of formal and informal regulatory constraints. The purpose of this section is to summarize those constraints and provide references for specific language on applicable constraints and more detailed description. While the description here is generally applicable to water management actions involving use of SWP, it is recognized that additional constraints may occasionally apply to specific measures.

Although the focus of this discussion is on managing SWP water, optimizing water supplies for SWP Contractors also frequently involves use of water supplies or facilities outside of the SWP. The discussion below addresses the following topics:

- State of California Water Rights
- State Water Project Water Supply Contracts
- Environmental and Endangered Species Acts
- Groundwater Storage
- Use of Conveyance

5.1 State of California Surface Water Rights

In general, the rights to use surface water in the State of California are managed by the State Water Resources Control Board (SWRCB). The State of California holds water in the state in trust. A water right provides an assigned user the right to use some portion of the available water. Water rights that can be demonstrated to have been established prior to 1914 are not subject to SWRCB regulation and allow the water right holder broad discretion on the use and management of the water supplies that they receive. Water rights that were established after 1914 are assigned by the SWRCB based on formal applications for use in specific areas. Within the San Luis Obispo and Santa Barbara Counties study area, water rights to local streams are subject to specific water rights permits by the SWRCB, either directly or as part of a larger project. A landowner that has property adjacent to a waterway may use water for beneficial uses on that property without additional approval from the SWRCB. Such riparian water rights do not apply to other lands, owned by the landowner, that are not contiguous with those lands adjacent to the waterway.

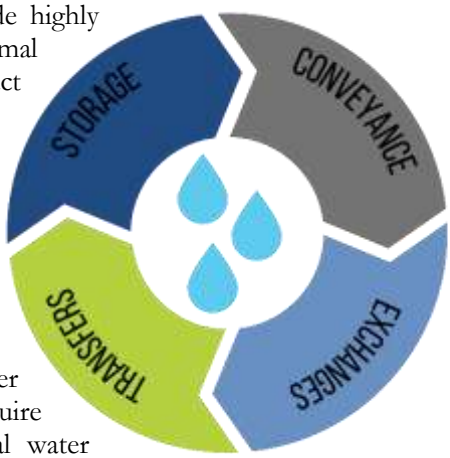
When the SWP was being contemplated, the State of California Department of Water Resources (DWR) obtained permits from the SWRCB to store and divert water for the SWP. While DWR has many contractual constraints on water use by SWP Contractors (which are described below), its use of SWP water remains subject to SWRCB water rights jurisdiction. The practical effects of this continuing oversight are primarily related to the SWP Area of Use, which is defined in the SWP water rights. The SWP Area of Use includes the service area boundaries of all of the SWP Contractors, including San Luis Obispo and Santa Barbara Counties in their entirety as well as the neighboring counties of Kings, Kern and Ventura. The SWP Area of Use can affect a water transfer, exchange or storage program if a transfer, exchange or storage program partner agency is not located within the defined SWP Area of Use.

Transfers from the Sacramento or San Joaquin valleys are examples where SWP Area of Use could affect a water management action. Any water management action that requires the movement of water through the Sacramento-San Joaquin Delta will necessitate close coordination and cooperation of DWR (which owns and operates the SWP), United States Bureau of Reclamation (USBR) (which owns and operates the CVP), State Water Contractors Inc., (which performs many important management and facilitation functions for 27 of the

29 SWP contractors), and the San Luis-Delta Mendota Water Agency (which performs the same functions as the State Water Contractors Inc. for many CVP contractors). As such, all water transfers involving movement of water through SWP and CVP delta export pumping plants will require extensive preparation and coordination.

5.2 State Water Project Water Supply Contracts

Because this evaluation is focused on the SWP, there is also an emphasis on specific rules affecting use of SWP water supplies. As long as SWP water supplies are used within the SWP Area of Use, the primary regulations affecting their management are those that are described in the SWP Water Supply Contracts for the Coastal Branch Contractors. The SWP Water Supply Contracts contain constraints that affect water management actions involving other SWP Contractors. These constraints do not necessarily apply to actions amongst individual Participants within either Coastal Branch Contractor's Area of Use. Most Participant management actions would need approval by the primary SWP contract holder (either SLOFCWCD or CCWA) and would be subject to any conditions that their SWP Contractor would require.



DWR originally developed the SWP contracts in the 1960s to provide highly reliable supplies that would be available in all years, subject to defined minimal reductions during dry years. The original SWP water supply contract provided limited guidance on external water management actions, being either silent on the topic or providing very high level, general guidance. The need for such water management tools was not anticipated in the original 1960s era contracts because of the intended reliable water supply that would be provided. Due to delays in developing new SWP water supplies since the 1960s, SWP Contractors needed additional flexibility to manage SWP water supplies they receive to meet their needs. Today, individual SWP Contractors manage water supplies within their own service area without needing approvals from DWR. However, water management actions outside of a SWP Contractor's own service area require approval from DWR. In response to the increased need for local water management of SWP supplies, amendments to the SWP contracts have been enacted over the years.[2] These amendments have formalized typical DWR processes or agreements between DWR and SWP Contractors collectively on proposed activities.

As discussed below, the manner in which a contract amendment controls a water management action varies considerably. In many cases, the contract amendment provides only a general indication that an action can be taken, leaving DWR with considerable discretion in how it implements a potential action. In other cases, contract amendments specify conditions that apply to an action and DWR has less leeway in interpreting how an action can be approved. The SWP contractual or administrative policies apply to the following water management actions[3]: Transfer, Exchanges, Storage, and Conveyance.

[2] The most recent contract amendment is the SWP Water Management Amendment, which was negotiated between SWP contractors and DWR. Upon completing environmental documentation, DWR began implementation of this amendment in February 2021. This amendment is referred to as the "2021 Water Management Amendment" to distinguish it from prior amendments that may have included some water management provisions.

[3] All actions require some level of CEQA disclosure.

5.2.1 Transfers

Transfers are defined as the sale of SWP water either temporarily or permanently to another SWP Contractor. The sale of SWP water to a user outside of the SWP Contractors has not happened due to challenges and costs involved in completing these kinds of transfers[4] and transfer of SWP water to users outside of the SWP are not described here.

SWP water transfers are segregated into three categories that are subject to different constraints – permanent, multi-year and single year.

Permanent

A permanent water transfer involves the assignment of part or all of one SWP Contractor's SWP Table A amounts to another SWP Contractor. Table A of each SWP Contractor's contract specifies its share of the costs, water supplies and use of SWP facilities. Article 41 in the SWP Water Supply Contracts provides that an SWP Contractor may assign their rights to another agency only with the approval of DWR. A SWP Contractor may sell a portion of their Table A to another SWP Contractor permanently, with the buyer water agencies becoming responsible for future costs of their SWP supplies and receiving future water supply amounts. A permanent assignment, or water transfer, will require environmental documentation, such as California Environmental Quality Act (CEQA). [5] (Reference: SWP Water Supply Contract Article 41)

Multi-Year

Multi-year transfers would be an ongoing agreement for an agency to purchase SWP supplies from another SWP Contractor over a series of years. DWR's authority for such transfers is contained in general language in Article 7 and Article 15. While some permanent transfers and single year transfers have been subject to specific SWP contract language since 1996[6], no specific guidelines have been developed for multi-year SWP transfers. Due, in part, to uncertainty about the approval process for multi-year transfers, these types of transfers were only implemented in extreme drought circumstances (e.g., 2008-09, 2013-14) among SWP Contractors. (Reference: SWP Water Supply Contract Articles 7, 15 and 56(d))

Single Year

Since 1996, single year transfers have been prohibited by the SWP Water Supply Contract outside of the "Turnback Pool". Article 56 provided for a process for DWR to establish "Turnback Pool" for those SWP Contractors that do not have need for their water in a single year to

[4] Such a transfer would have to address the need for a possible water rights change in place of use. It would also need to be approved by DWR under broad authorities (such as Article 15) and is not provided for in the SWP Water Supply Contracts.

[5] Article 53, added in 1996, required that agricultural SWP contractors offer the permanent transfer of at least 130,000 acre-feet to urban SWP contractors, with the agricultural contractors having a first right of refusal for transfers offered under this provision. The 130,000-acre-foot requirement was satisfied in 2010 and would not apply to any future transfers.

[6] A package of SWP water supply contract amendments, including Articles 52, 53, 54, 55 and 56, implemented in 1996 was successfully challenged for lack of adequate CEQA documentation. DWR ultimately agreed to revisions to the environmental documentation and recertified the environmental documentation for the revised amendments in 2010.

transfer that water to other contractors. The pricing and allocation are explicitly identified in Article 56 and have limited flexibility in how they are applied; due to the low prices established in Article 56, there has been limited value for SWP contractors to transfer water supply through the Turnback Pool, and it has not been an effective water management tool in recent years.

For SWP Contractors that sign the 2021 Water Management Amendment (including CCWA and SLOFCWCD), the Turnback Pool is eliminated as the sole way to allow single year transfers among SWP Contractors and there is provision for single year sales of water on terms that are negotiated by SWP contractors.[7] Article 57, which is revised in the 2021 Water Management Amendment provides that DWR will approve one-year transfers subject to general provisions that the financial integrity of the SWP is maintained, that the transfer is transparent, that other SWP Contractors are not adversely impacted and that no significant adverse impacts are created in the participating SWP Contractors' service areas. (Reference: SWP Water Supply Contract Article 57)

5.2.2 Exchanges

An exchange is defined in this report as an ongoing agreement for one agency to provide water to another agency in exchange for the future return of some portion of the amount exchanged. An exchange will typically involve delivery of unneeded water in a wet year by an agency in exchange for return of some smaller portion of the exchanged water in a dry year. Monetary payments may also be involved in addition to the actual exchange to reflect different values of water in different year types as well as to address additional costs or avoided costs that occur.

The 2021 Water Management Amendment updates pre-existing SWP guidance on exchanges, which were defined as bona-fide exchanges in prior SWP contracts. The SWP contract language added by the 2021 Water Management Amendment provides for specified exchange ratios based on SWP allocation levels as follow:

- SWP allocation less than or equal to 15% - 5:1 specified exchange ratio
- SWP allocation greater than 15% and less than or equal to 25% – 4:1 specified exchange ratio
- SWP allocation greater than 25% and less than 50% – 3:1 specified exchange ratio
- SWP allocation greater than or equal to 50% – 2:1 specified exchange ratio

The current exchange provisions also include caps on exchange costs that are related to an agency's overall SWP contract charges to DWR. The SWP contract does not require payment of charges for exchange programs that use SWP facilities that a SWP Contractor already pays for, which is a condition of storage programs (as discussed below).

Over time, there has been a realization that exchanges almost always include an implied element of storage that can make them appear indistinguishable externally from a storage (or banking) program. (Reference: SWP Water Supply Contract Article 56(f))

[7] Between 1996 when Article 56 was implemented and in 2021 when the 2021 Amendment was added, single year transfers were limited to the Turnback Pool Program. The Turnback Pool Program was a limited means for a SWP contractor to for a quarter of the Delta Water Charge (for Pool B sales by March 15). Because of increasing SWP contractor demands and the low prescribed price for Turnback Pool sales, it has had limited participation since the early 2000s sell unneeded Table A allocations at a defined price. The Turnback Pool Program provided that a SWP contractor could sell into two Pools at relatively low prices defined as half of the Delta Water Charge (for Pool A sales by February 15)

5.2.3 Storage

While SWP Contractors have always been able to store water within their own service areas, either in surface reservoirs or groundwater, the original SWP contract did not provide for storage outside of a SWP Contractor's service area. With Article 56 (added in the SWP contract amendments of 1996), individual SWP contractors were allowed to store unused Table A amounts in either unused space of SWP facilities or in storage facilities within other SWP Contractors' service area.

Storage of unused SWP Table A amounts in SWP facilities is subject to availability of that space and can be reclassified as SWP project water ("spilled") in the event that SWP supplies become available that require use of the storage. Under Article 56, SWP Contractors can schedule water to be carried over on a long-term basis into subsequent years when their annual water supply requests are made. SWP Contractors may also carry over some of their allocated Table A for delivery in January through March of the following year if there is sufficient storage space in SWP facilities.

Article 56 also specifies rules limiting the amount of scheduled carryover water by a SWP Contractor. The scheduled carryover water is allocated by DWR and made available in San Luis Reservoir at the end of a calendar year. Any carryover water amounts can be retained in storage in San Luis Reservoir as long as the SWP does not need the storage, which can extend for multiple years. In the event that wet conditions occur and the SWP can fill San Luis Reservoir, a SWP Contractor is required to use their carryover water on relatively short notice or it will be converted to SWP water. There is no specific cost for storing water in SWP facilities, so this provision is very attractive to many SWP Contractors.

Prior to 2007, when new Endangered Species Act (ESA)-related Delta pumping restrictions began, San Luis Reservoir would very frequently fill and SWP Contractors were forced to manage their carryover or allow it to convert to the current year SWP water supply, effectively losing it for their use. Since 2007, the restrictions on SWP pumping in the Delta have greatly reduced the occurrence of filling San Luis Reservoir, thus allowing SWP Contractors to increase reliance on that carryover storage.

While storage in SWP facilities is a convenient and low-cost option, SWP Contractors have no control over when their water may be at risk of spilling. However, another important provision of Article 56 is the ability for SWP Contractors to store some, or all, of their carryover in storage programs outside of the SWP facilities. These external storage programs typically involve use of groundwater basins in the Area of Use of another SWP Contractor. The Semitropic Water Bank, operated by Semitropic Water Storage District (a member agency of the Kern County Water Agency) was an early implementer of this kind of program. More recently, other agencies within Kern County and in other SWP service areas, have developed similar programs or are in the process of developing such programs. The costs for storage access and any constraints on its use are subject to mutual agreement between a SWP Contractor and the entity offering the external storage arrangement.

Additionally, the SWP Water Supply Contract Article 56 defines constraints on a SWP Contractor's involvement in an external storage program, primarily addressing issues related to maintaining cost equity on the SWP for use of SWP facilities that are involved with moving the water to and from the external storage program. The most significant terms of an external storage program, however, are subject to mutual agreement with the SWP Contractor and the storage agency, and are not regulated by DWR. (Reference: SWP Water Supply Contract Article 56). External storage programs that use groundwater also need to adhere to any other statewide or local regulations, such as adjudication or GSA-related requirements.

5.2.4 Conveyance

SWP Contractors have contractual access to the use of SWP facilities (including the California Aqueduct) to deliver non-SWP water through SWP facilities. This access is subject to specified charges and the delivery priorities identified in Article 12(f). The priorities in Article 12(f) specify that various types of SWP water (e.g.,

Table A and Article 21 Water) have the highest priority. Non-project water, such as water transfers purchased by individual SWP Contractors from non-SWP sources, have lower priorities and can only be delivered after all SWP water is delivered. Use of SWP facilities is subject to actual pumping costs determined by DWR and can also be subject to a calculated "use of facilities charge" for SWP features that a SWP Contractor does not pay for.

DWR's Division of Operations and Maintenance operates the California Aqueduct to maximize flexibility for overall SWP purposes[8]. These purposes include using conveyance and storage capability along the Aqueduct to minimize energy costs to all SWP Contractors; however, avoiding loss of SWP water is a higher priority than energy costs. Non-SWP operations, such as transfers and exchanges, ride on top of the normal SWP operations. As a result, scheduling for water transfers and exchanges requires close coordination with DWR operators and can be challenging to schedule.

5.3 Environmental Permits

Actions, such as water management activities, that could potentially affect the environment are subject to the regular kind of environmental permitting needed by any project. These requirements will almost always include the California Environmental Quality Act (CEQA), which may involve DWR as a responsible agency. Actions affecting federal facilities (such as Cachuma Reservoir) or involving federal permits (such as Clean Water Act permits) will typically require evaluation of environmental impacts under the National Environmental Protection Act (NEPA). A general overview of CEQA and NEPA requirements is provided below, and other potential State and Federal permitting requirements are summarized later in this discussion.

5.3.1 Environmental Permitting

CEQA review begins with review of the proposed water management activity and evaluation of whether it qualifies as a project under CEQA. Some routine operational activities will be considered categorically exempt. A categorical exempt activity may not require additional analysis and can proceed with release of a Notice of Exemption. Activities with the potential for significant impacts to the environment will require preparation of an Initial Study, which is followed by a decision on the level of significance of environmental impacts. Projects with a low level of environmental impacts can proceed after preparation and public release of a Negative Declaration, with provisions for specified public review. Projects with higher levels of environmental impacts require preparation of an Environmental Impacts Report (EIR) with more comprehensive documentation of potential impacts. The EIR will need public release providing an opportunity for public comment. Ultimately, after closure of public review periods for either a Negative Declaration or an EIR, an agency can approve the document with a Record of Decision and proceed with the action.

The NEPA process has many similarities to the CEQA process and NEPA documentation will frequently be prepared in coordination with CEQA as joint documents. Activities identified as projects under NEPA would be triggered by the need for federal approvals. Projects will initially be evaluated with an Environmental Assessment, identifying the potential for environmental impacts. Projects with a low potential for environmental impacts can be approved by preparation of a Finding of No Significant Impacts (FONSI). Based on the Environmental Assessment, projects with a higher potential for environmental impacts will require preparation of an Environmental Impacts Statement (EIS). After public release of the EIS, an opportunity for public review, and any modification based on comments, the project may ultimately be considered for implementation which is documented by a Notice of Determination.

[8] There is additional discussion of DWR's management of conveyance in the Chapter on Conveyance Capability of this report.

In addition to the normal CEQA and NEPA evaluations, water management activities may be subject to permitting for the following processes. Note that this list is not comprehensive and there may be other permits or regulations requiring compliance for specific activities.

Federal Endangered Species Act

Activities that could involve impacts to federally listed endangered species may require permits from National Oceanic and Atmospheric Administration (NOAA) Fisheries or the U.S. Fish and Wildlife Service. Effects on streambeds in the Central Coast will sometimes involve habitat used by steelhead trout and may require Federal Endangered Species Act (FESA) permits. Land based activities affecting critical habitat for specifies such as the San Joaquin Kit Fox may also require ESA permits.

California Endangered Species Act

California Endangered Species Act (CESA) has separate permitting that is similar to the FESA. For the Central Coast area, CESA listed endangered species are likely to have similar identified ranges and permitting requirements. The CESA and FESA processes may be closely coordinated.

Delta Plan

The Delta Stewardship Council adopted the Delta Plan in 2013, which identifies requirements meant to avoid adverse impacts to the Sacramento-San Joaquin Delta. Some water management activities to the SWP could have effects traced back to the Delta and need to conform to the Delta Plan. The Delta Stewardship Council will consider projects for consistency with the Delta Plan and make a determination on whether the project is consistent.

5.4 Groundwater Basin Constraints

Storage of SWP water in groundwater basins will typically involve compliance with local groundwater storage constraints including any adjudications, ordinances, groundwater sustainability plans (GSPs) that regulate groundwater storage or less formal local agreements. For example, within the Central Coast area, the Santa Maria River Valley Basin has been adjudicated and future activities related to the use of the basin may be subject to its ongoing court supervised management. San Luis Obispo County implemented a permit requirement in 2014 for any groundwater exports from basins within the county or outside the county. In addition to local regulatory agreements, there are usually local operation agreements that provide oversight on the operation and management of groundwater storage programs to ensure that no third-party impacts occur. With or without any such local agreements, in-basin users retain their ability to legally challenge programs, including a groundwater banking program, that could adversely their groundwater use. Such legal challenges could lead to court ordered adjudications, which have frequently taken many years, or decades to complete.

With the passage of the Sustainable Groundwater Management Act (SGMA) in 2014, groundwater sustainability agencies (GSA) have been authorized with broad authorities to protect local beneficial uses that depend on groundwater. Under SGMA, beneficial uses of groundwater, including agricultural and municipal groundwater pumping, as well as environmental purposes such as groundwater dependent ecosystems, must be protected from significant and unreasonable impacts to sustainability indicators such as declining water levels, degraded water quality and land subsidence. SGMA provides GSAs management authorities that could apply to banking operations, including the authority to impose spacing requirements on groundwater well construction and to control groundwater extractions, or a GSA could implement a groundwater banking program if it could be operated in a way to help achieve sustainability. However, within the Central Coast area, the Paso Robles Basin GSAs completed a GSP in January 2020and it does not identify any particular projects related to banking. Instead, the Paso Robles GSP recommends that the County of San Luis Obispo's existing

groundwater export ordinance should be enforced and retained. Many other Central Coast groundwater basins are in the process of preparing their GSPs which are due in January 2022. While GSPs have the authority to implement groundwater banking programs, any water recharged in a GSA may be subject to legal challenge by a non-participant in the absence of an adjudication of the groundwater basin.

6 Conveyance Capacity

Water management activities by SWP Contractors in San Luis Obispo and Santa Barbara Counties (Central Coast Contractors) will frequently require use of conveyance capacity in the California Aqueduct and the Coastal Branch Aqueduct (Figure 6-2). These facilities are operated by different agencies, with different patterns of availability and different rules. The California Aqueduct and Coastal Branch reaches upstream of Polonio Pass, are operated by DWR as part of the overall SWP. The downstream portion of the Coastal Branch (below Polonio Pass) is operated by CCWA. The two operators – DWR and CCWA – have different operating rules, which affect use of their facilities by Central Coast Participants and other agencies.

Following the initial discussion of operations for both the California Aqueduct and Coastal Branch, descriptions of the facilities involved are presented along with information related to physical and operational capacities. This conveyance capability discussion touches on constraints upstream and downstream of San Luis Reservoir, analyses of CALSIM-2 and historical capacities for the California Aqueduct, and comparison of design capacity and historical deliveries for the Coastal Branch. Finally, a high-level summary of available capacity in various reaches is presented.

Overall, the summary identified major constraints in available capacity in summer months (generally June through September) in years of above average deliveries along the California Aqueduct east of Coalinga, due to historic subsidence. There are also lesser, but still often significant, limitations in capacity along most Coastal Branch reaches during the summer. Alternatively, there is plentiful available capacity in the October through May period in nearly all years in the conveyance facilities serving the Coastal Branch Contractors.

6.1 Conveyance Facility Operation and access by Outside Entities

DWR constructed and operates the California Aqueduct and Coastal Branch reaches through Polonio Pass for the SWP and their primary purpose is to deliver SWP water to its contracting water agencies. Although SWP Contractors are assigned a share of capacity (and associated costs) in the reaches of the facility providing their water supply, the SWP water supply projects do not give SWP Contractors direct rights to use that capacity. The Department of Water Resources (DWR) operates the SWP as a whole and does not instantaneously constrain SWP Contractor water supplies to their allocated share of capacity. SWP Contractors submit annual water delivery request schedules to DWR and DWR strives to meet their water supply needs to the extent possible by optimizing available capacity. DWR only limits contractor use of conveyance for SWP water to their assigned capacities under extreme circumstances. SWP Contractors, including CCWA and SLOFCWCD, have rights to move non-SWP water through available capacity under Article 55 of the water supply projects. Additionally, any entity has a right to use unused conveyance capacity with the payment of fair compensation under Water Code Section 1810.

The Coastal Branch downstream of Polonio Pass is operated by CCWA. CCWA's prime purpose in operating its portion of the Coastal Branch is also to deliver SWP water to its Participants on their requested schedule. CCWA does not have any defined provisions for allowing use of its facilities by member agencies or outside entities. As with any public agency conveyance facilities, Water Code Section 1810 provides for the use of unused conveyance capacity for an outside entity.

6.2 State Water Project Operational Features of the California Aqueduct and a Portion of the Coastal Branch Aqueduct

As described above, DWR operates the SWP, including California Aqueduct and a portion of the Coastal Branch Aqueduct. The configuration of SWP California Aqueduct and Coastal Branch Aqueduct is shown in Figure 6-2.

SWP Contractors, including CCWA and SLOFCWCD, are provided water by the SWP and are responsible for payment of assigned costs for their portion of the SWP. Table 1 shows the allocation of Central Coast Contractors' capacity in the State Water Project for upstream reaches of the California Aqueduct and the Coastal Branch. These capacities are used by DWR primarily for cost allocation purposes, but under extreme circumstances they could also be constraining in the event of continuing shortage in conveyance capacity.

Table 6-1 California Aqueduct: Capacity Provided for SWP Contractors, by Reach*

	CCWA Share	SLOFCWCD Share	Design Total	Current Estimated Total
Reach	Capacity (cfs)	Capacity (cfs)	Capacity (cfs)	Capacity (cfs)
1	72.03691	39.0471	10,300	10,300
2A	72.02638	39.04134	10,000	10,000
2B	71.61539	38.81848	10,000	10,000
3	71.48536	38.74804	13,100	13,100
4	71.34908	38.67414	13,100	13,100
5	71.17955	38.58213	11,800	11,800
6	70.9241	38.4437	8,350	6,900
7	70.84246	38.39943	8,100	6,900
8C	70.73959	38.34363	8,100	8,100
8D	70.73761	38.34264	8,100	8,100
31A	70.60034	38.26825	450	450
33A	70.06459	37.9774	71	71

*(Includes Consideration of Scheduled Outages and Operational Losses)

In addition to SWP project deliveries (including Table A amounts, Turnback Pool, Carryover Water and Article 21 Water), the California Aqueduct system is also commonly used for conveyance of other supplies on behalf of SWP Contractors (and potentially outside agencies). While DWR attempts to meet all SWP Contractor conveyance needs, in situations with extended periods of limited capacity, a SWP Contractor may be limited to their proportional share of remaining capacity after SWP project needs have been met.

Generally, limitations to conveyance availability are likely to occur in the summer months of high-delivery (wet) years. SWP facilities for SWP agricultural contractors were designed to meet water demands on an irrigation demand schedule, which has high peaks during summer months. Additional conveyance constrictions can occur

in Aqueduct reaches where SWP Contractors purchased additional Table A amounts or where outside factors (such as groundwater subsidence or facility outages) have limited operational capacity.

As an example, if the SWP is using 80 percent of the capacity in a reach for SWP purposes, Article 55 provides that the remaining 20 percent could be allocated among SWP Contractors proportional to each SWP Contractor's assigned capacity of that reach. Central Coast Contractors access to conveyance facilities for non-SWP purposes will normally be on an "as available" basis, subject to primary use by the SWP or by other project participants.

To address the potential for limited conveyance access on an "as available" basis, this discussion quantifies both the physical capacity of conveyance facilities and the primary facility use for purposes of delivering SWP water. The primary facilities described here are the California Aqueduct and the Coastal Branch Aqueduct. The overall approach used was to compare historical or projected Aqueduct use for representative Aqueduct reaches with physical capacities, and quantify the amounts of available, or unused, capacity. For purposes of this study, analysis is limited to available conveyance probabilities on a monthly basis, with totals indicated for annual potential conveyance. The approach to defining available conveyance capacity is different for each facility, as described below.

6.3 SWP Conveyance Constraints Upstream of San Luis Reservoir

The California Aqueduct begins at Clifton Court Forebay in the Sacramento-San Joaquin Delta and terminates in Southern California. For Reaches 1 through 4 (from Clifton Court Forebay to San Luis Reservoir), DWR has designated the California Aqueduct as having two purposes – conveyance (labelled "transportation"), for delivering water to meet SWP Contractor demands, and storage (labelled "conservation"), for delivering water to San Luis Reservoir for storage during wet periods for later use to meet SWP Contractor demand.

While Aqueduct Reaches 1-4 were designed with capacities of up to 10,300 cubic feet per second to provide for both direct SWP deliveries and storage of water at San Luis Reservoir, in actual operations that apparent high capacity is not usable to the SWP for a variety of reasons:

- A U.S. Army Corps of Engineers permit for Banks Pumping Plant (Reach 1) limits its use to 6,680 cfs, with provision for somewhat higher capacities under limited circumstances for limited periods, for reasons relating to levee protection.
- Fisheries and water rights permits for Banks Pumping Plant and Sacramento-San Joaquin Delta operations generally restrict allowable exports at Banks Pumping Plant for extended periods from November through June.
- Upstream California Department of Fish and Wildlife flow regulations limit the ability to increase Oroville Reservoir releases at times when permitted Banks Pumping Plant capacity is available.

As a result of these various regulatory and physical constraints at Banks Pumping Plant, constraints from water supply availability and upstream flow management limitations, there is essentially a four-month period (July through October) when unused capacity in Reaches 1-4 is available. While the physical capacity in Banks Pumping Plant and the California Aqueduct is 10,300 cfs, the capacity that is actually allowable considering applicable regulations is usually 6,680 cfs or less. In most wetter-than-average runoff years, the SWP normally uses all available permitting pumping capacity at Banks Pumping Plant (and Aqueduct Reaches 1-4) for filling San Luis Reservoir with available high Delta outflows and for conveying Oroville Reservoir releases to SWP Contractors. It is only in below-average runoff years that there is unused available capacity in Aqueduct Reaches 1-4. Even in those below-average runoff years, capacity can be limited, and its availability is frequently difficult to predict.

As described in the earlier water supply discussion, DWR allocates Table A amounts to SWP Contractors based on a combination of availability of water in the Delta (either from natural flows or from Oroville Reservoir releases), permitted pumping capacity at Banks Pumping Plant and water stored over the winter in San Luis Reservoir. The SWP's annual Table A allocation is the amount available for SWP Contractors after adjusting for the most limiting of available unregulated Delta flows, Oroville and San Luis Reservoir storage and ability to convey water to SWP Contractors on requested delivery patterns.

Considering the purpose of this discussion is to describe the potential for capacity use by Central Coast Contractors, unused capacity on the California Aqueduct upstream of San Luis Reservoir has not been quantified. While transfers of North of Delta water supplies are theoretically an option, their availability is uncertain as is the ability to deliver them through Aqueduct facilities south of the Sacramento-San Joaquin Delta. The underlying assumption for Central Coast water management is that water management measures would be limited to water that is already south of the Delta. The water available for Central Coast Contractor water management has been assumed to be limited to SWP Table A allocations (which are effectively made available to Central Coast Contractors by DWR at San Luis Reservoir) and other potential South of Delta water supply sources and management measures such as SWP Table A Transfers, exchanges with SWP or other water agencies and South of the Delta groundwater banking programs.

6.4 Analysis of SWP Conveyance Capacity Availability Downstream of San Luis Reservoir

To evaluate the impacts of California Aqueduct capacity constraints, a comparison of two analyses were conducted at Reach 7 (Check 21), Reach 31A (Badger Hill Pumping Plant), Reach 33A (Polonio Pass Pumping Plant). The first analysis reviews historical SWP deliveries compared to physical capacity. Where CALSIM-2 data is available, a second analysis relies on data extracted from CALSIM-2 model simulations of the California Aqueduct. The historical and CALSIM-2 projection analyses provide different types of information. While the historical analysis is a likely indication of actual operational practices for SWP and Central Coast Contractors, it does not account for factors that may change in the future. Factors such as Delta regulatory requirements, changes in upstream SWP facility operations and increased future use of contracted water supplies by downstream SWP Contractors are not represented in historical operations but are included in CALSIM-2 simulations. While CALSIM-2 operations studies are generally not as accurate in indicating the nuances of SWP Contractor actual operations, they have the advantage of considering known factors that can affect future availability of conveyance capacity. Next the two analyses are compared. Where historical and CALSIM-2 estimates of available capacity are similar, there can be strong confidence in the accuracy of their results. Where they differ, this summary offers an interpretation of which is more likely and provides a recommended outcome.

6.4.1 California Aqueduct Reach 7 (Check 21)

Conveyance capacity south of the San Luis Reservoir has been reduced from design amounts by subsidence. High groundwater pumping in the westside of the San Joaquin Valley along the California Aqueduct alignment has resulted in subsidence that has lowered local ground surface elevations. The decline in the ground surface has been uneven and has reduced gradients in many parts of the California Aqueduct, with corresponding reductions in conveyance capacity. A 2019 DWR analysis of ground surface declines to date and their impacts on the California Aqueduct, identified reductions in capacity that varied by reach of the Aqueduct. The analysis showed that California Aqueduct capacities remained at design levels through Pool 19 (generally, north of Huron). Aqueduct Pools 20 through 29 were identified as having some level of capacity reductions. The largest reduction in Aqueduct capacity was identified in Pool 20 of Reach 7, which lost 1,450 cfs of its design capacity of 8,350 cfs, leaving a reduced operational capacity of 6,900 cfs.

This historical analysis of SWP deliveries from 2005 to 2019 compared actual Aqueduct flows with the reduced 6,900 cfs capacity available in Aqueduct Reach 7, near Kettleman City.

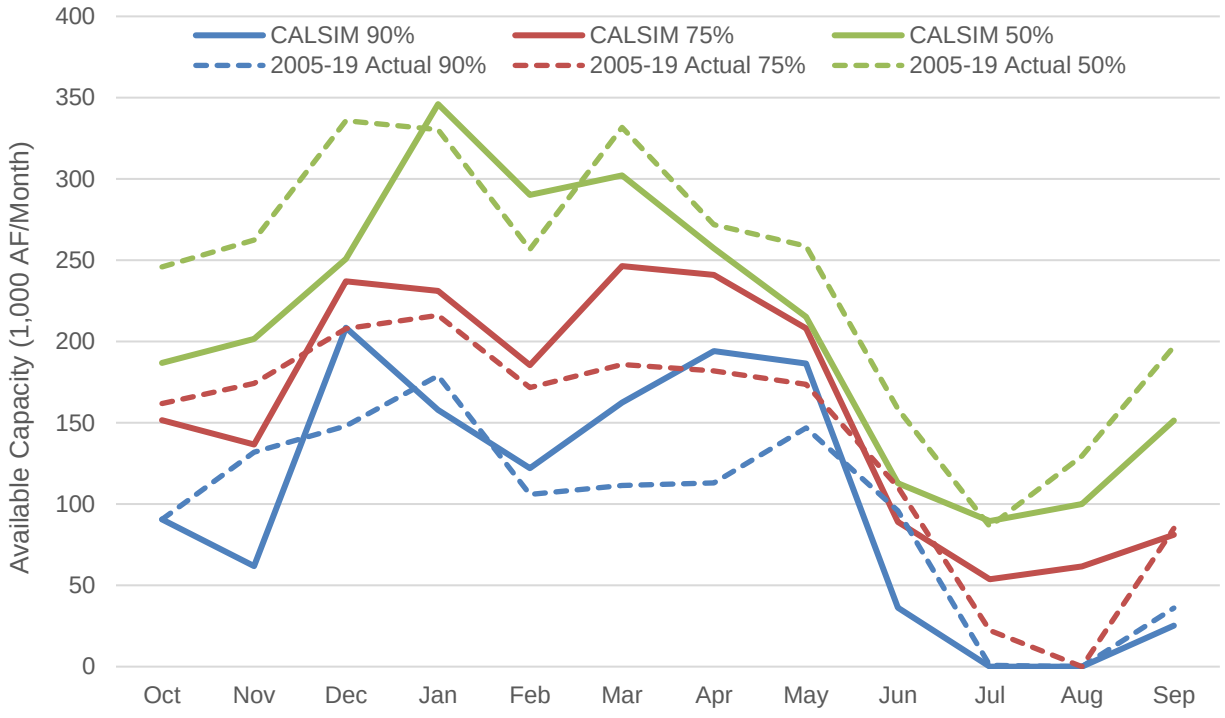


Figure 6-1 California Aqueduct Reach 7 (Check 21) Capacity Availability

The analyses for Reach 7 (Check 21) capacity show similar results based on both CALSIM-2 projections and actual historical operations. In both analyses, severe limitations on capacity are projected in wetter years (90-percentile usage) for the months of July and August, and lesser limitations are projected in the months of June and September. There is significant available capacity for the remainder of the months, October through May. For the 75-percentile usage, actual historical operations show significant constraints during the months of June through September, which are consistent with CALSIM-2 projections. For the 50-percentile and lesser use conditions, both historical and CALSIM-2 analysis indicates minimal capacity constraints year-round.

Overall, the actual historical operations are consistent with CALSIM-2 projections, with both showing significant constraints in available capacity during the June through September period for high use (90-percentile and 75-percentile) periods. There is significant available capacity in all year types October through May.

6.4.2 Coastal Branch Aqueduct Reach 31A

The Coastal Branch breaks off from the California Aqueduct at Avenal Gap, just south of Kettleman City. Aqueduct Reach 31A (shown as Coastal Branch Phase 1 and including Las Perillas and Badger Hill Pumping Plants, provides deliveries for CCWA, SLOFCWCD, Santa Clarita Valley Water District (for the former Devils Den Water District), Kern County Water Agency (for their member agency Berrenda Mesa Water District), and a potential future SWP Contractor. Figure 6-2 shows the alignment and major features of the Coastal Branch Aqueduct.

Figure 6-2 Diagram of Coastal Branch Aqueduct (2020 CCWA Urban Water Management Plan)

As with the California Aqueduct, 2005-2019 historical water flows for Badger Hill Pumping Plant were reviewed along with CALSIM-2 projections of a 1922-2003 long term period. As there are minimal SWP delivery turnouts until the end of Reach 31A, the Badger Hill Pumping Plant analysis is considered representative of Reach 31A. The design capacity for Badger Hill Pumping Plant is 454 cfs, which is equivalent to a monthly capacity of 27,000 to 29,000 acre-feet.

As with Reach 7 (Check 21) capacity analyses, Badger Hill Pumping Plant available capacity was consistent for both actual historical flows and CALSIM-2 projected flows. In both analyses, available capacity at Badger Hill Pumping Plant is limited during the months of June through September for the 90-percentile use level particularly, and, to a lesser extent, for the 75-precentile use level. Capacity is likely to be available for the remainder of the months, October through May, at the 90-percentile use level. Additionally, considerable capacity is available in essentially all months for the 50-percentile use level and drier conditions.

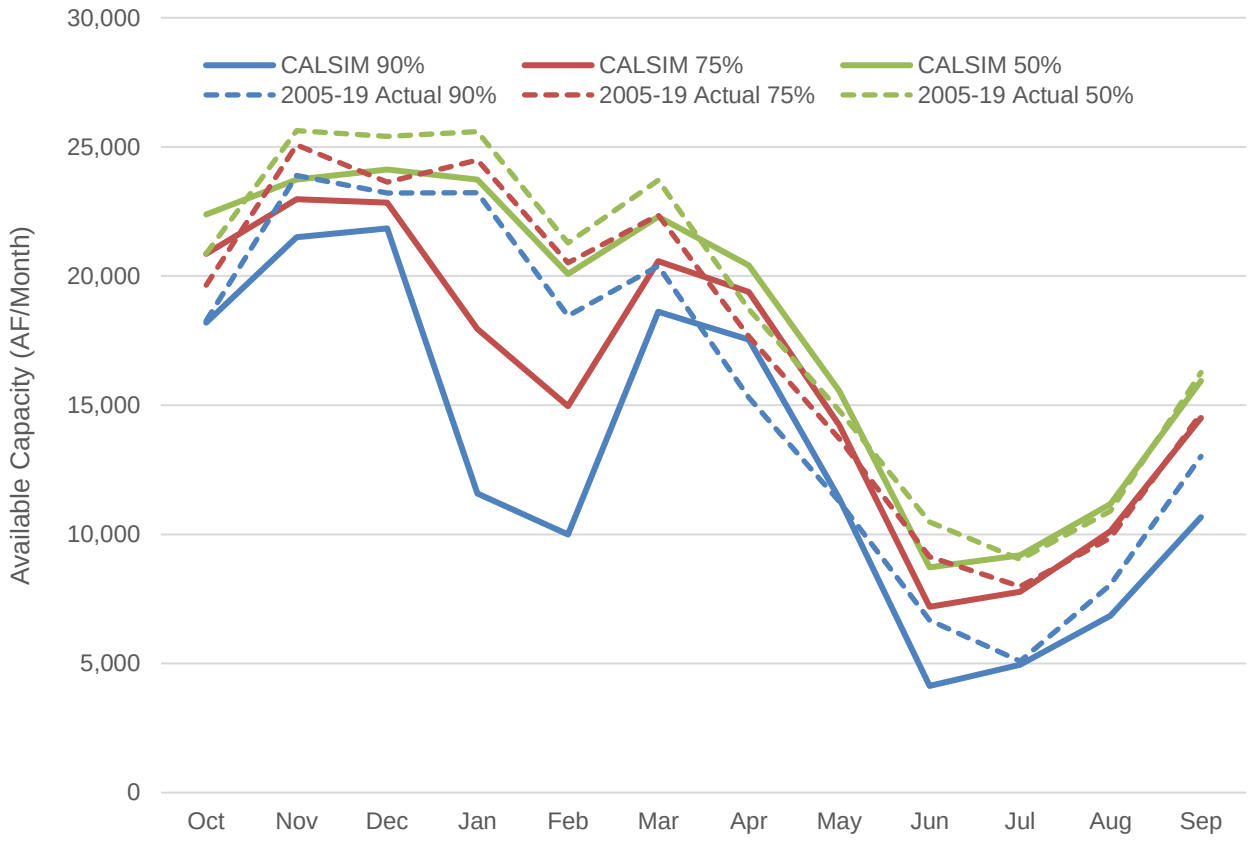


Figure 6-3 Coastal Aqueduct Badger Hill Pumping Plant Capacity Availability

6.4.3 Coastal Branch Aqueduct Reach 33A

The Coastal Branch has reduced capacity in Reach 33A with CCWA and SLOFCWCD being the only participant SWP Contractors. There are three pumping plants in Reach 33A: Devils Den, Bluestone and Polonio Pass. These three plants each have design capacities of 134 cfs (roughly 8,000 to 8,200 acre-feet per month), which were intentionally designed with higher capacities than needed for CCWA and SLOFCWCD. The purpose of the higher capacity is to allow for more energy efficient off-peak pumping operation. The

higher capacity would enable the SWP to pump water to Polonio Pass Water Treatment Plant during evenings and low power cost periods as a means to reduce overall SWP power costs.

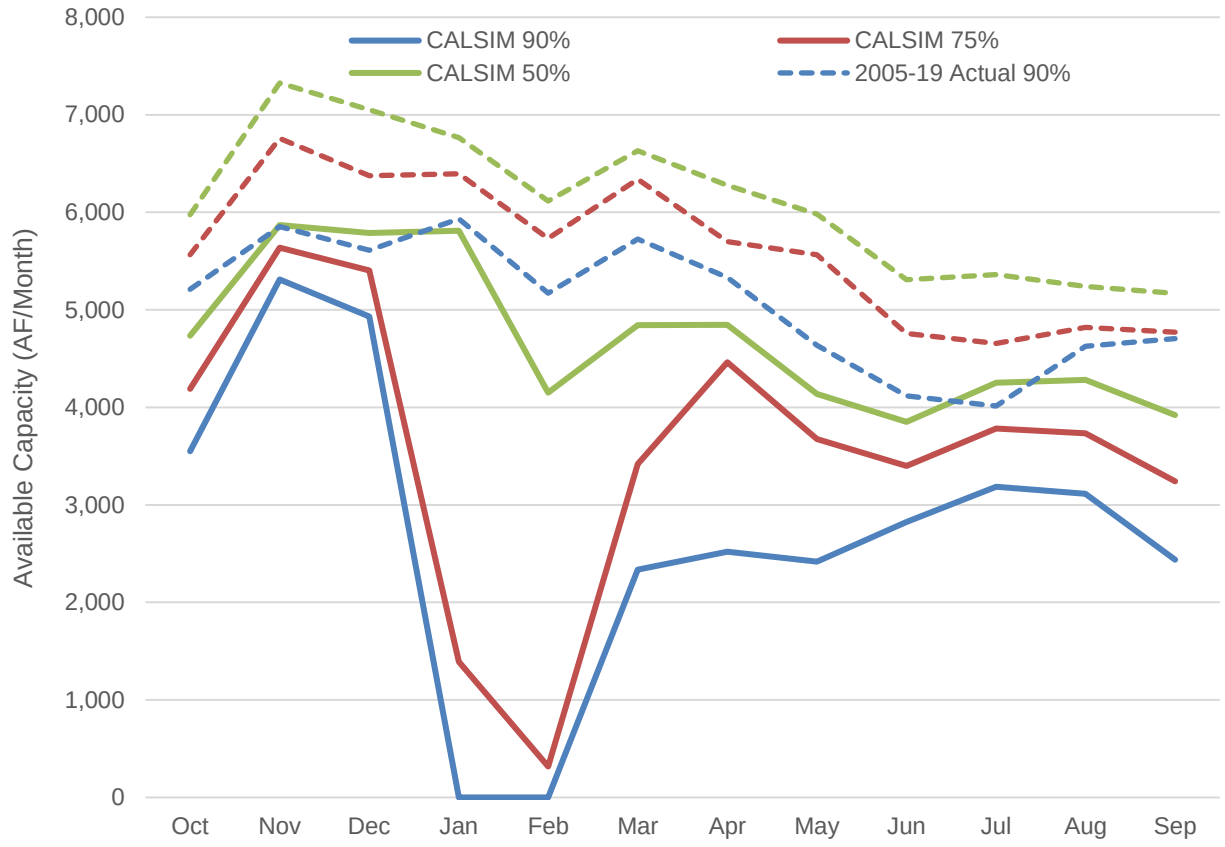


Figure 6-4 Coastal Aqueduct Polonio Pass Pumping Plant Capacity Availability

Figure 6-4 shows available capacity for Polonio Pass Pumping Plant using both actual historical operations data for 2005-2020 and CALSIM-2 projections. Unlike similar comparisons for Check 21 and Badger Hill Pumping Plant, the review of Polonio Pass Pumping Plant data shows significant differences between the CALSIM-2 projections and actual historical operations. The actual operations data shows essentially no periods of restricted capacity for any of the evaluated exceedances. There is essentially 50% available capacity (about 4,000 acre-feet per month) in even driest conditions. The CALSIM-2 projections included what are likely questionable assumptions about the delivery patterns for CCWA and SLOFCWCD that have high delivery amounts in the months of January and February in some of the higher delivery years (90-percentile and 75-percentile.) These delivery patterns resulted in low-capacity availability in high delivery years, which do not match historical experience and appears to be an unrealistic modeling artifact. The poor representation of Polonio Pass flows by CALSIM-2 is likely due to modeler's focusing on operational issues on the main California Aqueduct and minimal attention to operations on the Coastal Branch. For purposes of the current water management study, the CALSIM-2 data for Polonio Pass is being ignored and the capacity available in actual historical operations will be used instead. As noted, the actual historical data show essentially no limitations on available unused conveyance capacity based on likely potential use.

Based on the actual historical use data for Badger Hill and Polonio Pass Pumping Plants, there is limited available capacity in upstream reaches of the Coastal Branch in the summers (June through September) in most

high delivery years (any years above 50-percentile). In dry years and in non-summer months, there is good availability of capacity.

Continuing downstream of the California Aqueduct to the Coastal Branch Aqueduct, the remainder of this discussion focuses on the Coastal Branch design capacities, making a conservative estimate of actual operational capacity that could be available on a consistent basis.

6.5 Analysis of CCWA Conveyance Capacity Availability

At Polonio Pass, CCWA treats water at its Polonio Pass Water Treatment Plant (WTP). Downstream of the Polonio Pass WTP, CCWA operates remaining reaches of the Coastal Aqueduct. The operational capacity of Polonio Pass WTP is 48 million gallons per day (66.5 cubic feet per second), which can be a limiting factor for use of the Coastal Branch.

To evaluate the impacts of Coastal Branch capacity constraints, available Coastal Branch capacity on selected downstream reaches of the Coastal Branch was reviewed comparing historic delivery data for 1997-2020 provided by CCWA with the design capacities shown in Table 6-2. Note that no analysis of CALSIM-2 results was prepared, as CALSIM-2 does not include operation of the Coastal Branch downstream of Polonio Pass.

6.5.1 Coastal Branch Reach 33B

Design capacities for the Coastal Branch reaches are shown in Table 6-2. A 2011 hydraulic analysis conducted for CCWA identified modeled flow capacities for the Coastal Branch that were higher than design estimates. In Reach 33B, modeling indicated potential short term flow rates of up to 84.5 cfs. In Reaches 34, modeled flow capacity of up to 77 cfs was identified. While the hydraulic flow modeling indicates higher capacities than used for design, the higher capacities are considered a short-term peaking capability and it is uncertain that they could be maintained on a consistent basis. For the analysis here, the design rates are being used as representative of sustained flows that can be maintained under normal operations.

Table 6-2 Coastal Branch Design Capacity

Reach(s)	Upstream	Downstream	Design Capacity (cfs)
33B	Polonio Pass WTP	Chorro Valley TO	71
34	Chorro Valley TO	Lopez TO	68
35	Lopez TO	Guadalupe TO	64
37	Guadalupe TO	Southern Pacific RR	64
38	Southern Pacific RR	Tank 5	33
MH II	Tank 5	McLaughlin Rd	35/26
SY I	McLaughlin Rd	Santa Ynez PP	26
SY II	Santa Ynez PP	Cachuma Reservoir	22

During actual historical 1997-2020 CCWA delivery operations, the upstream reaches of the Coastal Branch (Reaches 1-4), with a design capacity of 71 cfs, had monthly availability as shown in Figure 6-5. This figure indicates the potential for limited availability capacity for the months of May through September. Available

monthly capacity during this May through September period was limited to less than 1,000 AF for the 90th-percentile high delivery year. Available capacity is also near 1,000 AF for the months of Jun through September at the 75th percentile. Conversely, available conveyance capacity of 1,500 AF or higher is regularly available for the months of October through April.

The maximum permitted operating capacity the PPWTP is 48 MGD (74 cfs, and equivalent to about 48,000 acre-feet per year), but the PPWTP may be permitted to operate as high as 52 MGD (96.6 cfs) under certain circumstances. Since the rated conveyance capacity of Reach 33B is 71 cfs, the PPWTP is not a limiting factor in terms of conveyance capacity for the Coastal Branch.

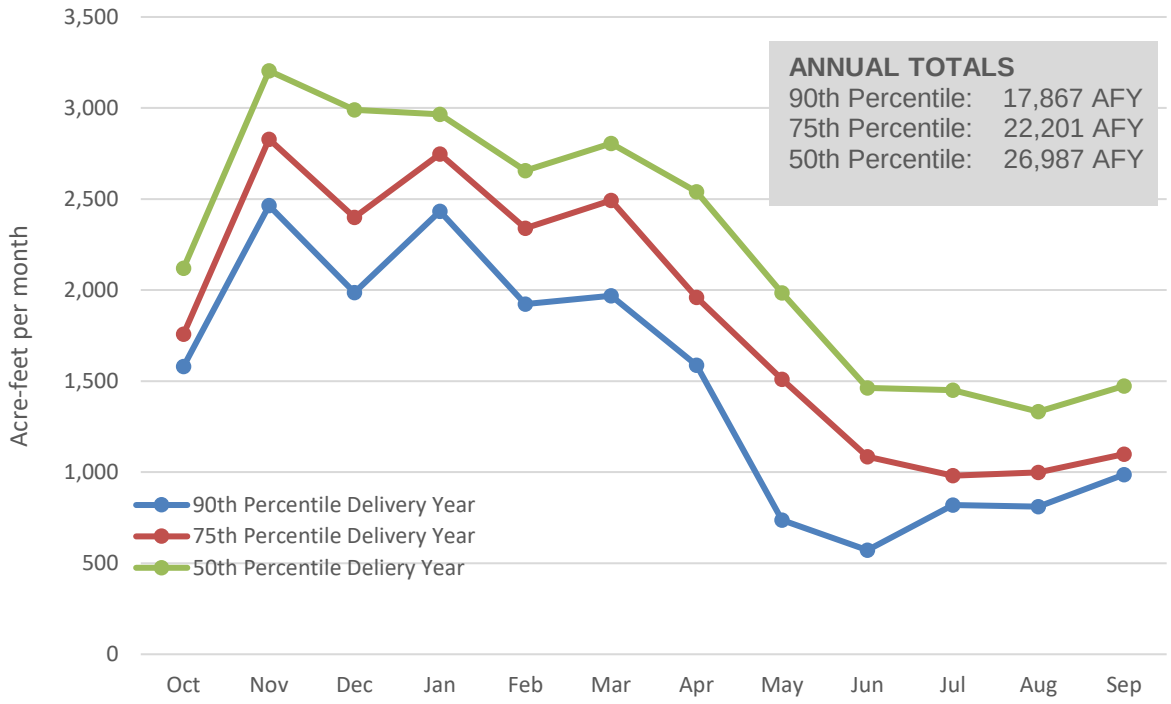


Figure 6-5 Coastal Branch 33B Historic (1998-2020) Capacity Availability

6.5.2 Coastal Branch Reach 34

Available capacity for Reach 34 of the Coastal Branch was computed based on the design capacity of 68 cfs. These reaches cover the Coastal Branch Aqueduct roughly from Santa Margarita to the San Luis Obispo County line. This review identified the available capacities shown in Figure 6-6, which are generally similar to those shown for Reaches 1-4. Available capacity is regularly limited during the months of May through September and is relatively open for the months of October through April.

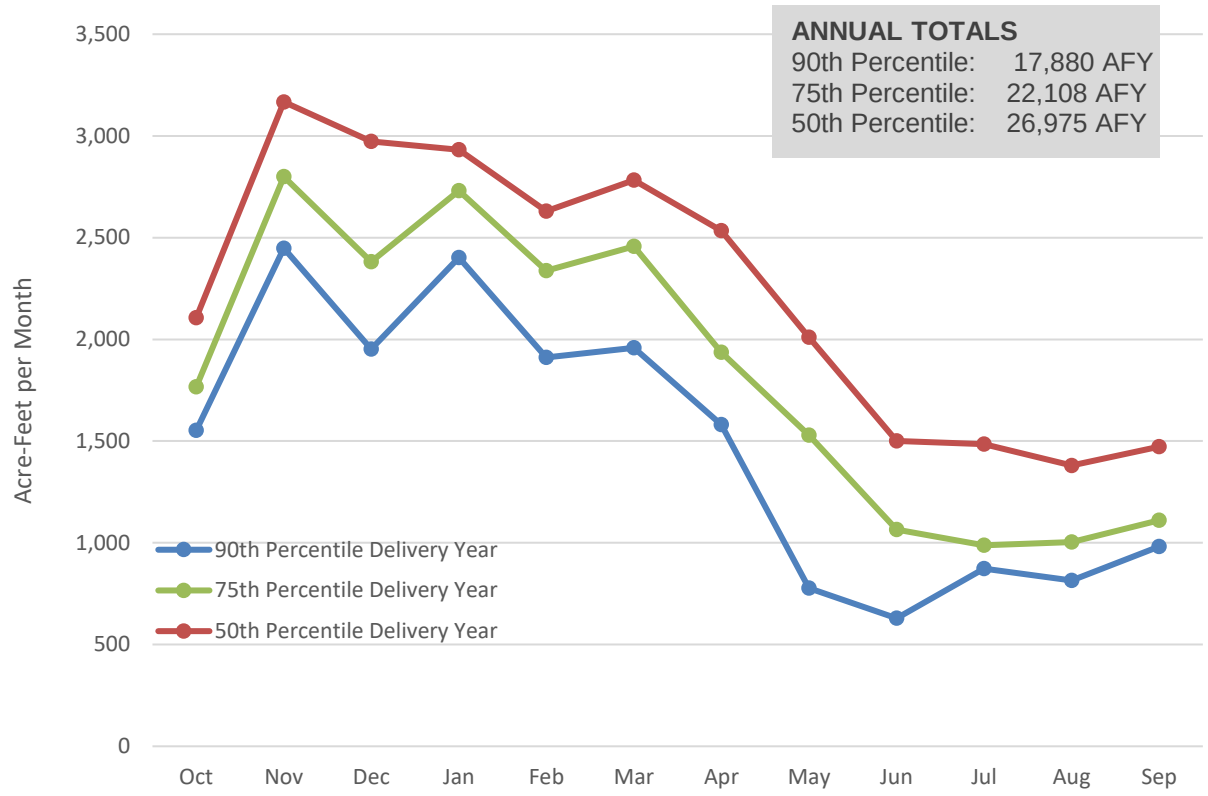


Figure 6-6 Reach 34 Historic (1998-2020) Capacity Availability

6.5.3 Coastal Branch Reach 38

Reach 38 is located south of the City of Santa Maria. This reach has a design capacity of 33 cfs, which is significantly lower than upstream reaches and reflects the high turnout capacity at the City of Santa Maria. Figure 6-7 shows very limited available capacity in the peak delivery season for high delivery years (greater than 75th percentile), with available capacities less than 500 AF for the months of May through September. During the remainder of the year (October through April), monthly capacities of 1,500 AF and greater are available.

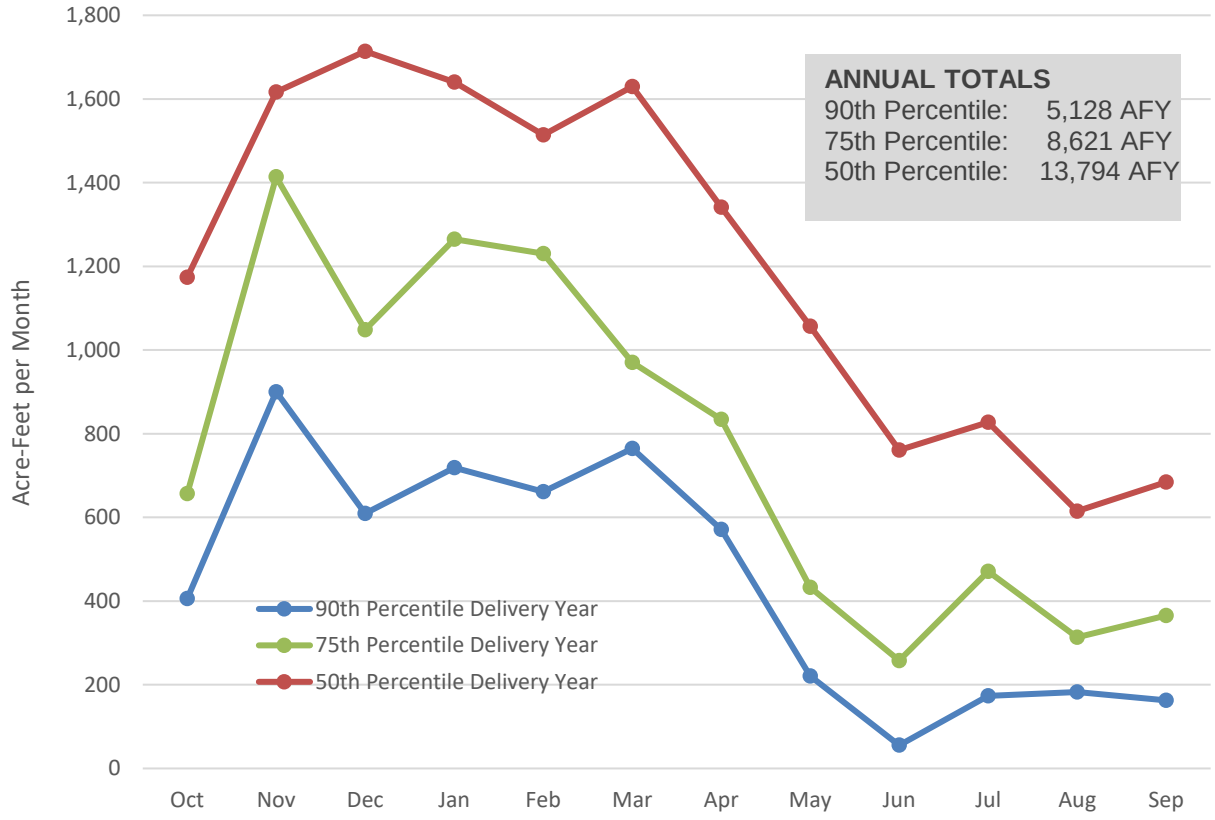


Figure 6-7 Reach 38 Historic (1998-2020) Capacity Availability

6.5.4 Coastal Branch SY II

The last reach of the Coastal Branch that is analyzed is Reach SY II, located downstream of the Santa Ynez Pump Station. This reach has a design capacity of 22 cfs, which (being the most downstream reach) is the lowest capacity on the Coastal Branch. Figure 6-8 shows very limited available capacity in the peak delivery season for high delivery years (greater than 90th percentile), with available capacities less than 200 AF for all but two months (November and March). In the 75th percentile delivery year and lower, there is consistent relatively high capacity available for the months of October through April.

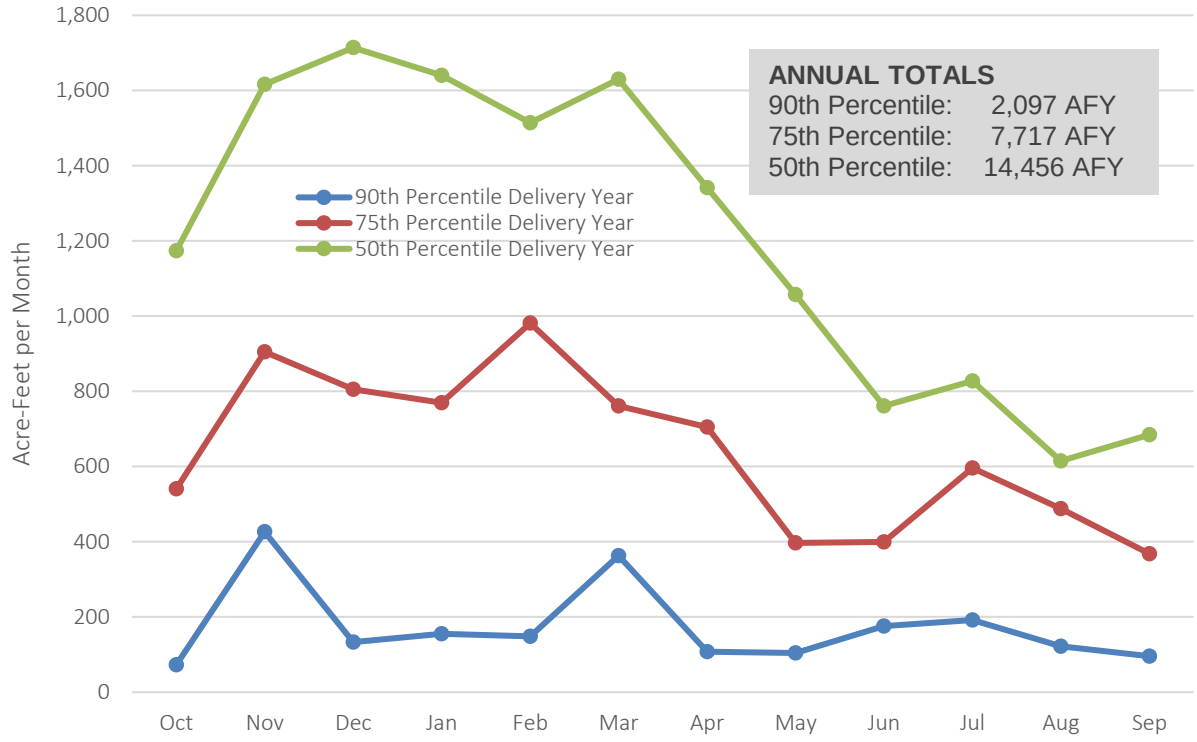


Figure 6-8 Reach SY II Historic (1998-2020) Capacity Availability

6.5.5 Conveyance Constraints Summary

The review of available capacity in the California Aqueduct between the San Luis Reservoir and the CCWA portion of the Coastal Branch indicates good availability of capacity in dry years and in non-summer months. At Reach 7 (Check 21) there is significant available capacity in all year types from October to May. At Reach 31A there is available capacity from October to May in high-use wet years and in all months in drier years (50th percentile and drier). At Reach 33A there are no limitations in available capacity even in the driest conditions. Historical actual data and CALSIM-2 modeling show similar capacity availability results at both Reach 7 and Reach 31A but differ for Reach 33A with historical actual data having more validity.

The review of available capacity in the Coastal Branch indicates that there is limited available capacity from May through September in high-use years for all reaches. Consistently high capacity is available for use by Coastal Branch Contractors in all years in the months of October through April as well as in low delivery years (less than 50th percentile) in all months.

7 State Water Project Supply Capability

This Central Coast Water Management Strategies discussion uses CALSIM-2 studies in DWR's 2019 SWP Delivery Capability Report (2019 DCR)[9] to estimate present SWP supply capability conditions and quantify available SWP supplies for both counties. The 2019 SWP DCR indicates that CCWA has available SWP Table A and carryover supplies of about 59% of its Table A contract amounts. SLOFCWCD has slightly lower SWP Table A and carryover supplies of about 58% of its Table A contract amounts. In addition to minor amounts of Article 21 water that are available on an interruptible basis, the supplies documented here are the quantities that the SWP is capable of providing for Coastal Branch Contractors. Subsequent analysis is described in Chapter 9 that indicates the amounts of these available water supplies that could actually be utilized by Coastal Branch Contractors.

7.1 CALSIM-2 Description

The California Department of Water Resources, in managing the State Water Project (SWP), develops a biennial SWP Delivery Capability Report, which estimates the water supply available for SWP Contractors, including CCWA and SLOFCWCD. The SWP water supply estimates are developed using their CALSIM-2 operations model[10]. In addition to evaluating SWP operations with hydrologic conditions in the Central Valley, CALSIM-2 incorporates the operations of the US Bureau of Reclamation (USBR) Central Valley Project (CVP) facilities and local water supply systems as these can affect the water supply available to the SWP. CALSIM-2 also represents water rights and regulatory constraints, which have changed over time and are subject to future revisions.

CALSIM-2 uses an historical period of 1922 through 2003, which contains hydrologic variations representing a range of water supply conditions and is run incorporating current regulatory and water demand conditions. The current hydrologic conditions represent an estimate of the long-term water supply variation of the 1922 through 2003 period, with adjustments to bring water use practices to current levels. DWR also runs CALSIM-2 using projections of future climatic effects on water supply and corresponding regulatory and demand assumptions.

For the 2019 SWP DCR, DWR prepared a CALSIM-2 study (Study 2020D09E) including current regulatory constraints on the SWP, including the Bay Delta Water Quality Control Plan, Biological Opinions of the National Marine Fisheries Service and the United States Fish and Wildlife Service, and the Coordination Operations Agreement between DWR and the USBR. CALSIM-2 results for SWP Contractors are presented in the 2019 DCR for three types of water supply – Table A Amounts, Carryover Water (Article 56) and Article 21 Water. The reported amounts of Table A represent SWP allocations that can be delivered on a schedule for use in a specific year. In years with high Table A allocations, SWP Contractors may request to carry over water in San Luis Reservoir for use in subsequent years. Once in San Luis Reservoir, the water can either be used in a drier following year or else it can be "spilled" if water supply conditions become wet and DWR needs to use the San Luis Reservoir storage space. The CALSIM-2 reported carryover amounts represent the quantities of Table A carryover supplies that were used in subsequent years. A third type of water, Article 21 Water, represents short term water supplies that are available relatively infrequently and can be taken on an instantaneous basis by SWP Contractors.

[9] https://water.ca.gov/Library/Modeling-and-Analysis/Central-Valley-models-and-tools/CalSim-2/DCR2019

[10] CALSIM-2 was used to perform the modeling simulations. https://water.ca.gov/Library/Modeling-and-Analysis/Central-Valley-models-and-tools/CalSim-2

7.2 2019 Delivery Capability Report Results

The projected Table A, Carryover and Article 21 water supply for CCWA and SLOFCWCD from the 2019 DCR CALSIM studies is presented as monthly tables of water supply in the Appendix D as Table D 1 - Table D 6. Summaries of the water supply are shown in Table 7-1. The water supplies summarized in Table 7-1 are also shown graphically in Figure 7-1 and Figure 7-2.

Table 7-1 Supply Capability

State Water Project Central Coast Area Water Supply																
Santa Barbara County Flood Control and Water Conservation District									San Luis Obispo County Flood Control and Water Conservation District							
	Off-Peak (Oct-Mar)				On-Peak (Apr-Sep)				Off-Peak (Oct-Mar)				On-Peak (Apr-Sep)			
Year	Table A	Carryover	Article 21 Water	Total	Table A	Carryover	Article 21 Water	Total	Table A	Carryover	Article 21 Water	Total	Table A	Carryover	Article 21 Water	Total
1922	13,164	0	0	13,164	18,088	0	0	18,088	6,560	0	0	6,560	6,310	0	0	6,310
1923	11,234	3,607	0	14,841	17,343	0	0	17,343	5,164	6,466	0	11,630	6,032	0	0	6,032
1924	5,961	769	0	6,730	3,327	1,025	0	4,352	2,960	1,913	0	4,873	1,494	2,551	0	4,045
1925	3,053	513	0	3,565	8,015	0	0	8,015	1,475	1,451	0	2,926	3,486	350	0	3,837
1926	4,539	0	0	4,539	12,153	0	0	12,153	2,350	331	0	2,682	4,877	662	0	5,539
1927	8,216	309	0	8,525	18,407	0	0	18,407	3,919	2,179	0	6,098	6,452	0	0	6,452
1928	9,048	4,073	0	13,121	19,080	0	0	19,080	4,382	6,720	0	11,101	6,621	0	0	6,621
1929	6,984	886	0	7,870	7,651	1,476	0	9,127	3,447	1,977	0	5,424	3,436	3,295	0	6,730
1930	5,513	0	0	5,513	4,398	0	0	4,398	2,664	37	0	2,701	1,913	74	0	1,987
1931	3,560	0	3,688	7,248	11,581	0	0	11,581	1,771	60	448	2,279	4,684	0	0	4,684
1932	4,667	95	0	4,762	7,865	190	0	8,054	2,441	693	0	3,134	3,424	1,386	0	4,810
1933	4,178	0	1,844	6,022	12,349	0	0	12,349	2,184	325	224	2,734	4,962	0	0	4,962
1934	4,604	102	0	4,706	4,850	170	0	5,021	2,417	721	0	3,137	2,113	1,201	0	3,314
1935	2,550	34	0	2,584	20,745	0	0	20,745	1,331	842	0	2,173	7,338	0	0	7,338
1936	8,988	1,854	0	10,842	16,294	0	0	16,294	4,206	1,019	0	5,225	6,620	0	0	6,620
1937	7,339	349	3,688	11,376	20,020	0	0	20,020	3,781	2,461	448	6,690	7,059	0	0	7,059
1938	11,596	4,724	1,844	18,164	22,470	0	3,688	26,158	5,400	7,095	224	12,719	7,872	0	448	8,320
1939	10,629	3,510	0	14,139	12,726	4,680	0	17,406	4,952	3,803	0	8,755	4,425	5,071	0	9,496
1940	1,995	157	0	2,152	17,807	0	0	17,807	6,101	86	0	6,188	6,254	0	0	6,254
1941	11,001	740	0	11,741	20,526	0	1,844	22,370	5,137	4,394	0	9,531	7,169	0	224	7,393
1942	12,401	9,817	0	22,217	16,928	0	0	16,928	5,624	10,637	0	16,261	5,895	0	0	5,895
1943	10,619	6,469	0	17,088	19,527	0	0	19,527	4,825	8,031	0	12,856	6,846	0	0	6,846
1944	6,924	1,245	0	8,170	11,972	2,491	0	14,462	3,314	684	0	3,998	4,927	1,369	0	6,296
1945	6,102	210	0	6,312	20,019	0	0	20,019	3,080	1,860	0	4,940	7,049	0	0	7,049
1946	11,452	3,253	0	14,705	16,185	0	0	16,185	5,358	6,277	0	11,635	5,603	0	0	5,603
1947	7,192	257	0	7,449	14,339	343	0	14,682	3,526	1,527	0	5,053	5,013	2,036	0	7,050
1948	8,238	157	0	8,395	14,657	0	0	14,657	3,694	86	0	3,780	6,317	0	0	6,317
1949	8,060	124	0	8,184	10,776	249	0	11,025	3,672	878	0	4,549	4,608	1,755	0	6,363
1950	4,714	64	0	4,779	15,984	0	0	15,984	2,484	1,465	0	3,949	6,438	0	0	6,438
1951	11,010	172	5,532	16,713	16,995	0	0	16,995	5,223	1,210	896	7,329	5,943	0	0	5,943
1952	11,120	5,661	0	16,781	20,213	0	3,688	23,901	5,032	7,598	0	12,631	7,074	0	448	7,522
1953	12,573	9,817	0	22,389	15,580	0	0	15,580	5,691	10,637	0	16,328	5,398	0	0	5,398
1954	9,715	771	0	10,485	17,789	0	0	17,789	4,507	4,577	0	9,084	6,200	0	0	6,200
1955	8,281	312	1,844	10,437	11,248	0	0	11,248	4,022	1,158	224	5,404	4,529	0	0	4,529
1956	10,074	138	5,532	15,744	18,451	0	0	18,451	4,651	971	672	6,294	6,449	0	0	6,449
1957	8,682	9,243	0	17,925	14,816	0	0	14,816	4,051	10,015	0	14,067	5,983	0	0	5,983
1958	9,739	386	1,844	11,969	22,790	0	3,688	26,478	4,673	2,719	224	7,616	8,030	0	448	8,478
1959	11,626	10,530	0	22,156	11,880	0	0	11,880	5,375	11,410	0	16,785	4,820	0	0	4,820
1960	4,793	116	0	4,909	16,192	231	0	16,423	2,542	815	0	3,357	6,519	1,629	0	8,149
1961	6,035	128	0	6,163	10,184	257	0	10,441	3,197	906	0	4,103	4,443	1,811	0	6,255
1962	4,985	0	0	4,985	16,269	0	0	16,269	2,593	1,236	0	3,829	6,555	0	0	6,555
1963	10,915	395	0	11,310	17,096	0	0	17,096	5,256	2,785	0	8,041	5,906	0	0	5,906

State Water Project Central Coast Area Water Supply																
Santa Barbara County Flood Control and Water Conservation District									San Luis Obispo County Flood Control and Water Conservation District							
	Off-Peak (Oct-Mar)				On-Peak (Apr-Sep)				Off-Peak (Oct-Mar)				On-Peak (Apr-Sep)			
Year	Table A	Carryover	Article 21 Water	Total	Table A	Carryover	Article 21 Water	Total	Table A	Carryover	Article 21 Water	Total	Table A	Carryover	Article 21 Water	Total
1964	9,762	389	0	10,151	16,568	778	0	17,346	4,652	1,689	0	6,340	5,721	3,377	0	9,098
1965	10,230	760	0	10,990	13,597	0	0	13,597	4,843	3,708	0	8,551	5,464	0	0	5,464
1966	10,223	180	3,688	14,090	17,169	0	0	17,169	4,796	1,266	672	6,734	6,002	0	0	6,002
1967	10,113	4,090	0	14,203	21,790	0	0	21,790	4,624	6,744	0	11,368	7,680	0	0	7,680
1968	12,543	10,113	0	22,656	16,698	0	0	16,698	5,726	10,958	0	16,684	5,809	0	0	5,809
1969	11,085	679	5,532	17,297	21,998	0	2,638	24,636	5,107	2,316	672	8,095	7,715	0	318	8,033
1970	12,738	6,986	5,532	25,257	17,044	0	0	17,044	5,757	6,370	672	12,799	5,954	0	0	5,954
1971	10,571	5,465	0	16,037	12,513	0	0	12,513	4,856	7,486	0	12,343	5,083	0	0	5,083
1972	9,403	377	0	9,780	17,445	0	0	17,445	4,504	2,656	0	7,160	6,059	0	0	6,059
1973	10,308	819	0	11,128	17,782	0	0	17,782	4,768	4,866	0	9,633	6,230	0	0	6,230
1974	11,507	3,869	0	15,376	18,703	0	0	18,703	5,241	6,612	0	11,852	6,545	0	0	6,545
1975	11,176	9,255	0	20,431	17,613	0	0	17,613	5,115	10,028	0	15,143	6,124	0	0	6,124
1976	10,170	1,319	0	11,488	17,310	2,198	0	19,508	4,814	2,218	0	7,033	5,951	3,697	0	9,648
1977	293	52	0	346	1,961	105	0	2,066	2,760	29	0	2,789	854	58	0	911
1978	3,944	0	0	3,944	19,242	0	0	19,242	1,752	250	0	2,003	6,798	0	0	6,798
1979	7,734	8,612	0	16,346	20,422	0	0	20,422	3,680	9,332	0	13,012	7,199	0	0	7,199
1980	11,275	2,208	3,688	17,171	19,489	0	0	19,489	5,266	5,027	448	10,741	6,852	0	0	6,852
1981	7,987	3,078	0	11,064	12,050	4,104	0	16,153	3,796	3,335	0	7,131	5,277	4,447	0	9,724
1982	10,441	2,209	0	12,650	22,420	0	1,844	24,264	4,308	2,310	0	6,618	7,843	0	224	8,067
1983	13,631	9,620	5,532	28,783	21,599	0	2,638	24,237	6,116	10,075	672	16,863	7,589	0	318	7,907
1984	12,945	6,381	5,532	24,858	16,758	0	0	16,758	5,833	6,037	672	12,543	5,853	0	0	5,853
1985	9,841	699	3,688	14,227	18,294	0	0	18,294	4,563	882	448	5,893	6,366	0	0	6,366
1986	8,070	4,129	0	12,199	19,503	0	0	19,503	3,778	4,415	0	8,193	6,919	0	0	6,919
1987	7,142	2,092	0	9,234	8,574	3,487	0	12,061	3,506	2,642	0	6,148	3,731	4,404	0	8,135
1988	3,425	697	0	4,122	3,302	0	0	3,302	1,829	1,238	0	3,067	1,435	715	0	2,150
1989	2,096	0	0	2,096	19,753	0	0	19,753	1,088	138	0	1,226	6,959	184	0	7,143
1990	392	52	0	444	4,079	105	0	4,183	1,342	29	0	1,371	1,776	58	0	1,833
1991	2,217	0	0	2,217	7,806	0	0	7,806	1,160	168	0	1,327	3,397	335	0	3,733
1992	3,262	0	0	3,262	5,217	0	0	5,217	1,740	321	0	2,061	2,272	642	0	2,914
1993	5,763	0	0	5,763	18,580	0	0	18,580	2,681	641	0	3,322	6,506	0	0	6,506
1994	7,423	427	0	7,850	9,026	854	0	9,880	3,677	1,713	0	5,390	3,946	3,426	0	7,372
1995	7,399	0	0	7,399	23,198	0	1,844	25,042	3,514	1,183	0	4,697	8,175	0	224	8,399
1996	13,073	6,383	0	19,456	18,487	0	0	18,487	6,002	3,508	0	9,509	6,446	0	0	6,446
1997	12,159	7,094	5,532	24,786	16,556	0	0	16,556	5,428	6,071	672	12,171	5,782	0	0	5,782
1998	10,695	6,301	3,688	20,685	22,369	0	3,688	26,057	4,804	7,720	448	12,973	7,892	0	448	8,340
1999	12,730	10,530	0	23,260	17,268	0	0	17,268	5,821	11,410	0	17,231	6,002	0	0	6,002
2000	9,883	2,953	3,688	16,524	17,984	0	0	17,984	4,573	5,434	448	10,456	6,295	0	0	6,295
2001	6,528	1,871	0	8,399	8,158	3,741	0	11,900	3,187	2,524	0	5,711	3,549	5,048	0	8,597
2002	5,263	0	0	5,263	12,611	0	0	12,611	2,649	339	0	2,988	5,071	678	0	5,749
2003	8,410	183	0	8,593	9,575	0	0	9,575	4,149	100	0	4,250	3,772	0	0	3,772
Average	8,267	2,450	877	11,594	15,196	323	312	15,831	4,010	3,462	112	7,584	5,585	613	38	6,236

7.3 Santa Barbara County

Figure 7-1 shows the CALSIM-2 hydrologic sequence of SWP supplies for Santa Barbara County (contractually the contract is between DWR and the Santa Barbara County Flood Control and Water Conservation District). The average SWP Table A and Carryover supplies that are available to Santa Barbara County are 26,000 acre-feet, with those supplies exceeding 22,000 acre-feet in about 70 percent of the years. The sequence of water supply availability shows three especially significant drought periods when deliveries are much lower than average – 1929-1934, 1976-1977, and 1987-1992. These dry periods have comparable SWP supply shortages to the recent 2012-2016 drought period, which is not included in the CALSIM-2 simulation. In addition to Table A and Carryover water that is delivered to SWP Contractors on a requested delivery schedule, the 2019 DCR also shows about 1,200 acre-feet of Article 21 Water being available. This water is available in less than 30% of the years and only during the months of January through May.

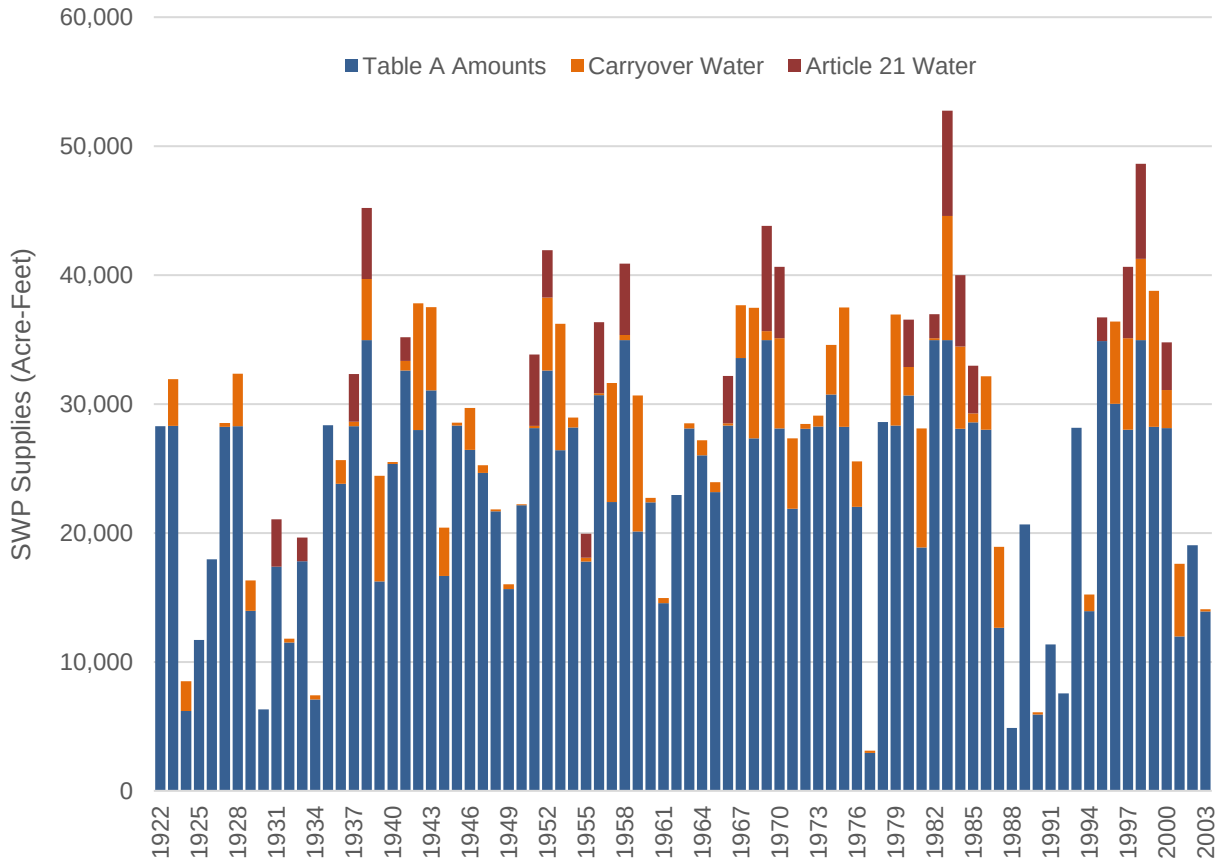


Figure 7-1 Santa Barbara County – SWP Available Supply Present Level

The water supplies shown in Figure 7-1 are the total SWP supplies that are available to Santa Barbara County and do not necessarily represent the amounts that could be used. In some wet years, there may not be water demands in the local service area, or local water supplies may be available making SWP Supplies unnecessary. As discussed elsewhere, in these types of wet years (either locally or in the SWP's Central Valley watershed source), other provisions may be needed for managing water supplies. Capacity on the SWP or in local conveyance facilities may also be a limiting factor, particularly in wetter years. Since the rated conveyance

capacity of Reach 33B is 71 cfs, which is lower than the permitted operating capacity of the PPWTP, the PPWTP is not a limiting factor in terms of conveyance capacity for the Coastal Branch.

7.4 San Luis Obispo County

A similar graph of SWP available supply for San Luis Obispo County (contractually, the SWP contract is between DWR and the San Luis Obispo County Flood Control and Water Conservation District) is shown in Figure 7-2. This figure is plotted on the same scale as that of Santa Barbara County and shows smaller quantities of SWP supplies, reflecting San Luis Obispo County's smaller amount of SWP Table A contracted supply. The 2019 DCR estimates that San Luis Obispo County would receive average Table A and carryover water deliveries of approximately 14,000 acre-feet, which is about 58% of the 25,000 acre-foot Table A contract amount. The percentage of Table A amounts estimated to be available to San Luis Obispo County is slightly lower than for CCWA due to different assumptions used by CALSIM-2 for San Luis Obispo County Table A demand levels and carryover requests. In addition to the Table A and Carryover Water, San Luis Obispo County also is projected to have about 100 acre-feet of Article 21 water available.

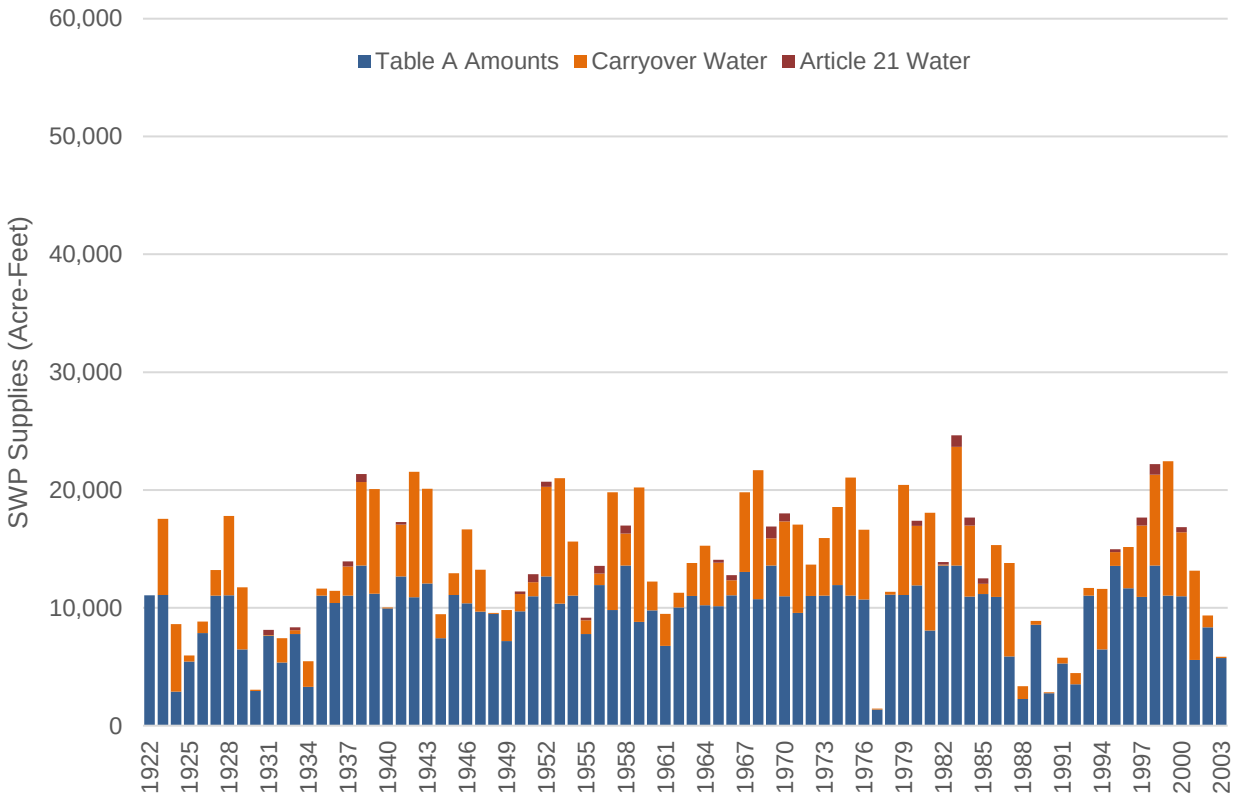


Figure 7-2 San Luis Obispo County -- SWP Available Supply Present Level -

7.5 Central Coast Contractors Allocations

The supplies summarized in Table 7-2 and shown in Figure 7-1 and Figure 7-2 represent a starting point in estimating locally available water supplies from the SWP. As discussed in later sections, factors such as local

water supplies, service area demands and SWP capacity can affect the portion of SWP supplies retained in each county.

Both Santa Barbara County and San Luis Obispo County have local agencies within their service areas that have contracted for portions of the SWP supply. The Table A contracted amounts for these agencies (referred to as the Central Coast Contractors) are shown in Table 7-2.

Table 7-2 CCWA and SLOFCWCD Table A Subcontracted Amounts (Acre-Feet per Year)

Central Coast Water Authority			
Participant	Table A Amount	CCWA and District Drought Buffer	Total Water Amounts
City of Buellton	578	58	636
Carpinteria Valley Water District	2,000	200	2,200
Goleta Water District	4,500	2,950	7,450
City of Guadalupe	550	55	605
La Cumbre Mutual Water Company	1,000	100	1,100
Montecito Water District	3,000	300	3,300
Morehart Land Company	200	20	220
City of Santa Barbara	3,000	300	3,300
Raytheon Systems Company	50	5	55
City of Santa Maria	16,200	1,620	17,820
Santa Ynez RWCD, Improvement District	2,000	200	2,200
Golden State Water Company	500	50	550
Vandenberg Space Force Base	5,500	550	6,050
TOTAL	39,078	6,408	45,486

San Luis Obispo County Flood Control and Water Conservation District			
Participant	Water Service Amount	Drought Buffer Amount	Total Water Amounts
CSA 16 (Shandon)	100	0	100
City of Morro Bay	1,313	2,290	3,603
CMC	400	400	800
County Ops Center	425	425	850
Cuesta College	200	200	400
City of Pismo Beach	1,240	1,240	2,480
Oceano CSD	750	750	1,500
San Miguelito MWC	275	275	550
Avila Beach CSD	100	100	200
Avila Valley MWC	20	20	40
San Luis Coastal USD	7	7	14
PARTICIPANT TOTAL [2]	4,830	5,707	10,537

[2] A remaining amount of 14,463 acre-feet of SLOFCWCD Table A amount is not under contract with a Participant

The SWP water delivery availability amounts indicated in Table 7-2 can be applied proportionately to individual Coastal Branch Contractors based on the Table A amounts shown in Table 7-2. For example, Cuesta College, with a Table A amount of 400 acre-feet[11], would have access to 1.6% (400 AF/25,000 AF) of the total San Luis

[11] While in this example, Cuesta College would have access to 400 acre-feet of Table A amounts for allocation purposes, it would only have access to 200 acre-feet of actual deliveries under the CCWA treatment/capacity agreement.

Obispo County supply amounts shown in Table 7-2. The CALSIM-2 SWP water supply estimate summarized above, as distributed to Coastal Branch Contractors, constitute the SWP supply available. Chapter 9 of this Water Management Strategy will evaluate approaches to maximize the use of these supplies to meet local water management needs cost effectively.

8 Selection Criteria

The selection criteria for the identified water management strategies are intended to be utilized subjectively to guide decisions on how to best implement management measures that align with participant constraints and goals.

Selection criteria were developed by considering both local needs and regional goals as identified in the Integrated Regional Water Management Plans (IRWMP). A summary of the regional objectives can be found in Table 8-1 Regional Objectives below. These proposed selection criteria address the key objectives below, with the exception of flood control, infrastructure maintenance and groundwater management, which are not related to the State Water Project (SWP). Groundwater management could be utilized as a tool or management measure but should not be used as a selection criterion on its own.

Table 8-1 Regional Objectives

Objective/Goal	Santa Barbara County IRWMP	San Luis Obispo County IRWMP
Water Supply	Protect, conserve, and augment water supplies Maintain and enhance water and wastewater infrastructure efficiency and reliability storage capacity.	Maintain or improve water supply quantity and quality for potable water, fire protection, ecosystem health, and agricultural production needs; and cooperatively address limitations, vulnerabilities, conjunctive-use, and water-use efficiency.
Groundwater Monitoring and Management	Protect, manage, and increase groundwater supplies	Achieve sustainable use of the Region's water supply within groundwater basins through collaborative and cooperative actions.
Ecosystem and Watershed Goal	Practice balanced natural resource stewardship Protect and improve water quality Address climate change through adaptation and mitigation	Maintain or improve the health of the Region's watersheds, ecosystems, and natural resources through collaborative and cooperative actions; with a focus on assessment, protection, and restoration/enhancement of ecosystem and resource needs and vulnerabilities.
Flood Management	Improve flood management Improve emergency preparedness	Foster an integrated, watershed approach to flood management and improved storm water quality through collaborative community supported processes in order to ensure community health, safety, and to enhance quality of life.
Water Resources Management and Communications	Ensure equitable distribution of benefits	Promote open communications and regional cooperation in the protection and management of water resources, including education and outreach related to water resources conditions, conservation/water use efficiency, water rights, water allocations, and other regional water resource management efforts.

The selection criteria identified are subjective in nature and should be utilized to best determine if a management measure should be implemented. The criteria include water supply, water quality, the ability to permit, cost, proximity, and equity. When considering a management measure, these criteria should be prioritized to adhere to the participant's specific objectives and constraints. Table 8-2 Selection Criteria outlines the criteria and considerations for the selection of a specific management measure.

Table 8-2 Selection Criteria

Criteria	Measure	Considerations
Water Supply	Acre-feet Cubic feet per second	Does the amount of volume or flow satisfy the participant need under a particular condition?
Water Quality	Maximum level and Concentration	Is there a difference in resulting water supply; how well does water supply meet water quality needs? Are there any negative adverse water quality effects?
Ability to Permit	Weeks	How lengthy and difficult would permitting process be?
Cost	Dollars	Is it affordable for the short term? Long term?
Proximity	Yes or no	Is the measure local (vs. imported)? Will it shift supply to a more sustainable/long-term solution?
Equity	Yes or no	Do alternatives maintain or improve DAC and tribal access to adequate water supplies?
Reliability	More or less	Is the supply cost and availability probable? Focus on moderate or extreme dry years?

The criteria considered in the modeled analysis and recommendations (Chapter 9) are largely focused on water supply, cost, and reliability as these criteria can be assessed utilizing model analysis of empirical data. Other selection criteria are somewhat qualitative and would be factors that individual agencies could ultimately consider together with the modeling analysis.

8.1 Water Supply

In selecting a management measure based upon water supply, participants should consider factors such as required volume or flow, and year condition types. Since the amount of water needed will likely vary based on wet, average, or drought conditions, the implemented measure should satisfy the volume needed under the specific conditions for which it is required. The Integrated Resource Planning (IRP) Analysis Tool was used to evaluate and compare the relative water supply benefits for identified water management components.

8.2 Water Quality

Participants should ensure the management measure meets or exceeds water quality requirements for intended use and has no adverse impacts. It was expressed during the needs assessment that SWP water quality was a concern and management measures to improve water quality were of priority. For example, projects that reduce the total dissolved solids in a groundwater basin may be considered for implementation, even if they do not provide significant benefits in other factors.

8.3 Ability to Permit

If a management measure contemplates a project that would have environmental impacts or require local, state, or federal permitting, ability to permit should be considered in terms of time, cost, and likelihood of permit issuance. Some projects that may bring significant supply benefits could come at a substantial cost in terms of time, staff resources, and cost commitment just to gain approvals. These projects would also have a large element of uncertainty and permits might ultimately not be obtained, with the project not completed. Other projects may be easier to permit with a shorter timeline to address participant objectives and goals. In all cases these permitting risks should be considered.

8.4 Cost

Cost is an important factor in determining whether a management measure is implemented. Participants would assess cost in terms of risk management to address shortages during various year condition types and look at overall affordability in the context of near term and longer management projections to ensure objectives and goals are met. Costs were quantified for water management components evaluated by the IRP Analysis Tool which provide cost comparisons.

8.5 Proximity

Some management measures could be selected or screened out based on geographic proximity to the participants. If a measure it is local, it may be preferred over imported options. In other cases, a measure may contribute to a larger regional portfolio to increase sustainability and long-term water security by reducing reliance on water supplies from the Sacramento-San Joaquin Delta.

8.6 Equity

Another regional consideration in selecting management measures may be ensuring adequate water supplies to Disadvantaged Communities (DAC) or economically distressed areas. Many of these communities face unreliable water sources and are especially susceptible to adverse impacts during periods of drought. Measures that provide improvements to these communities may become a prioritized selection factor among alternatives.

8.7 Reliability

Both near term and long-term supply reliability is necessary in a successful water management plan and can be achieved through managed demand and supply development. Participants will need to consider the cost and probability that the supply will be available when it is needed most (i.e., moderate, or extreme dry years). The analysis provided in later sections contemplates historical availability of differing water year types to inform regional portfolio planning. The available water supply in key drought shortage periods – 1927-1933, 1959-1962, 1987-1993 and 2012-2016 – was used as a quantity indicating the reliability based on the Model developed for this study (CBIRP Analysis Tool).

9 Water Management Components

Several water management components have been identified and evaluated to provide an initial indication of the water management opportunities available to the Central Coast Contractors. This section begins by describing the scope of this evaluation and its limitations. The analysis described in this chapter evaluates five water management portfolios that are formed by combining individual water management components. The five SWP portfolios were evaluated using the Coastal Branch Integrated Regional Planning (CBIRP)Analysis Tool (referred hereafter as Model). Based on the modeling analysis as well as a cost review of the modeling results, the relative benefits of the water management components are compared, and recommended management approaches are identified. This section presents recommendations for management actions and future analysis, based on the water management component analysis.

9.1 Analysis Tool Description

Based on policy direction and study scope, a completely integrated analysis of all water supply and demand components was not conducted for this study. Instead, the focus of this effort is on the SWP role in meeting Central Coast water demands. The limited analysis conducted for this report is not a comprehensive integrated water resources management (IWRM). A comprehensive IWRM analysis should consider all local and imported water supplies and management tools available to water agencies, incorporate available conveyance facilities and reservoirs (including groundwater) in a time series review to indicate water supply adequacy to meet needs, and include measures to reduce water demand, such as water conservation and recycling.

The analysis using Model described here is less comprehensive in scope, focusses primarily on the role of the SWP in meeting Central Coast water management needs, and does not evaluate optimization opportunities for other non-SWP water supplies. Water management in the Central Coast has multiple local and regional water supply sources available, including water supplies from the Santa Ynez River, Santa Maria River, Salinas River and other local watersheds. Additionally, several large groundwater basins in the Central Coast provide long term storage and local supplies based on local recharge sources. The SWP provides a supplemental supply to the Central Coast, augmenting local water supplies and management measures.

The Model developed for this study centers on the SWP and, with one exception, does not directly consider the coordinated use of SWP and local water supplies. The Model specifically includes the Coastal Branch and SWP supplies available to Central Coast Participants. A schematic of the Model showing conveyance reaches and aggregated turnouts for the Coastal Branch is shown in Figure 9-1. The conveyance reach capacities, aggregated turnouts and the deliveries through these turnouts are summarized in Table 9-1. In addition to the SWP Coastal Branch, the Model also includes a representation of Cachuma Reservoir, which is closely integrated with SWP operations. The Model uses a semi-annual time step to evaluate the 98-year analysis period (1922-2019) with projected SWP supplies and Cachuma Reservoir inflows. The semi-annual time frame aggregates the October to April and the May to September period. This provides greater accuracy in evaluating sub-annual operations without creating an overly burdensome modeling effort.

The Model uses Network Flow Programming (NFP) to determine an optimal approach to manage different water management components to meet goals such as maximizing water deliveries and minimizing spills and costs. NFP is an Operations Research technique for computing minimum cost solutions for transportation and resource allocation issues and has been used extensively in solving water management problems. This approach optimizes operations while considering known future conditions, something that is not possible in real time water management. However, the results of this approach establish the best operating scenario able to be achieved and provides water managers with information that could be evaluated alongside potential water management strategies to minimize risks. For example, this approach could help with deciding how much water should be left in storage and placed at risk of spilling in one year to ensure there is sufficient supply to meet local demands in a future year.

Table 9-1 Model (CBIRP Analysis Tool) Demand and Capacity Assumptions, Acre-Feet

	San Luis Obispo County			Central Coast Water Authority		
Category	Oct-Apr	May-Sept	Annual	Oct-Apr	May-Sept	Annual
Capacity	3,362	2,426	5,788	26,494	19,120	45,614
Contract Amount			10,537			45,486
Deliveries – Max	2,586	2,685	5,271	18,725	18,334	37,059
Deliveries – Average	1,890	1,809	3,699	9,489	12,076	21,565

A full description of the Model, the data it includes, and key operational assumptions are provided in Appendix D. As described below, Appendix D also provides detailed summaries of the water management component analyses and their results.

9.2 Water Management Components

As defined here, water management components are individual management actions that a water agency can use to improve its overall water supply. A water management component is an action, either internal or external to an agency, that can improve the agency's water supplies. A water management agency will typically implement multiple water management components as part of an overall water management "portfolio". Several pre-existing and new water management components were described in the Rules and Requirements section of this report (Chapter 5). A selection of water management components is described below, which could be implemented separately or in combination by water agencies. Five combinations of water management components, defined as "portfolios", were identified that are subsequently analyzed using the Model.

9.2.1 Water Management Component Descriptions

Historic water management in the Central Coast has used some, but not all, water management components that are currently available. Defined restrictions to the application of some water management components were described in the Rules and Regulations section of this report (Chapter 5). The water management components that are identified in this report for Central Coast water management analysis include the following:

San Luis Reservoir Carryover Storage – Article 56 of the SWP Water Supply Contract was implemented in 1996 and provides that individual SWP Contractors have the ability to store a portion of their unused Table A allocations in a single year in SWP conservation storage facilities, primarily San Luis Reservoir. The contract provides that a SWP Contractor has limits to the amount that can be stored in a single year and, additionally, only has access to their proportional share of available storage in San Luis Reservoir.

Transfers between SLOFCWCD and CCWA – According to the new 2021 Water Management Amendment, annual transfers of Table A allocations (meaning water stored in SWP storage that is not needed by a SWP Contractor) are allowed between all the signatories to the Amendment. Individual SWP Contractors still have the discretion to limit their use of the SWP Water Management Amendment, and this component assumes a limited implementation of the SWP Water Management Amendment that is limited to transfers between the Coastal Branch Contractors. An obvious application of this component would be transfers of San Luis Obispo County's uncontracted Table A Amount (totaling 14,463 acre-feet) to Santa Barbara County. A defined transfer from San Luis Obispo County to

Santa Barbara County could be part of a package that might include increased use of Coastal Branch conveyance capacity by San Luis Obispo County.

Dry Year Purchase Program – The State Water Contractors, Inc. (SWC) organization has organized a water purchase program in dry years (referred to as the Dry Year Purchase Program) for one year water transfers from the Sacramento Valley. This program facilitates water transfers based on fallowing or groundwater substitution programs from the Sacramento Valley. The amounts of any available water transfers from the Dry Year Purchase Program are usually not adequate to meet the potential needs, therefore, shortfalls in supply are allocated proportionately to SWP Contractors' Table A amounts. As relatively small SWP Contractors, the Central Coast Contractors typically have low allocations of any available transfers. The Model assumes a dry year purchase program is a water management component that is available on an ongoing basis.

External Storage Program –Article 56 of the SWP Water Supply Contract provides SWP Contractors with the ability to store allocated Table A Amounts in storage programs within the service areas of other SWP Contractors. These programs are normally groundwater storage programs in developed groundwater banks. Some CCWA members participate in such programs and this water management component could provide for expanded use of such storage. For purposes of this analysis, it is assumed that external storage programs would be implemented external to the Central Coast area in total, and does not assume external storage within the Central Coast area. The capacity of external storage programs was assumed to be 10,000 acre-feet for San Luis Obispo County and 30,000 acre-feet for Santa Barbara County.

Internal Storage Program –Article 56 of the SWP Water Supply Contract would also apply to one Central Coast Contractor storing a portion of its SWP water within the other Central Coast Contractor's service area. Based on input from the Central Coast Contractors, no such programs were assumed in the Model to be available, and this option has not been analyzed.

Increased SLOFCWCD SWP Contract Use – Currently, 14,463 acre-feet of San Luis Obispo County's Table A Amount is un-contracted and does not have an assigned use. Water agencies within San Luis Obispo County's service area, such as Groundwater Sustainability Agencies or agencies with access to storage in Lopez Reservoir, could potentially contract with SLOFCWCD for a portion of the unallocated Table A Amount. Conveyance capacity to deliver this additional supply would be a limiting factor for this component, and it might be limited to lower allocation years when capacity is available or might require an agreement with CCWA for access to additional capacity.

Coastal Branch Capacity – The CCWA participation agreements include defined capacities for access to treated water (at PPWTP) and conveyance in the Coastal Branch. The defined capacities are expressed as maximum Table A amounts but have equivalent capacity values for the Coastal Branch itself. The most obvious limitation in the agreements is that SLOFCWCD, with 25,000 acre-feet of maximum Table A Amounts, only participates in the Coastal Branch at an amount of 4,830 acre-feet.

Purchases of Table A Allocations, or Carryover Storage, from Other SWP Contractors – Single year or multi-year purchases of SWP Table A allocations, water stored in SWP facilities, or water stored in other SWP Contractors service areas are allowed by the 2021 SWP Water Management Amendment. These purchases could be a useful supply source in drought years. This component is assumed to rely on transfers from SWP Contractors outside of the Central Coast.

Sales of Table A Allocations, or Carryover, to other SWP Contractors. The 2021 SWP Water Management Amendment allows for sales of SWP water to other SWP Contractors. This

component could be a useful water management tool in years of higher SWP allocation or years when local supplies are plentiful. Revenue from these sales can be used by local water agencies to pay for other, more critical, water management measures.

The list of water management components here is a partial list selected based on stakeholder workshop input and the consultants' previous water management experience. A selection of these components was included in various combinations in portfolios that are described below and subsequently analyzed by the Model.

9.2.2 Water Management Component Portfolios

Five water management portfolios, each comprised of combinations of water management components, have been identified for analysis of alternative SWP supply benefits. The five portfolios were chosen to define a reasonable range of potential actions and operations based on stakeholder input. For many of the portfolios, specific limits were identified for analysis that could be adjusted in the future based on stakeholder interest. Future analyses could be performed to refine the specific actions identified in the portfolios. For example, Portfolio 2 sets external storage for CCWA to 30,000 acre-feet; however, it may be decided later to investigate a larger or smaller size of external storage program for the Central Coast Contractor.

Each of the portfolios described below was analyzed using the Model. In addition to the portfolios reported here, some of the water management components not included in the portfolios below were analyzed separately and determined not to have important impacts on analysis results. Those are briefly described in the evaluation section (Section 9.3) below. As described earlier, the Model does a semi-annual analysis of long term (1922-2019) water supply conditions. Table 9-2 shows the water management components included in each of the analyzed water management portfolios:

Table 9-2 Water Management Component Portfolios

	Water Management Component Portfolio				
	1	2	3	4	5
	Baseline SWP Operations	Baseline with Ext Storage	Baseline with SLOFCWCD Add Use	Central Coast Integration	Water Management Amendment
Coastal Branch Capacity	Unrestricted	Unrestricted	Unrestricted	Unrestricted	Unrestricted
Dry Year Purchase Program	Available	Available	Available	Available	Available
External Storage Program	Unavailable	Available	Available	Available	Available
Internal Storage Program	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable
Increased SLOFCWCD Demands	No	No	Yes	Yes	Yes
External Table A Purchases	Unavailable	Unavailable	Unavailable	Unavailable	Available
External Table A Sales	Unavailable	Unavailable	Unavailable	Unavailable	Available

Portfolio 1 "Baseline SWP Operations" – Portfolio 1 approximately represents recent historical Central Coast SWP operations, providing a baseline for comparison with other portfolios. This portfolio provides for

use of available conveyance capacity in the Coastal Branch for the Coastal Branch Contractors as well as availability of annual purchases through the State Water Contractors Inc. (SWC) Dry Year Water Purchase Program, however those amounts are relatively modest and provide very limited supply to the Coastal Branch Contractors. Transfers of SLOFCWCD's non-contracted Table A water to its Participants are also included in this portfolio; however, this portfolio does not allow use of the new Water Management Amendment provisions and it assumes non-use of other existing SWP contract provisions such as external storage programs.

Portfolio 2 "Baseline with External Storage" – Portfolio 2 includes continued baseline (Portfolio 1) Coastal Branch operations, while providing for external storage programs. Although external storage programs are allowed under Article 56 of the SWP Water Supply Contract, there has been limited participation in such programs by the Coastal Branch Contractors. Use of external storage programs could increase the availability of SWP water supplies during critically dry periods through more efficient storage and reduced spills. For example, while the long-term allocation of Table A used in the modeling is 58% of contracted amounts, Portfolio 1 can only take advantage of 46% of the contracted amount. With the addition of 30,000 acre-feet of external storage for Santa Barbara County, Santa Barbara County could increase its utilization of its SWP water supplies by nearly 2% to 47.8% of the contracted amount. While that may not seem like a significant increase, the improvement in water supply primarily occurs in dry and critically dry years with an increase in the usable SWP water supply of 6% and 32% respectively.

Portfolio 3 "Baseline with SLOFCWCD Additional Use" – Portfolio 3 builds on Portfolio 2 by increasing SLOFCWCD's demands for SWP water. Portfolio 3 assumes 1,000 acre-feet of additional SLOFCWCD demand for supplemental recharge of the San Luis Obispo Groundwater Basin. This additional SWP water use is presented as an example that could be increased based on local interest and ability to pay for SWP water.

Portfolio 4 "Central Coast Integration" – Portfolio 4 includes Portfolio 3 operations and provides for transfer of water supplies between CCWA and SLOFCWCD. The primary tool available from this portfolio is explicit ability of Coastal Branch Contractors to purchase and sell SWP Table A amounts to each other on a one-year or multi-year basis. One-year transfers were formerly prohibited in the SWP Water Supply Contract and are being implemented as one of the actions in the SWP Water Management Amendment. Portfolio 4 would keep SWP water supplies within the Coastal Branch Contractors' service area and not allow transfers with other SWP Contractors. While this portfolio could broadly provide for local exchange or storage programs, no specific programs (such as possible San Luis Obispo Groundwater basin or Lopez Reservoir storage programs) are explicitly included.

Portfolio 5 "Water Management Amendment" – Portfolio 5 includes Portfolio 4 operations and expands the transfer capability to include sales to and purchases from other SWP Contractors outside of the Coastal Branch Contractors' service area. This portfolio allows the most ambitious management approaches that include the primary water management components available to the Coastal Branch Contractors.

9.3 Evaluation of Water Management Component Portfolios

The Water Management Component Portfolios described above were analyzed using the Model to evaluate their performance in improving Coastal Branch Contractor water supplies. The Model was also used separately to analyze various individual water management components or different analysis assumptions, which are briefly described in this section.

9.3.1 Portfolio Evaluation

As described in Section 8 on the Selection Criteria, the focus of the Water Management Component analysis is on three of the seven identified selection criteria – Water Supply, Cost and Reliability. The results of each portfolio are described individually, with a follow-up summary table showing how they compare with each

other. Portfolio 1, which serves as a baseline indication, is described in more detail than the other four portfolios. The descriptions of subsequent portfolios are focused on changes from Portfolio 1.

Portfolio 1 "Baseline SWP Operations" – Portfolio 1 represents baseline Coastal Branch SWP operational conditions that generally match historical SWP water use. Each Coastal Branch Contractor controls the use of its own SWP water supply. The Coastal Branch Contractors are assumed to have access to available Coastal Branch capacity that is not restricted to their contract shares.

The resulting SLOFCWCD water supply for Portfolio 1 is shown in Figure 9-1.

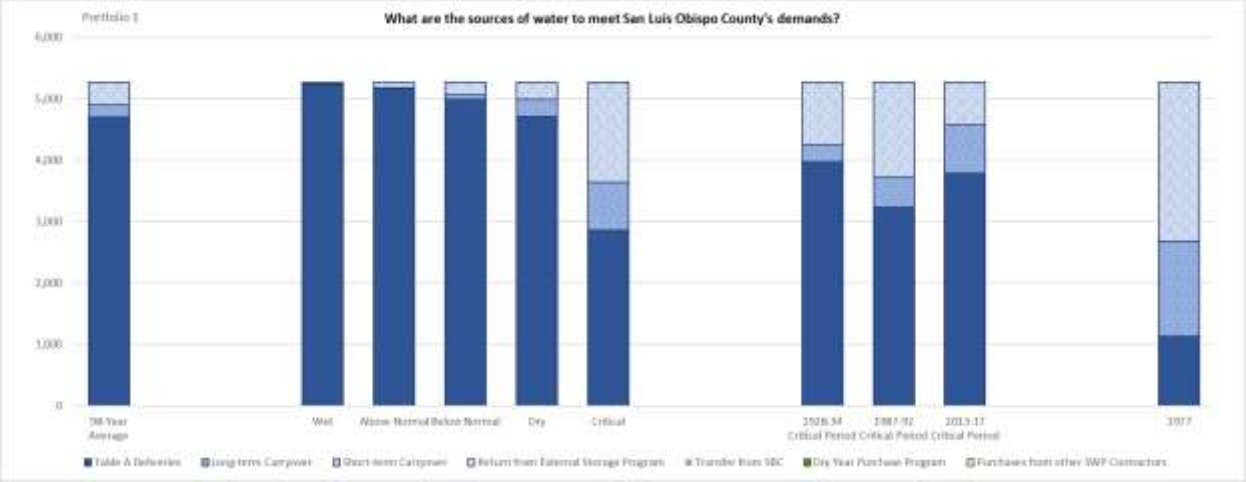


Figure 9-1 SWP Water Supply Deliveries to SLOFCWCD (includes all SWP water supply types)

Figure 9-1 shows that SLOFCWCD's small historical demand of 5,271 acre-feet (based on the maximum historical maximum deliveries to existing users) is met in all years, through either direct SWP Table A allocations or use of previous allocations that were carried over in San Luis Reservoir. Table A allocations, based on that portion of SLOFCWCD's Table A Amount of 25,000 acre-feet that has been contracted for by its Participants (10,537 acre-feet), meets demands in exactly half of the years in the 1922-2019 period and provides nearly 87% of deliveries for the entire analysis period. Approximately 8% of SLOFCWCD's Table A delivered directly within the year is from transfer of SLOFCWCD's non-contracted Table A to its Participants. Water supplies that are carried over in SWP facilities are sufficient to meet SLOFCWCD's demands in the remaining half of the years, providing about 13% of SLOFCWCD's SWP supply.

Figure 9-2 shows that CCWA's higher demand cannot be met in critically dry years. Overall, CCWA deliveries of SWP water average 21,100 acre-feet, which is roughly 46% of its maximum Table A Amount of 45,486 acre-feet. This 46% delivered supply is considerably lower than the average SWP reliability of 59%, which would be achieved if all allocated SWP supplies were used. The lower delivery percentage for CCWA results from two factors: an inability to match demand to the available SWP allocation and inability to manage water in high supply years. The Model maximum demand of 37,059 acre-feet is less than CCWA's maximum Table A amount of 45,486 acre-feet. Additionally, the Model only provides water for CCWA's South Coast users in years when shortages from Lake Cachuma are imminent, which turns out to be about 15 years out of the 98-year analysis period. In more than 80% of the years, no water deliveries would be needed for South Coast users. In the years of non-delivery for the South Coast, the Model only delivers 21,472 acre-feet, which is the amount needed to meet the demands of North County and Mid County area users only. In addition to limited South Coast demands, the assumptions for Portfolio 1 limit CCWA's options for managing SWP supplies in high allocation

years to carryover storage in San Luis Reservoir, which is subject to spillage and can result in delivery shortages in subsequent years. The computed overall shortage in the Portfolio 1 analysis is 2,100 acre-feet.

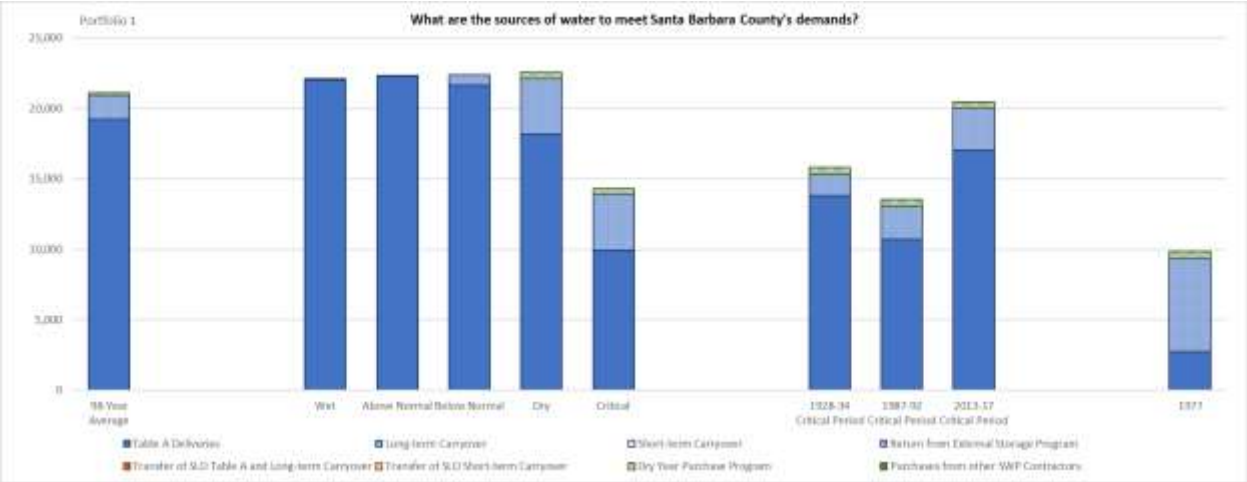


Figure 9-2 SWP Water Supply Deliveries to CCWA (Includes all SWP water supply types)

A breakdown of the CCWA deliveries by turnout for Portfolio 1 is shown in Figure 9-3. The Model shows CCWA deliveries to North County and Mid County users in all years, with occasional deliveries to South Coast users as supplemental supply to their Cachuma Project supplies. As noted above, the deliveries for South Coast users occur very infrequently and are used only during, or in anticipation of, shortage periods, primarily the recent 2012-2018 period and a 1947-1951 period when Cachuma Project inflows are low.

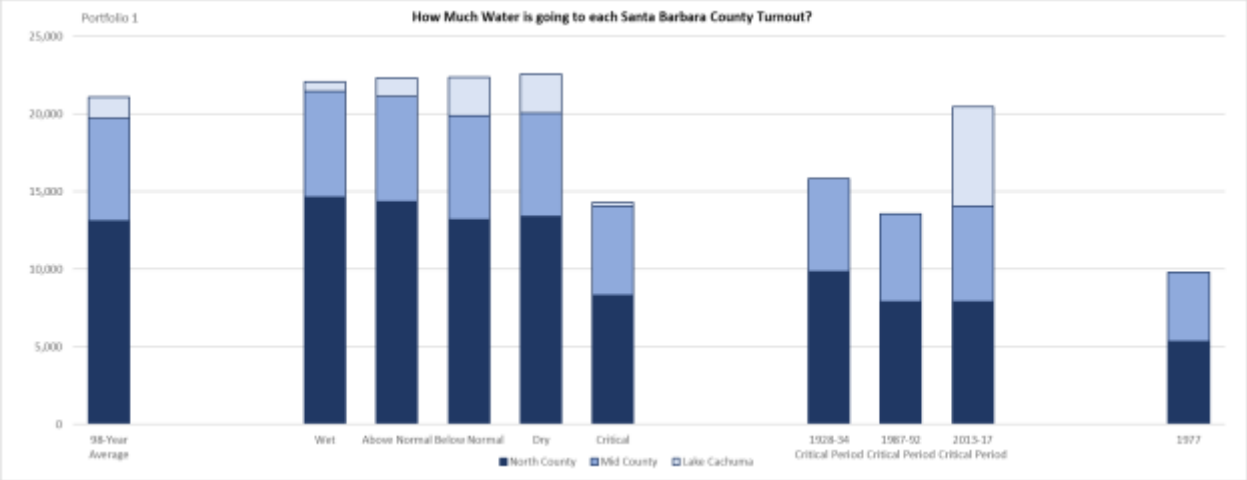


Figure 9-3 SWP Water Supply Deliveries to CCWA by Turnout Group

The Model projects spills of carryover as the SWP starts to use its full share of San Luis Reservoir, which are shown in Figure 9-4. In the Portfolio 1 analysis, the only management tool assumed is the use of short term and long-term carryover in the SWP San Luis Reservoir. Coastal Branch Contractors' unused SWP Table A Allocations are assumed to be stored in San Luis Reservoir, where they are subject to spillage if the reservoir's available storage capacity is exceeded, or their carryover storage exceeds the SWP Water Supply Contractor Article 56 allowable storage amounts. Spills of SLOFCWCD carryover averages 9,400 acre-feet, which is larger

than its local demands and the spillage amounts to about 36% of SLOFCWCD's Table A Amount. As shown in Figure 9-4, SLOFCWCD would have very frequent spills from San Luis Reservoir, which is a result of its relatively low Portfolio 1 delivery demand of 5,271 acre-feet, as compared to its Table A Amount of 25,000 acre-feet. CCWA spills from San Luis Reservoir, while considerably lower than SLOFCWCD's proportion, are 5,470 acre-feet per year, which is about 12% of the CCWA Table A Amount. CCWA spills are projected to occur in wetter year sequences, when SWP Table A allocations are higher for several years.

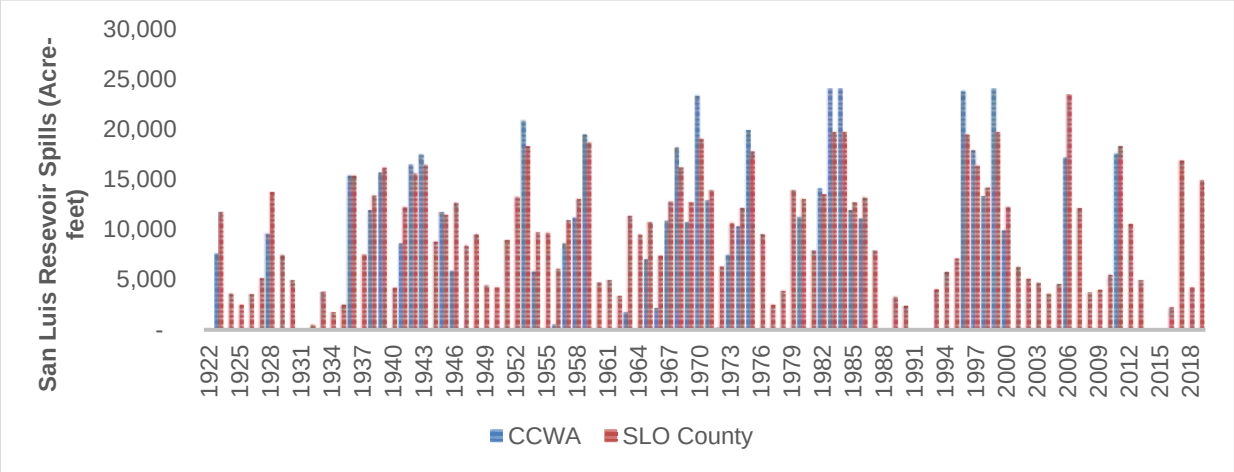


Figure 9-4 Coastal Branch Contractors Spills from San Luis Reservoir Storage

Portfolio 2 "Baseline with External Storage" – Portfolio 2 represents historical baseline operations for Coastal Branch Contractors, with the addition of external storage as provided for in Article 56 of the SWP Water Supply Contract. For analysis purposes, the total amount of external storage assumed in the Model was 10,000 acre-feet for SLOFCWCD and 30,000 acre-feet for CCWA. Since SLOFCWCD's limited demands were already being met in the Portfolio 1 baseline analysis, it did not receive any additional water supply as a result of Portfolio 2. SLOFCWCD's carryover spills also were not reduced significantly through use of the program. Portfolio 2 indicates that, in the absence of increased SLOFCWCD demands, there is no benefit for participating in an external storage program; the additional cost does not improve water supply conditions.

For CCWA however, Portfolio 2 improves water supplies, with SWP deliveries increasing slightly to 21,900 acre-feet. The increase of 800 acre-feet per year includes additional supply of 1,000 acre-feet per year from the external storage program, which is partially offset by reduced purchases as compared to the Portfolio 1 results. While the increased average delivery amounts are relatively small, they have relatively high benefits because they occur during critical drought periods when water is most valuable. Spills for CCWA decrease about 1,000 acre-feet per year, reflecting the improved ability to regulate allocation SWP Table A supplies with the external storage program.

Portfolio 3 "Baseline with SLOFCWCD Additional Use" – Portfolio 3 is a slight variation of Portfolio 2 which provides for increased demands within SLOFCWCD's service area for supplemental groundwater basin supply. Portfolio 3 includes an annual supply of 1,000 acre-feet for the San Luis Obispo Groundwater Basin, which was assumed in the Model as a constant demand in all years. This additional demand was identified as a placeholder for possible other uses of SLOFCWCD's Table A supplies to address unmet water supply needs in other groundwater basins in the county.

Based on Portfolio 3, the 1,000 acre-feet of supplemental demand for SLOFCWCD could be met in all years, without any shortages. Spills of carryover storage from San Luis Reservoir would correspondingly be reduced by 1,000 acre-feet per year. As with Portfolio 2, there is no benefit to SLOFCWCD deliveries from an external storage program.

Since there were no changes to water management components available to CCWA, Portfolio 3 results in essentially no water management changes as compared to Portfolio 2 for CCWA. CCWA deliveries, shortages and spills are not significantly changed for Portfolio 3 as compared to Portfolio 2.

Portfolio 4 "Central Coast Integration" – Portfolio 4 provides for a limited implementation of the 2021 Water Management Amendment to the SWP Water Supply Contract. With Portfolio 4, the water management components of Portfolio 3 are supplemented with a limited sales program between SLOFCWCD and CCWA. Sales are allowed between the two Coastal Branch Contractors based on an approximate schedule of transfer costs. As would be expected due to relatively low SLOFCWCD demands and lack of identified shortages, the Model identified sales only from SLOFCWCD to CCWA.

For the sales and purchases programs in Portfolio 4 and 5, assumptions were needed about the prices for any sales or purchases. The sales/purchase prices are the result of unique circumstances in each year and could fluctuate greatly depending on local water supply conditions throughout the SWP service area. Very uncertain estimates of the sales/purchase prices were estimated based on consultant observation of historical transactions, which are not necessarily indicative of future prices. Considering these factors, the following assumptions were used for sales or purchase prices based on Sacramento Valley water year type (Table 9-4).

Table 9-3 Purchase Price Estimation by Water Year Type

Water Year Type	Purchase Price Estimation
Wet	$200/AF
Above Normal	$500/AF
Below Normal	$1000/AF
Dry	$1,500/AF
Critical	$2,000/AF

Portfolio 4 does not provide any improvement in water supplies or shortages for SLOFCWCD, which were already being completely met in Portfolios 1, 2 and 3. SLOFCWCD does receive additional revenue of $920,000 per year which could be used to offset the fixed costs of its SWP supplies. The limited Central Coast sales program reduces SLOFCWCD's spills by 1,000 acre-feet per year as compared to Portfolio 3.

Portfolio 4 provides improved water supplies and reduced shortages for CCWA. Deliveries increase by an average of about 1,000 acre-feet per year and shortages are reduced significantly. The costs for the additional purchases averaged $920,000 per year. Spills of unused SWP Table A remain unchanged. Because of the significant amount of unused Table A allocation for the SLOFCWCD service area, this Portfolio represents the greatest improvement in water supply for CCWA. While both Portfolios 2 and 3 represent increased water supplies for CCWA by 3.7% (as compared to Portfolio 1), Portfolio 4 has an 8.3% increase in water supplies when compared to Portfolio 1 for CCWA.

Portfolio 5 "Water Management Amendment" – The final portfolio that was analyzed includes full implementation of the 2021 SWP Water Management Amendment, which provides for annual and multi-year sales of SWP Table A outside the Central Coast region, among other provisions. For SLOFCWCD, there is no change to deliveries, which were already fully met with the other portfolios. The primary benefit for SLOFCWCD is more revenue from the assumed sale of unused Table A allocations in many years. Having buyers outside of the Central Coast area provides more opportunity for sales, and revenues are increased to $930,000 per year. The portfolio analysis makes a conservative assumption that the price for the sales is the

same externally as with the sales within the Central Coast region, but a larger market for sales would be very likely to obtain higher prices.

For CCWA, Portfolio 5 provides nearly the same supply as with Portfolio 4, with purchases potentially spread across a broader group of SWP Contractors than just SLOFCWCD, as is the case with Portfolio 4. Portfolio 5 increases the water supplies to CCWA by 8.5% when compared to Portfolio 1. Shortages for CCWA are reduced from 158 af/year in Portfolio 4 to 97 af/year. The major benefit for CCWA is a reduction in spills of carryover water, which result from the ability to sell unused Table A allocations. The sales of SWP water in mostly wet years provided an average of over $2 million per year, which could offset fixed SWP costs. Since the revenue from SWP sales is higher in drier year types than in wetter year types, most of the income from sales occurred in Dry and Critical years. While there was a relatively high volume of total sales in Wet and Above Normal year types (42% of the total volume) it provided a small amount of sale income (only 13% of the total). Conversely, sales in Dry and Critical year types provided a high proportionate share of revenue (57% of the total) for a relatively small share of the sale volume (32% of the total volume sold).

Portfolio Summary – As noted above, the review of the identified portfolios is focused on three of the identified Selection Criteria: Supply, Reliability and Cost. A summary of the results of the portfolio analysis is shown in Table 9-4.

Table 9-4 Summary of Portfolio Analysis Results

	Portfolios Average Annual Amounts for 1922-2019, SLOFCWCD				
	1	2	3	4	5
	Baseline SWP Operations	Baseline with Ext Storage	Baseline with SLOFCWCD Additional Use	Central Coast Integration	Water Management Amendment
SLOFCWCD Deliveries (AF)	5,300	5,300	6,300	6,300	6,300
SLOFCWCD Shortages (AF)	0	0	0	0	0
SLOFCWCD Spills (AF)	9,100	9,000	8,000	6,900	1,300
SLOFCWCD Shortage ($)	0	0	0	0	0
SLOFCWCD External Storage ($)	0	506,600	515,300	536,000	521,200
SLOFCWCD Purchases ($)	0	0	0	6,600	3,500
SLOFCWCD Sales ($)	0	0	0	504,200	838,400

	Portfolios Average Annual Amounts for 1922-2019, CCWA				
	1	2	3	4	5
	Baseline SWP Operations	Baseline with Ext Storage	Baseline with SLOFCWCD Additional Use	Central Coast Integration	Water Management Amendment
CCWA Deliveries (AF)	21,100	21,900	21,800	22,800	22,900
CCWA Shortages (AF)	2,100	1,000	1,000	200	100
CCWA Spills (AF)	5,400	4,400	4,400	4,500	0
CCWA Shortage ($)	1,433,700	662,900	662,800	129,800	67,000
CCWA External Storage ($)	0	1,646,400	1,646,400	1,644,300	1,636,100
CCWA Purchases ($)	79,900	57,400	57,400	543,600	610,700
CCWA Sales ($)	0	0	0	0	2,134,600

The Portfolio results that have been presented here can be very sensitive to the assumptions in the analyses. Some of the key assumptions made and the effects that they may have on the result include the following:

- Access to uncontracted-SLOFCWCD Table A – The analysis described above assumed that the current SLOFCWCD deliveries, with the possible addition of demand to replenish a groundwater basin within SLOFCWCD's service area, would have access to the portion of SLOFCWCD's allocations which has not been contracted for locally. If SLOFCWCD choses to limit current deliveries to the contracted portion of its Table A, then there would be more frequent shortages.
- Maximum Demands – The analyses presented here all used a target demand that was set to the maximum historical Coastal Branch turnout deliveries. The analyses assume that this target demand needs to be met in all years, which may not be an expectation for the Coastal Branch Contractors, specifically portions of their service areas with access to local groundwater such as the North County and Mid County areas of Santa Barbara County (CCWA).

In addition to the two assumptions indicated above, there are other specific assumptions that have been made that could change the results of the analyses and the conclusions that are reported below.

9.3.2 Individual Evaluation Summary

Provide overview description of evaluations of specific water management components or related features such as San Luis Reservoir carryover.

9.4 Water Management Conclusions and Recommendations

Conclusions:

1. SLOFCWCD has adequate SWP water supplies to meet its current Participant and simulated additional demands in all years under historic hydrologic patterns. This assumes that it can use available Coastal Branch conveyance capacity beyond its contracted share and historic hydrologic patterns remain the same in the future.
2. SLOFCWCD has unused SWP water supplies in most years that frequently spill from San Luis Reservoir and could be sold to CCWA or other SWP Contractors to reduce its overall SWP costs.
3. CCWA has frequent SWP supply shortages in dry years.
4. As with SLOFCWCD, CCWA cannot store its unused SWP water supplies during high SWP allocation years for later use during lower SWP allocation years. Thus, a significant amount of its unused SWP water will spill from San Luis Reservoir.
5. CCWA's unused SWP water could be sold to other SWP Contractors and would reduce its overall SWP costs.
6. The availability of annual or multi-year purchases with the SWP Water Management Amendment reduces shortages for CCWA.
7. There is conveyance capacity available in the Coastal Branch in most years.

Recommendations:

1. Explore a program to share conveyance capacity among the Coastal Branch Contractors.

2. Explore a program to transfer excess Table A between SLOFCWCD and CCWA. While a purchase program with other SWP Contractors would help CCWA reduce its shortages, the greatest benefit from a transfer program would likely occur if it can purchase unused Table A from SLOFCWCD.
3. Explore an external storage/exchange program for the Coastal Branch Contractors, particularly if there is increased demand for State Water Project supplies in the Coastal Branch, dry years become more extreme and storage reliability in San Luis Reservoir changes. External storage and exchange programs would not be subject to spill as carryover stored in San Luis Reservoir; thus, reducing the risk of water supply loss. In addition, some of the water stored in an external program could be exchanged with the banking partner to reduce the cost of using the storage.
4. Refine quantitative analysis of Model limitations if CCWA and SLOFCWCD do not fully implement the Management Tool Amendment or attempt to integrate their operations. The Model currently aggregates the operations for CCWA and SLOFCWCD into a single model. Additionally, it does not segregate contract rights for each of the Coastal Branch Contractors' member agencies; therefore, it may overestimate the capability to meet demands in some years. If there are limitations on how individual member unit water allocations can be used and stored, these limitations would need to be added to the model to fully investigate how they would impact water management decisions.
5. Explore alternative management of SLOFCWCD's uncontracted SWP Table A. Available options include entering into contracts with other entities for purposes such as groundwater basin supply augmentation, one-year or multi-year sale of unused Table A or permanent sale of a portion of SLOFCWCD's uncontracted SWP Table A Amount.
6. A small increment of increased supply for San Luis Obispo County groundwater basins was evaluated in Portfolio 3 which supplied SWP water for recharge in all years. As noted in the Portfolio 3 discussion, this kind of supplemental groundwater supply could be scaled up and used for supplemental supply to other Central Coast groundwater basins. Since a supplemental supply for groundwater basins is typically used to maintain long term sustainability, the SWP supplemental deliveries would not necessarily be needed in every year. Given the considerably higher value of SWP supplies through sales in drier years, an alternative approach for supplemental groundwater basin supply would be to provide higher amounts of water deliveries in wetter years and lower amounts (or none at all) in drier years. An intermittent SWP supply approach would likely be more cost effective for SWP supplies, but there would be a tradeoff from increased turnout and delivery facility costs for higher capacity deliveries and lower use factors.

Appendix A Resource Documents

Resource documents utilized to further inform the needs assessment are listed below:

1. Paso Robles Groundwater Subbasin Water Banking Feasibility Study 2008
2. San Luis Obispo County IRWM Plan 2019
3. San Luis Obispo County Flood Control and Water Conservation District SWP Water Delivery Operations – 2020 Update & 2021 Schedule
4. County of San Luis Obispo Regional Water Infrastructure Resiliency Plan
5. Draft Existing Data and Analysis Memorandum 2020
6. City of Solvang Integrated Water Supply Management Plan 2018
7. Santa Barbara County Integrated Regional Water Management Plan Update 2019
8. Paso Basin GSP Appendix I: Water Supply

Appendix B Needs Assessment Summary

The table below represents a summary of the regional needs as provided by survey response, and existing reports. Several areas, as noted below, did not provide sufficient information to include in the summary.

KEY:
- Information provided by survey response.
- Information derived from existing reports.
- Information not available.

	NEEDS													
	Supply				Storage and Regulation			Conveyance Capacity			Quality		Other	
	Groundwater	*Surface Water*	*Dry Year Supply*	*State Water Project*	*Groundwater Banking*	*Surface Water Storage*	*Exchange / Transfer*	*Aqueduct*	*Coastal Branch*	*Other*	*Groundwater*	*State Water Project*	*Cost Control*	*Others*
Central Coast Water Authority													✓	
North County														
City of Santa Maria				✓							✓	✓	✓	
Golden State Water Company	?	?	?	?	?	?	?	?	?	?	?	?	?	?
City of Guadalupe				✓									✓	
Mid County														
City of Buellton	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Santa Ynez RWCD, Improvement District #1	?	?	?	?	?	?	?	?	?	?	?	?	?	?
City of Solvang			✓	✓	✓	✓	✓					✓	✓	
Vandenberg Air Force Base	?	?	?	?	?	?	?	?	?	?	?	?	?	?
South Coast														
Goleta Water District			✓	✓	✓	✓	✓						✓	
City of Santa Barbara			✓	✓	✓	✓	✓						✓	
Montecito Water District			✓	✓	✓	✓	✓						✓	
Carpinteria Valley Water District			✓	✓	✓	✓	✓						✓	
La Cumbre Mutual Water Company			✓	✓	✓	✓	✓						✓	
Other Potential CCWA Water Users	?	?	?	?	?	?	?	?	?	?	?	?	?	?
San Luis Obispo County Flood Control and Water Conservation District													✓	
North SLO														
County of SLO C.S.A. No. 16, I.D. #1 (Shandon)				✓									✓	
Central SLO/Chorro Valley Turn Out														
California Men's Colony (State)		✓	✓	✓	✓	✓	✓						✓	
County of SLO (Op Center & Reg. Park)			✓	✓	✓	✓	✓						✓	
City of Morro Bay			✓	✓	✓	✓	✓						✓	
SLO Co. Comm. Coll. District (Cuesta College)			✓	✓	✓	✓	✓						✓	
South SLO/Lopez Turn Out														
Avila Beach Community Services District		✓	✓	✓	✓	✓	✓						✓	
Avila Valley Mutual Water Company, Inc		✓	✓	✓	✓	✓	✓						✓	
Oceano Community Services District				✓									✓	
City of Pismo Beach		✓	✓	✓	✓	✓	✓						✓	
San Luis Coastal Unified School District			✓	✓	✓	✓	✓						✓	
San Miguelito Mutual Water Company		✓	✓	✓	✓	✓	✓						✓	
Other Potential SLO Water Users	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓

Appendix C Survey Results Table

Appendix D CALSIM Water Supply Summaries

Table D 1 CCWA – Table A Amounts (Acre-Feet) - Study 2020D09E

WY	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Water Year	Cal Year
1922	4,010.0	2,040.0	2,510.0	1,088.3	1,294.4	2,220.8	2,311.8	3,256.7	3,253.6	3,004.4	3,051.4	3,210.5	31,252.0	28,275.2
1923	2,644.6	1,287.5	1,651.1	1,634.2	1,884.0	2,132.7	2,218.7	3,184.7	3,161.4	2,889.8	2,898.6	2,989.6	28,576.9	28,317.2
1924	2,493.3	1,238.0	1,592.2	0.0	22.2	615.7	527.1	648.5	670.1	708.8	772.7	0.0	9,288.6	6,188.6
1925	1,051.0	541.0	631.5	23.8	4.5	800.9	916.0	1,285.9	1,328.9	1,405.6	1,532.3	1,546.5	11,068.1	11,707.5
1926	1,353.2	696.6	813.2	18.7	404.2	1,252.9	1,172.0	2,084.9	2,142.7	2,268.9	2,302.6	2,182.2	16,692.2	17,947.9
1927	1,929.4	981.6	1,207.7	696.6	1,130.5	2,270.0	2,278.2	3,305.2	3,309.8	3,067.8	3,129.9	3,316.4	26,623.1	28,223.6
1928	2,720.0	1,314.8	1,684.4	1,078.0	1,199.2	1,051.3	2,449.0	3,483.2	3,463.7	3,174.7	3,195.2	3,313.7	28,127.3	28,270.5
1929	2,754.2	1,360.2	1,748.0	0.0	26.3	1,095.5	1,130.1	1,510.2	1,560.6	1,650.7	1,799.5	0.0	14,635.2	13,951.3
1930	0.0	0.0	5,178.4	0.0	0.0	334.8	477.6	710.2	733.9	776.3	846.2	854.1	9,911.6	6,314.3
1931	747.4	384.7	449.1	174.8	420.9	1,382.7	1,433.4	1,922.2	1,976.0	2,092.2	2,130.9	2,026.2	15,140.3	17,379.4
1932	0.0	0.0	3,820.2	0.0	94.0	753.0	932.6	1,255.6	1,297.6	1,372.5	1,496.2	1,510.1	12,531.8	11,507.1
1933	1,321.3	680.1	794.0	1.9	112.1	1,268.1	1,493.2	2,061.2	2,118.3	2,243.0	2,276.4	2,157.3	16,527.0	17,803.3
1934	0.0	0.0	4,071.8	17.5	18.0	496.9	607.9	768.4	794.1	840.0	915.6	924.2	9,454.4	7,093.4
1935	808.6	416.2	485.9	23.8	66.6	748.9	1,975.6	3,579.8	3,671.3	3,529.0	3,755.3	4,233.6	23,294.7	28,361.8
1936	3,343.2	1,514.1	1,920.5	0.0	113.9	2,096.2	2,167.7	2,682.0	2,756.4	2,918.7	2,962.1	2,807.2	25,282.0	23,802.4
1937	2,482.0	1,262.7	1,553.6	0.0	327.7	1,712.9	2,530.1	3,548.1	3,564.8	3,321.0	3,409.1	3,646.5	27,358.5	28,278.3
1938	2,973.4	1,423.6	1,821.1	1,349.6	1,856.4	2,172.0	2,775.6	3,756.3	3,852.3	3,702.9	3,940.4	4,442.3	34,066.1	34,960.0
1939	3,508.0	1,588.7	2,015.2	1,002.4	1,151.7	1,362.5	2,466.3	3,548.6	3,513.4	3,197.8	0.0	0.0	23,354.7	16,242.7
1940	0.0	0.0	0.0	0.0	0.0	1,995.0	1,932.9	3,417.1	3,368.5	3,044.5	3,010.8	3,033.4	19,802.2	25,355.5
1941	2,567.2	1,303.9	1,682.2	1,404.7	1,895.1	2,147.8	2,201.2	3,495.1	3,584.5	3,445.5	3,666.4	4,133.4	31,527.1	32,591.2
1942	3,264.1	1,478.3	1,875.1	1,813.1	1,860.4	2,109.9	2,192.9	2,904.0	2,945.6	2,784.8	2,908.3	3,192.0	29,328.5	27,988.8
1943	2,562.0	1,194.2	1,521.6	1,290.9	1,918.6	2,131.7	2,412.1	3,264.3	3,347.8	3,217.9	3,424.3	3,860.5	30,145.9	31,048.6
1944	3,048.5	1,380.6	1,751.3	0.0	2.1	741.7	1,640.4	1,937.3	1,993.9	2,110.7	2,183.4	2,106.1	18,896.1	16,668.9
1945	1,856.6	947.7	1,148.9	274.5	186.5	1,687.6	2,552.1	3,625.8	3,615.8	3,329.4	3,369.8	3,526.3	26,121.2	28,340.3
1946	2,914.6	1,426.7	1,831.0	1,764.5	1,537.3	1,977.4	1,966.9	3,060.6	3,017.1	2,726.9	2,696.7	2,716.9	27,636.6	26,438.3
1947	2,299.4	1,167.9	1,506.7	550.8	470.0	1,197.3	2,223.7	3,224.0	3,178.2	2,872.5	2,840.7	0.0	21,531.2	24,658.9
1948	0.0	3,537.6	4,564.1	5.7	0.0	130.6	449.0	2,912.8	0.0	3,794.5	3,850.9	3,649.5	22,894.6	21,681.1
1949	3,226.8	1,641.6	2,019.8	60.8	61.1	1,050.0	1,431.4	1,712.3	1,767.0	1,869.6	2,003.2	1,993.0	18,836.4	15,653.8
1950	1,747.9	897.4	1,060.2	20.2	132.0	856.7	2,226.7	2,612.0	2,684.4	2,842.5	2,884.7	2,733.9	20,698.5	22,153.0
1951	2,417.2	1,229.7	1,513.0	1,899.1	1,864.7	2,086.0	2,190.0	2,957.8	2,986.6	2,804.2	2,905.2	3,150.9	28,004.4	28,129.0
1952	2,547.5	1,202.3	1,534.8	1,816.2	1,962.9	2,056.0	2,094.1	3,455.8	3,544.2	3,406.7	3,625.2	4,087.0	31,332.7	32,591.2
1953	3,227.4	1,461.6	1,854.0	2,107.1	1,838.0	2,084.5	1,856.6	2,954.0	2,912.0	2,631.9	2,602.7	2,622.3	28,152.3	26,410.0
1954	2,219.3	1,127.2	1,454.2	1,014.4	1,703.0	2,196.6	2,185.9	3,330.0	3,291.6	2,988.1	2,971.6	3,022.1	27,504.0	28,175.0
1955	2,542.7	1,279.9	1,649.2	656.6	876.2	1,276.1	1,322.9	1,884.3	1,936.5	2,050.6	2,081.1	1,972.2	19,528.3	17,778.9
1956	1,743.8	887.1	1,091.5	1,835.0	2,203.8	2,312.7	2,153.8	3,108.3	3,187.8	3,064.2	3,260.7	3,676.0	28,524.5	30,687.2
1957	2,902.9	1,314.7	1,667.6	698.0	751.0	1,348.3	2,064.0	2,421.2	2,488.3	2,634.8	2,674.0	2,534.2	23,498.9	22,396.8
1958	2,240.6	1,139.9	1,402.5	948.8	1,621.6	2,385.7	2,815.2	3,809.9	3,907.3	3,755.8	3,996.6	4,505.7	32,529.6	34,960.0
1959	3,558.0	1,611.4	2,044.0	1,071.9	1,474.8	1,866.0	1,654.9	1,941.3	1,995.1	2,112.6	2,144.0	2,031.9	23,506.0	20,127.6
1960	1,796.5	914.0	1,124.5	0.0	0.0	958.2	2,255.6	2,646.0	2,719.3	2,879.5	2,922.3	2,769.4	20,985.3	22,377.4
1961	2,448.7	1,245.7	1,532.7	0.0	49.9	758.0	1,331.8	1,603.5	1,657.1	1,752.7	1,910.6	1,928.4	16,219.0	14,561.8
1962	0.0	1,647.1	1,922.8	14.0	0.0	1,401.3	2,266.4	2,658.6	2,732.3	2,893.2	2,936.2	2,782.6	21,254.3	22,936.4
1963	2,460.3	1,251.6	1,540.0	1,803.2	1,815.2	2,045.1	1,838.1	3,267.5	3,226.3	2,923.7	2,901.0	2,939.3	28,011.4	28,104.9
1964	2,478.8	1,252.2	1,614.4	1,105.4	1,716.5	1,594.9	2,141.9	3,105.4	3,061.3	2,766.8	2,736.1	2,756.7	26,330.4	26,031.7
1965	2,333.1	1,184.9	1,528.8	1,609.9	1,843.4	1,729.7	1,894.2	2,222.0	2,283.5	2,418.0	2,454.0	2,325.6	23,827.2	23,169.8

WY	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Water Year	Cal Year
1966	2,056.3	1,046.1	1,287.1	1,870.0	1,870.6	2,092.8	2,178.1	3,071.8	3,076.2	2,851.3	2,909.1	3,082.6	27,391.9	28,318.2
1967	2,528.2	1,222.0	1,565.5	650.9	1,952.4	2,193.5	2,436.4	3,691.3	3,785.7	3,638.8	3,872.2	4,365.4	31,902.4	33,575.5
1968	3,447.3	1,561.2	1,980.4	1,516.1	1,896.0	2,142.2	2,158.6	3,129.6	3,085.2	2,788.4	2,757.5	2,778.2	29,240.7	27,338.0
1969	2,351.3	1,194.2	1,540.7	1,426.3	2,227.3	2,345.6	2,717.4	3,677.4	3,771.4	3,625.2	3,857.7	4,349.0	33,083.5	34,960.0
1970	3,434.4	1,555.4	1,972.9	1,817.7	1,868.3	2,089.7	2,193.7	2,976.0	3,002.0	2,814.2	2,910.2	3,147.7	29,782.2	28,116.1
1971	2,549.1	1,206.5	1,540.9	1,799.2	1,720.5	1,755.3	1,617.6	2,068.6	2,126.0	2,251.2	2,284.6	2,165.2	23,084.7	21,874.7
1972	1,914.4	973.9	1,198.3	1,522.9	1,639.6	2,154.3	2,255.2	3,269.8	3,223.3	2,913.3	2,881.0	2,902.6	26,848.6	28,076.0
1973	2,456.6	1,247.7	1,609.7	877.6	1,932.2	2,184.4	2,282.7	3,186.6	3,187.7	2,949.6	3,003.3	3,172.3	28,090.5	28,267.7
1974	2,606.9	1,264.1	1,620.2	1,819.5	2,068.5	2,128.0	2,068.5	3,172.7	3,253.8	3,127.6	3,328.2	3,752.2	30,210.3	30,726.2
1975	2,963.0	1,341.9	1,702.2	1,600.5	1,411.3	2,157.5	2,246.9	3,154.6	3,157.2	2,923.6	2,979.4	3,151.4	28,789.6	28,228.5
1976	2,587.5	1,253.0	1,605.6	1,486.7	1,359.5	1,877.4	2,237.8	3,244.5	3,198.4	2,890.8	2,858.7	2,880.2	27,480.0	22,034.0
1977	0.0	0.0	0.0	23.8	24.5	245.0	236.5	312.4	322.8	341.5	372.3	375.7	2,254.6	2,950.1
1978	328.8	169.2	197.6	0.0	1,044.9	2,203.5	2,343.7	3,222.9	3,305.3	3,177.1	3,380.9	3,811.5	23,185.5	28,592.1
1979	3,009.9	1,363.1	1,729.1	18.4	147.2	1,466.1	2,613.5	3,733.9	3,711.7	3,400.3	3,420.0	3,543.0	28,156.2	28,330.0
1980	2,946.7	1,456.8	1,872.4	759.2	1,914.5	2,324.9	2,407.4	3,258.0	3,341.3	3,211.7	3,417.7	3,853.0	30,763.8	30,656.4
1981	3,042.7	1,378.0	1,747.9	203.8	757.8	856.4	2,330.3	3,378.6	3,330.6	3,010.2	0.0	0.0	20,036.2	18,874.6
1982	0.0	5,007.0	0.0	1,516.5	1,797.3	2,120.2	2,743.3	3,753.0	3,848.9	3,699.7	3,937.0	4,438.4	32,861.3	34,960.0
1983	3,504.9	1,587.3	2,013.5	2,046.4	2,182.5	2,296.4	2,668.0	3,610.6	3,702.9	3,559.3	3,787.6	4,270.0	35,229.5	34,960.0
1984	3,372.0	1,527.1	1,937.1	2,211.0	1,839.7	2,058.5	2,161.1	2,909.9	2,940.4	2,763.8	2,867.0	3,115.4	29,703.0	28,079.9
1985	2,515.8	1,185.0	1,512.3	1,495.6	1,148.0	1,984.0	2,320.8	3,273.1	3,277.8	3,038.2	3,099.8	3,284.7	28,135.0	28,586.1
1986	2,693.9	1,302.1	1,668.1	0.0	0.0	2,406.1	2,441.3	3,373.6	3,418.2	3,226.4	3,363.1	3,680.8	27,573.6	28,016.1
1987	2,959.4	1,383.5	1,763.6	0.0	6.2	1,028.9	1,065.1	1,360.1	1,405.6	1,486.7	1,620.6	1,635.7	15,715.6	12,637.1
1988	0.0	1,397.1	1,631.0	5.7	25.9	365.4	361.9	532.5	550.3	582.1	634.5	640.4	6,726.7	4,884.2
1989	560.4	288.4	336.7	0.0	0.0	910.3	2,553.6	3,702.4	3,649.8	3,298.7	3,262.2	3,286.7	21,849.2	20,663.7
1990	0.0	0.0	0.0	10.3	30.7	351.0	469.6	653.7	675.6	714.6	779.0	786.2	4,470.7	5,926.1
1991	687.9	354.1	413.4	17.5	18.0	726.5	904.8	1,250.1	1,291.9	1,366.5	1,489.6	1,503.5	10,023.9	11,351.7
1992	1,315.5	677.2	790.5	14.5	15.0	449.0	616.1	833.5	861.3	911.0	993.1	1,002.3	8,479.0	7,551.4
1993	877.1	451.5	527.0	0.0	1,616.1	2,291.3	2,395.6	3,460.1	3,418.3	3,100.3	3,079.5	3,125.8	24,342.5	28,159.5
1994	2,633.1	1,327.9	1,711.5	371.0	393.6	985.6	1,180.3	1,421.1	1,468.6	1,553.4	1,693.3	1,709.1	16,448.7	13,940.1
1995	1,495.5	769.8	898.6	23.8	1,959.0	2,251.9	2,606.0	3,927.6	4,028.0	3,871.8	4,120.1	4,644.9	30,596.9	34,869.3
1996	3,668.0	1,661.2	2,107.1	1,748.3	1,826.9	2,061.9	2,185.4	3,109.3	3,188.8	3,065.1	3,261.7	3,677.1	31,560.7	30,011.3
1997	2,903.7	1,315.1	1,668.1	2,037.1	2,178.2	2,057.0	2,072.1	2,862.7	2,900.9	2,738.7	2,855.4	3,126.3	28,715.3	28,012.7
1998	2,513.0	1,174.4	1,496.9	993.5	2,126.4	2,391.2	2,763.2	3,739.4	3,835.0	3,686.3	3,922.7	4,422.3	33,064.4	34,960.0
1999	3,492.2	1,581.6	2,006.2	1,814.8	1,720.5	2,114.5	2,218.3	3,113.2	3,108.1	2,867.0	2,908.1	3,053.6	29,998.2	28,241.4
2000	2,518.5	1,228.6	1,576.1	760.5	1,591.9	2,206.9	2,316.0	3,132.7	3,162.4	2,968.1	3,073.5	3,331.1	27,866.4	28,134.7
2001	2,694.3	1,272.5	1,624.6	0.0	6.2	930.2	990.3	1,298.4	1,341.7	1,419.2	1,547.1	1,561.5	14,686.1	11,985.2
2002	1,366.3	703.3	821.0	610.1	879.0	883.5	1,756.7	2,060.8	2,117.9	2,242.6	2,276.0	2,156.9	17,874.1	19,054.5
2003	0.0	1,825.2	2,245.8	1,279.4	1,497.5	1,562.0	1,329.7	1,690.5	0.0	2,202.2	2,235.0	2,118.1	17,985.4	13,914.4
Avg.	**2,104.1**	**1,179.4**	**1,564.7**	**795.4**	**1,031.8**	**1,592.0**	**1,897.6**	**2,679.8**	**2,654.5**	**2,628.8**	**2,639.2**	**2,696.5**	**23,463.6**	**23,359.2**
Max	**4,010.0**	**5,007.0**	**5,178.4**	**2,211.0**	**2,227.3**	**2,406.1**	**2,815.2**	**3,927.6**	**4,028.0**	**3,871.8**	**4,120.1**	**4,644.9**	**35,229.5**	**34,960.0**
Min	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**130.6**	**236.5**	**312.4**	**0.0**	**341.5**	**0.0**	**0.0**	**2,254.6**	**2,950.1**

Table D 2 CCWA -- Carryover (Article 56) Water (Acre-feet) - Study 2020D09E

WY	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Water Year	Cal Year
1922	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1923	0.0	0.0	0.0	1,623.2	1,448.2	535.7	0.0	0.0	0.0	0.0	0.0	0.0	3,607.1	3,607.1
1924	0.0	0.0	0.0	256.3	256.3	256.3	256.3	256.3	256.3	256.3	0.0	0.0	1,794.1	2,306.7
1925	512.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	512.6	0.0
1926	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1927	0.0	0.0	0.0	139.1	124.1	45.9	0.0	0.0	0.0	0.0	0.0	0.0	309.0	309.0
1928	0.0	0.0	0.0	1,832.9	1,635.4	604.9	0.0	0.0	0.0	0.0	0.0	0.0	4,073.1	4,073.1
1929	0.0	0.0	0.0	295.3	295.3	295.3	295.3	295.3	295.3	295.3	295.3	0.0	2,362.1	2,362.1
1930	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1931	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1932	0.0	0.0	0.0	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	284.3	284.3
1933	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1934	0.0	0.0	0.0	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	0.0	272.5	306.5
1935	0.0	34.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.1	0.0
1936	0.0	0.0	0.0	834.2	744.3	275.3	0.0	0.0	0.0	0.0	0.0	0.0	1,853.8	1,853.8
1937	0.0	0.0	0.0	184.4	164.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	349.0	349.0
1938	0.0	0.0	0.0	2,125.9	1,896.8	701.5	0.0	0.0	0.0	0.0	0.0	0.0	4,724.2	4,724.2
1939	0.0	0.0	0.0	1,170.0	1,170.0	1,170.0	1,170.0	1,170.0	1,170.0	1,170.0	0.0	0.0	8,190.0	8,190.0
1940	0.0	0.0	0.0	70.8	63.1	23.3	0.0	0.0	0.0	0.0	0.0	0.0	157.2	157.2
1941	0.0	0.0	0.0	333.0	297.1	109.9	0.0	0.0	0.0	0.0	0.0	0.0	740.0	740.0
1942	0.0	0.0	0.0	4,417.4	3,941.3	1,457.8	0.0	0.0	0.0	0.0	0.0	0.0	9,816.5	9,816.5
1943	0.0	0.0	0.0	2,910.9	2,597.2	960.6	0.0	0.0	0.0	0.0	0.0	0.0	6,468.7	6,468.7
1944	0.0	0.0	0.0	415.1	415.1	415.1	415.1	415.1	415.1	415.1	415.1	415.1	3,735.8	3,735.8
1945	0.0	0.0	0.0	94.4	84.2	31.1	0.0	0.0	0.0	0.0	0.0	0.0	209.7	209.7
1946	0.0	0.0	0.0	1,464.0	1,306.2	483.1	0.0	0.0	0.0	0.0	0.0	0.0	3,253.3	3,253.3
1947	0.0	0.0	0.0	85.7	85.7	85.7	85.7	85.7	85.7	85.7	0.0	0.0	600.1	600.1
1948	0.0	0.0	0.0	70.8	63.1	23.3	0.0	0.0	0.0	0.0	0.0	0.0	157.2	157.2
1949	0.0	0.0	0.0	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	373.3	373.3
1950	0.0	0.0	0.0	29.0	25.9	9.6	0.0	0.0	0.0	0.0	0.0	0.0	64.4	64.4
1951	0.0	0.0	0.0	171.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171.6	171.6
1952	0.0	0.0	0.0	2,547.5	2,272.9	840.7	0.0	0.0	0.0	0.0	0.0	0.0	5,661.0	5,661.0
1953	0.0	0.0	0.0	4,417.4	3,941.3	1,457.8	0.0	0.0	0.0	0.0	0.0	0.0	9,816.5	9,816.5
1954	0.0	0.0	0.0	346.9	309.5	114.5	0.0	0.0	0.0	0.0	0.0	0.0	770.8	770.8
1955	0.0	0.0	0.0	155.9	155.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	311.8	311.8
1956	0.0	0.0	0.0	137.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	137.8	137.8
1957	0.0	0.0	0.0	4,159.4	3,711.1	1,372.6	0.0	0.0	0.0	0.0	0.0	0.0	9,243.0	9,243.0
1958	0.0	0.0	0.0	173.5	154.8	57.3	0.0	0.0	0.0	0.0	0.0	0.0	385.6	385.6
1959	0.0	0.0	0.0	4,738.5	4,227.8	1,563.7	0.0	0.0	0.0	0.0	0.0	0.0	10,530.0	10,530.0
1960	0.0	0.0	0.0	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	346.6	346.6
1961	0.0	0.0	0.0	42.8	42.8	42.8	42.8	42.8	42.8	42.8	42.8	42.8	385.3	385.3
1962	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1963	0.0	0.0	0.0	177.7	158.6	58.6	0.0	0.0	0.0	0.0	0.0	0.0	394.9	394.9
1964	0.0	0.0	0.0	129.7	129.7	129.7	129.7	129.7	129.7	129.7	129.7	129.7	1,167.0	1,167.0
1965	0.0	0.0	0.0	341.9	305.0	112.8	0.0	0.0	0.0	0.0	0.0	0.0	759.7	759.7

WY	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Water Year	Cal Year
1966	0.0	0.0	0.0	179.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	179.5	179.5
1967	0.0	0.0	0.0	1,840.7	1,642.3	607.4	0.0	0.0	0.0	0.0	0.0	0.0	4,090.3	4,090.3
1968	0.0	0.0	0.0	4,550.8	4,060.4	1,501.8	0.0	0.0	0.0	0.0	0.0	0.0	10,113.0	10,113.0
1969	0.0	0.0	0.0	359.0	320.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	679.4	679.4
1970	0.0	0.0	0.0	4,738.5	2,248.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6,986.5	6,986.5
1971	0.0	0.0	0.0	2,459.5	2,194.4	811.6	0.0	0.0	0.0	0.0	0.0	0.0	5,465.5	5,465.5
1972	0.0	0.0	0.0	169.5	151.2	55.9	0.0	0.0	0.0	0.0	0.0	0.0	376.6	376.6
1973	0.0	0.0	0.0	368.7	329.0	121.7	0.0	0.0	0.0	0.0	0.0	0.0	819.4	819.4
1974	0.0	0.0	0.0	1,741.0	1,553.4	574.5	0.0	0.0	0.0	0.0	0.0	0.0	3,868.9	3,868.9
1975	0.0	0.0	0.0	4,164.6	3,715.8	1,374.3	0.0	0.0	0.0	0.0	0.0	0.0	9,254.8	9,254.8
1976	0.0	0.0	0.0	439.5	439.5	439.5	439.5	439.5	439.5	439.5	439.5	0.0	3,516.3	3,516.3
1977	0.0	0.0	0.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	157.2	157.2
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	3,875.4	3,457.7	1,278.9	0.0	0.0	0.0	0.0	0.0	0.0	8,612.0	8,612.0
1980	0.0	0.0	0.0	1,167.0	1,041.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,208.3	2,208.3
1981	0.0	0.0	0.0	1,026.0	1,026.0	1,026.0	1,026.0	1,026.0	1,026.0	1,026.0	0.0	0.0	7,181.8	9,233.7
1982	0.0	2,051.9	0.0	70.8	63.1	23.3	0.0	0.0	0.0	0.0	0.0	0.0	2,209.2	157.2
1983	0.0	0.0	0.0	4,738.5	4,227.8	653.9	0.0	0.0	0.0	0.0	0.0	0.0	9,620.2	9,620.2
1984	0.0	0.0	0.0	4,738.5	1,642.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6,380.8	6,380.8
1985	0.0	0.0	0.0	642.6	55.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	698.5	698.5
1986	0.0	0.0	0.0	1,858.1	1,657.8	613.2	0.0	0.0	0.0	0.0	0.0	0.0	4,129.0	4,129.0
1987	0.0	0.0	0.0	697.5	697.5	697.5	697.5	697.5	697.5	697.5	697.5	0.0	5,579.7	6,277.1
1988	0.0	0.0	697.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	697.5	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	157.2	157.2
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994	0.0	0.0	0.0	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4	1,281.3	1,281.3
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	2,872.1	2,562.6	947.8	0.0	0.0	0.0	0.0	0.0	0.0	6,382.5	6,382.5
1997	0.0	0.0	0.0	4,067.8	3,026.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7,094.5	7,094.5
1998	0.0	0.0	0.0	2,835.6	2,529.9	935.7	0.0	0.0	0.0	0.0	0.0	0.0	6,301.2	6,301.2
1999	0.0	0.0	0.0	4,738.5	4,227.8	1,563.7	0.0	0.0	0.0	0.0	0.0	0.0	10,530.0	10,530.0
2000	0.0	0.0	0.0	1,560.7	1,392.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,953.1	2,953.1
2001	0.0	0.0	0.0	623.6	623.6	623.6	623.6	623.6	623.6	623.6	623.6	623.6	5,612.0	5,612.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	82.3	73.4	27.1	0.0	0.0	0.0	0.0	0.0	0.0	182.8	182.8
Avg.	**6.3**	**25.4**	**8.5**	**1,132.0**	**942.8**	**334.6**	**67.1**	**67.1**	**67.1**	**67.1**	**36.2**	**18.3**	**2,772.5**	**2,772.5**
Max	**512.6**	**2,051.9**	**697.5**	**4,738.5**	**4,227.8**	**1,563.7**	**1,170.0**	**1,170.0**	**1,170.0**	**1,170.0**	**697.5**	**623.6**	**10,530.0**	**10,530.0**
Min	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Table D 3 CCWA -- Article 21 Water Acre-feet) - Study 2020D09E

WY	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Water Year	Cal Year
1922	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1923	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1924	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1925	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1926	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1927	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1928	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1929	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1930	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1931	0.0	0.0	0.0	1,844.0	1,844.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,688.0	3,688.0
1932	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1933	0.0	0.0	0.0	0.0	0.0	1,844.0	0.0	0.0	0.0	0.0	0.0	0.0	1,844.0	1,844.0
1934	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1935	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1936	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1937	0.0	0.0	0.0	0.0	1,844.0	1,844.0	0.0	0.0	0.0	0.0	0.0	0.0	3,688.0	3,688.0
1938	0.0	0.0	0.0	0.0	0.0	1,844.0	1,844.0	1,844.0	0.0	0.0	0.0	0.0	5,532.0	5,532.0
1939	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1940	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1941	0.0	0.0	0.0	0.0	0.0	0.0	1,844.0	0.0	0.0	0.0	0.0	0.0	1,844.0	1,844.0
1942	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1943	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1944	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1945	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1946	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1947	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1948	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1949	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1950	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1951	0.0	0.0	0.0	1,844.0	1,844.0	1,844.0	0.0	0.0	0.0	0.0	0.0	0.0	5,532.0	5,532.0
1952	0.0	0.0	0.0	0.0	0.0	0.0	1,844.0	1,844.0	0.0	0.0	0.0	0.0	3,688.0	3,688.0
1953	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1954	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1955	0.0	0.0	0.0	0.0	0.0	1,844.0	0.0	0.0	0.0	0.0	0.0	0.0	1,844.0	1,844.0
1956	0.0	0.0	0.0	1,844.0	1,844.0	1,844.0	0.0	0.0	0.0	0.0	0.0	0.0	5,532.0	5,532.0
1957	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1958	0.0	0.0	0.0	0.0	0.0	1,844.0	1,844.0	1,844.0	0.0	0.0	0.0	0.0	5,532.0	5,532.0
1959	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1960	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1961	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1962	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

WY	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Water Year	Cal Year
1966	0.0	0.0	0.0	1,844.0	1,844.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,688.0	3,688.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	1,844.0	1,844.0	1,844.0	1,844.0	794.0	0.0	0.0	0.0	0.0	8,170.0	8,170.0
1970	0.0	0.0	0.0	1,844.0	1,844.0	1,844.0	0.0	0.0	0.0	0.0	0.0	0.0	5,532.0	5,532.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	1,844.0	1,844.0	0.0	0.0	0.0	0.0	0.0	0.0	3,688.0	3,688.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	1,844.0	0.0	0.0	0.0	0.0	0.0	1,844.0	1,844.0
1983	0.0	0.0	0.0	1,844.0	1,844.0	1,844.0	1,844.0	794.0	0.0	0.0	0.0	0.0	8,170.0	8,170.0
1984	0.0	0.0	0.0	1,844.0	1,844.0	1,844.0	0.0	0.0	0.0	0.0	0.0	0.0	5,532.0	5,532.0
1985	0.0	0.0	0.0	1,844.0	1,844.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,688.0	3,688.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,844.0	0.0	0.0	0.0	0.0	1,844.0	1,844.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	1,844.0	1,844.0	1,844.0	0.0	0.0	0.0	0.0	0.0	0.0	5,532.0	5,532.0
1998	0.0	0.0	0.0	0.0	1,844.0	1,844.0	1,844.0	1,844.0	0.0	0.0	0.0	0.0	7,376.0	7,376.0
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	0.0	0.0	0.0	0.0	1,844.0	1,844.0	0.0	0.0	0.0	0.0	0.0	0.0	3,688.0	3,688.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Avg.	**0.0**	**0.0**	**0.0**	**224.9**	**314.8**	**337.3**	**179.9**	**131.8**	**0.0**	**0.0**	**0.0**	**0.0**	**1,188.7**	**1,188.7**
Max	**0.0**	**0.0**	**0.0**	**1,844.0**	**1,844.0**	**1,844.0**	**1,844.0**	**1,844.0**	**0.0**	**0.0**	**0.0**	**0.0**	**8,170.0**	**8,170.0**
Min	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Table D 4 San Luis Obispo FCWCD – Table A Amounts (Acre Feet) – Study 2020D09E

WY	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Water Year	Cal Year
1922	1,750.0	1,440.0	1,380.0	495.7	583.3	911.2	982.1	1,029.2	1,056.4	1,096.9	1,103.1	1,042.7	12,870.6	11,056.0
1923	1,037.8	875.8	841.9	735.4	798.9	874.3	930.6	986.7	1,013.0	1,051.3	1,054.4	996.5	11,196.5	11,089.6
1924	997.0	841.9	809.6	0.0	9.8	301.4	274.3	294.2	301.8	314.1	309.5	0.0	4,453.5	2,876.0
1925	406.1	340.8	324.0	10.2	2.0	392.0	477.4	585.5	600.8	625.2	616.0	581.6	4,961.6	5,440.7
1926	587.7	493.3	469.0	8.0	178.4	614.1	611.1	834.5	848.9	882.2	873.8	826.0	7,227.0	7,854.2
1927	835.6	687.6	654.1	297.6	506.3	938.1	962.3	1,060.1	1,087.9	1,129.8	1,137.3	1,075.1	10,371.7	11,029.6
1928	1,068.0	901.1	866.1	488.8	540.5	517.1	1,029.8	1,080.9	1,109.7	1,151.8	1,156.0	1,092.6	11,002.4	11,066.6
1929	1,091.6	921.6	886.2	0.0	11.6	536.2	588.6	686.7	704.6	733.2	722.5	0.0	6,882.7	6,483.4
1930	0.0	0.0	2,500.0	0.0	0.0	163.8	249.1	323.8	332.3	345.8	340.7	321.7	4,577.2	2,934.4
1931	325.0	272.8	259.4	74.7	186.1	653.3	708.0	777.7	791.4	822.6	814.5	769.9	6,455.6	7,629.0
1932	0.0	0.0	2,030.6	0.0	41.5	368.7	486.3	571.6	586.5	610.3	601.4	567.8	5,864.9	5,347.5
1933	573.8	481.6	457.8	0.8	49.5	620.8	734.6	827.1	841.3	874.4	866.0	818.7	7,146.4	7,791.0
1934	0.0	0.0	2,157.8	7.5	8.0	243.2	317.0	349.4	358.5	373.1	367.6	347.1	4,529.3	3,296.4
1935	350.7	294.4	279.9	10.2	29.4	366.7	898.9	1,238.2	1,269.1	1,320.7	1,341.4	1,269.1	8,668.9	11,025.1
1936	1,238.2	1,042.1	1,000.9	0.0	50.2	874.6	995.7	1,100.5	1,119.3	1,163.4	1,152.2	1,089.2	10,826.4	10,416.2
1937	1,101.8	906.7	862.6	0.0	144.6	765.8	1,095.6	1,150.7	1,180.7	1,226.6	1,236.2	1,168.8	10,840.1	11,042.5
1938	1,158.1	976.7	938.7	634.5	808.4	883.4	1,216.0	1,280.0	1,312.0	1,365.3	1,386.6	1,312.0	13,271.6	13,590.0
1939	1,280.0	1,077.3	1,034.6	434.6	516.5	608.5	1,043.1	1,093.7	1,123.0	1,165.1	0.0	0.0	9,376.5	11,193.9
1940	0.0	0.0	5,209.4	0.0	0.0	892.1	881.5	1,040.4	1,068.6	1,108.2	1,108.2	1,047.0	12,355.4	9,947.2
1941	1,053.8	890.6	856.6	660.4	800.7	875.0	960.9	1,193.9	1,223.7	1,273.5	1,293.4	1,223.7	12,306.4	12,669.2
1942	1,193.9	1,004.9	965.1	802.5	793.6	864.4	919.6	958.5	983.0	1,022.0	1,033.9	977.8	11,519.2	10,905.9
1943	961.7	810.3	778.5	606.9	794.6	872.8	1,057.4	1,113.1	1,140.9	1,187.3	1,205.8	1,140.9	11,670.4	12,069.5
1944	1,113.1	936.9	899.7	0.0	0.9	363.0	773.9	811.3	827.2	860.1	850.6	803.8	8,240.5	7,416.2
1945	812.9	672.7	639.8	117.3	83.0	754.8	1,096.2	1,150.3	1,180.8	1,225.8	1,231.8	1,164.4	10,129.7	11,086.2
1946	1,160.5	979.6	941.7	794.0	672.5	809.8	821.2	925.9	951.1	986.3	986.3	931.8	10,960.8	10,371.9
1947	937.9	792.7	762.4	235.3	208.8	588.7	935.9	980.8	1,007.4	1,044.7	1,044.7	0.0	8,539.2	9,673.9
1948	1,364.8	1,153.4	1,109.4	2.4	0.0	63.9	234.7	1,190.0	1,210.4	1,258.0	1,245.9	1,177.9	10,010.9	9,487.9
1949	1,191.5	980.4	932.7	26.0	27.1	514.2	721.8	757.1	775.3	806.6	795.7	751.5	8,280.0	7,173.2
1950	759.6	634.7	603.5	8.6	58.3	419.6	1,013.0	1,061.5	1,079.7	1,122.2	1,111.4	1,050.7	8,922.8	9,694.4
1951	1,062.8	874.6	832.0	821.0	776.6	855.6	932.0	966.1	991.1	1,030.0	1,040.2	983.6	11,165.6	10,971.6
1952	970.7	818.3	786.3	803.2	813.8	839.7	916.2	1,184.2	1,213.8	1,263.2	1,282.9	1,213.8	12,106.4	12,669.2
1953	1,184.2	996.7	957.3	910.9	785.8	855.8	775.9	895.1	919.4	953.5	953.5	900.8	11,089.0	10,360.8
1954	906.7	766.3	737.1	443.0	750.3	903.6	919.0	1,022.1	1,049.7	1,088.9	1,090.2	1,030.1	10,707.0	11,045.6
1955	1,034.3	873.9	840.5	280.5	388.3	604.6	655.2	758.0	771.0	801.3	793.6	750.3	8,551.4	7,780.2
1956	758.9	624.5	594.1	813.4	914.3	945.3	941.3	1,059.2	1,085.7	1,129.8	1,147.5	1,085.7	11,099.7	11,929.1
1957	1,059.2	891.5	856.2	298.2	333.1	613.0	941.4	986.5	1,003.4	1,042.8	1,032.8	976.4	10,034.4	9,801.1
1958	987.7	812.7	773.2	405.3	715.2	979.0	1,240.5	1,305.7	1,338.4	1,392.8	1,414.6	1,338.4	12,703.4	13,590.0
1959	1,305.7	1,099.0	1,055.5	484.4	665.2	765.2	758.4	794.7	808.3	840.1	832.0	786.6	10,195.0	8,808.1
1960	795.7	654.7	622.9	0.0	0.0	468.9	1,025.7	1,074.9	1,093.3	1,136.3	1,125.4	1,063.9	9,061.6	9,792.6
1961	1,076.2	885.6	842.5	0.0	22.0	371.0	695.1	729.3	748.3	778.7	767.3	724.5	7,640.6	6,767.1
1962	0.0	989.8	940.9	6.0	0.0	656.6	1,031.3	1,080.7	1,099.3	1,142.5	1,131.5	1,069.7	9,148.4	10,037.3
1963	1,082.1	890.4	847.1	806.0	793.7	837.2	764.9	995.4	1,022.3	1,060.3	1,061.0	1,002.5	11,162.8	11,021.2
1964	1,007.6	851.4	818.9	509.2	753.9	710.6	892.3	935.1	960.5	996.1	996.1	941.1	10,372.7	10,212.4
1965	947.2	800.5	770.0	756.9	799.4	769.3	859.6	900.8	916.2	952.3	943.1	891.6	10,306.9	10,139.4

WY	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Water Year	Cal Year
1966	901.9	742.1	706.1	808.4	779.2	858.5	932.4	978.9	1,004.6	1,043.3	1,050.2	992.8	10,798.5	11,066.5
1967	986.2	832.1	799.8	278.0	822.2	905.2	1,074.5	1,270.3	1,302.1	1,355.0	1,376.2	1,302.1	12,303.6	13,051.8
1968	1,270.3	1,069.2	1,026.8	682.2	797.4	879.8	906.1	949.5	975.2	1,011.4	1,011.4	955.5	11,534.9	10,724.9
1969	961.7	812.8	781.8	670.6	922.9	957.6	1,191.7	1,254.4	1,285.8	1,338.1	1,359.0	1,285.8	12,822.1	13,590.0
1970	1,254.4	1,055.8	1,014.0	798.9	777.3	856.3	932.6	968.3	993.4	1,032.3	1,042.1	985.4	11,711.0	10,969.1
1971	973.3	820.5	788.5	803.4	753.9	716.6	743.3	849.2	863.7	897.7	889.1	840.5	9,939.6	9,572.6
1972	850.2	699.6	665.6	685.3	718.9	884.2	945.1	990.4	1,017.3	1,055.0	1,055.0	996.7	10,563.3	11,014.4
1973	1,003.2	847.9	815.5	374.9	826.2	900.2	970.2	1,015.8	1,042.5	1,082.7	1,089.3	1,029.8	10,998.1	11,049.6
1974	1,023.8	863.9	830.4	793.4	858.8	870.2	899.4	1,085.6	1,112.8	1,158.0	1,176.1	1,112.8	11,785.3	11,944.2
1975	1,085.6	913.8	877.6	720.2	636.1	881.3	953.1	998.5	1,024.8	1,064.2	1,071.0	1,012.5	11,238.8	11,033.1
1976	1,006.2	849.0	816.1	699.0	610.5	833.6	928.2	972.7	999.0	1,036.1	1,036.1	978.9	10,765.2	10,712.7
1977	985.2	0.0	1,633.6	10.2	10.9	120.0	123.3	142.1	145.8	151.7	149.5	141.2	3,613.5	1,371.0
1978	142.7	119.7	113.8	0.0	461.0	915.2	1,027.3	1,109.7	1,137.4	1,183.7	1,202.2	1,137.4	8,550.1	11,114.6
1979	1,109.7	934.0	897.0	7.9	65.0	666.5	1,120.3	1,175.2	1,206.5	1,252.2	1,256.7	1,187.7	10,878.7	11,090.8
1980	1,186.9	1,002.2	963.6	324.3	834.7	953.9	1,058.4	1,114.1	1,142.0	1,188.4	1,206.9	1,142.0	12,117.5	11,917.1
1981	1,114.1	937.7	900.6	87.1	334.9	421.4	985.1	1,032.4	1,060.4	1,099.6	1,099.6	0.0	9,072.8	8,066.8
1982	0.0	1,946.4	0.0	713.0	786.3	862.7	1,200.0	1,277.5	1,309.4	1,362.6	1,383.9	1,309.4	12,151.1	13,590.0
1983	1,277.5	1,075.2	1,032.6	884.7	906.2	939.6	1,172.3	1,234.0	1,264.9	1,316.3	1,336.9	1,264.9	13,705.1	13,590.0
1984	1,234.0	1,038.6	997.5	955.9	764.2	843.2	918.5	951.2	975.7	1,014.1	1,024.4	968.7	11,686.0	10,950.7
1985	955.5	805.4	773.9	703.2	512.9	811.9	988.9	1,038.3	1,065.5	1,106.6	1,113.9	1,053.1	10,929.1	11,171.2
1986	1,046.0	882.5	848.3	0.0	0.0	1,000.6	1,071.8	1,126.7	1,155.6	1,201.4	1,214.8	1,148.9	10,696.6	10,919.1
1987	1,130.9	953.0	915.6	0.0	2.8	503.5	554.8	617.9	634.0	659.8	650.1	613.9	7,236.2	5,872.7
1988	0.0	838.6	797.2	2.4	11.4	178.9	188.5	242.5	248.9	259.0	255.2	240.9	3,263.6	2,269.8
1989	243.5	204.3	194.3	0.0	0.0	445.5	1,085.4	1,137.5	1,168.3	1,211.6	1,211.6	1,144.7	8,046.6	8,556.7
1990	1,152.1	0.0	0.0	4.4	13.6	171.9	245.0	297.8	305.6	318.0	313.4	295.9	3,117.6	2,754.0
1991	299.0	250.9	238.6	7.5	8.0	355.6	471.8	569.3	584.1	607.8	598.9	565.5	4,556.8	5,275.3
1992	571.4	479.6	455.9	6.2	6.6	219.8	321.3	379.5	389.4	405.2	399.3	377.0	4,011.5	3,509.3
1993	381.0	319.8	304.0	0.0	730.2	946.1	1,014.1	1,063.0	1,091.7	1,132.4	1,133.4	1,070.9	9,186.6	11,041.2
1994	1,075.9	909.1	874.3	158.5	174.6	484.4	617.3	647.7	664.6	691.6	681.4	643.4	7,622.8	6,478.2
1995	650.2	545.7	518.8	10.2	857.8	931.3	1,149.0	1,351.1	1,384.9	1,441.2	1,463.7	1,384.9	11,688.9	13,554.8
1996	1,351.1	1,137.2	1,092.2	786.7	796.3	838.2	952.6	1,056.4	1,082.8	1,126.8	1,144.4	1,082.8	12,447.5	11,666.3
1997	1,056.4	889.1	853.9	880.7	904.5	843.5	895.6	941.6	965.7	1,004.0	1,015.2	960.2	11,210.3	10,917.5
1998	945.0	796.3	765.1	428.5	886.5	983.0	1,219.0	1,283.2	1,315.3	1,368.7	1,390.1	1,315.3	12,696.0	13,590.0
1999	1,283.2	1,080.0	1,037.2	801.8	754.5	864.0	933.0	979.3	1,005.1	1,043.6	1,049.2	991.7	11,822.7	11,044.5
2000	987.6	833.5	801.3	324.9	719.9	906.1	986.3	1,023.5	1,050.0	1,091.2	1,101.9	1,042.0	10,868.0	10,974.4
2001	1,028.5	867.0	833.2	0.0	2.8	455.2	515.9	590.2	605.6	630.2	621.0	586.3	6,735.9	5,569.7
2002	592.5	497.3	472.7	260.6	389.4	436.2	797.8	836.1	850.4	883.8	875.4	827.5	7,719.8	8,338.5
2003	0.0	1,117.8	1,063.4	601.5	673.4	693.0	600.3	682.7	0.0	850.4	842.3	796.2	7,921.0	5,739.8
Avg.	**873.7**	**770.8**	**880.8**	**354.4**	**445.5**	**684.9**	**842.1**	**931.4**	**945.6**	**993.1**	**981.6**	**891.4**	**9,595.3**	**9,539.6**
Max	**1,750.0**	**1,946.4**	**5,209.4**	**955.9**	**922.9**	**1,000.6**	**1,240.5**	**1,351.1**	**1,384.9**	**1,441.2**	**1,463.7**	**1,384.9**	**13,705.1**	**13,590.0**
Min	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**63.9**	**123.3**	**142.1**	**0.0**	**151.7**	**0.0**	**0.0**	**3,117.6**	**1,371.0**

Table D 5 San Luis Obispo FCWCD – Carryover Article 56) Water (Acre-Feet) – Study 2020D09E

WY	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Water Year	Cal Year
1922	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1923	0.0	0.0	0.0	2,909.5	2,595.9	960.1	0.0	0.0	0.0	0.0	0.0	0.0	6,465.6	6,465.6
1924	0.0	0.0	0.0	637.8	637.8	637.8	637.8	637.8	637.8	637.8	0.0	0.0	4,464.8	5,740.4
1925	1,275.7	0.0	0.0	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	1,800.8	525.1
1926	0.0	0.0	0.0	110.4	110.4	110.4	110.4	110.4	110.4	110.4	110.4	110.4	993.4	993.4
1927	0.0	0.0	0.0	980.7	875.0	323.6	0.0	0.0	0.0	0.0	0.0	0.0	2,179.3	2,179.3
1928	0.0	0.0	0.0	3,023.9	2,698.0	997.9	0.0	0.0	0.0	0.0	0.0	0.0	6,719.8	6,719.8
1929	0.0	0.0	0.0	658.9	658.9	658.9	658.9	658.9	658.9	658.9	658.9	0.0	5,271.5	5,271.5
1930	0.0	0.0	0.0	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	110.7	110.7
1931	0.0	0.0	0.0	59.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59.5	59.5
1932	0.0	0.0	0.0	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9	2,078.4	2,078.4
1933	0.0	0.0	0.0	108.5	108.5	108.5	0.0	0.0	0.0	0.0	0.0	0.0	325.5	325.5
1934	0.0	0.0	0.0	240.2	240.2	240.2	240.2	240.2	240.2	240.2	240.2	0.0	1,921.5	2,161.7
1935	0.0	240.2	0.0	270.9	241.7	89.4	0.0	0.0	0.0	0.0	0.0	0.0	842.1	601.9
1936	0.0	0.0	0.0	458.5	409.1	151.3	0.0	0.0	0.0	0.0	0.0	0.0	1,018.8	1,018.8
1937	0.0	0.0	0.0	1,300.6	1,160.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,461.0	2,461.0
1938	0.0	0.0	0.0	3,192.6	2,848.5	1,053.6	0.0	0.0	0.0	0.0	0.0	0.0	7,094.7	7,094.7
1939	0.0	0.0	0.0	1,267.8	1,267.8	1,267.8	1,267.8	1,267.8	1,267.8	1,267.8	0.0	0.0	8,874.4	8,874.4
1940	0.0	0.0	0.0	38.9	34.7	12.8	0.0	0.0	0.0	0.0	0.0	0.0	86.4	86.4
1941	0.0	0.0	0.0	1,977.4	1,764.3	652.5	0.0	0.0	0.0	0.0	0.0	0.0	4,394.2	4,394.2
1942	0.0	0.0	0.0	4,786.6	4,270.7	1,579.6	0.0	0.0	0.0	0.0	0.0	0.0	10,636.9	10,636.9
1943	0.0	0.0	0.0	3,613.9	3,224.4	1,192.6	0.0	0.0	0.0	0.0	0.0	0.0	8,031.0	8,031.0
1944	0.0	0.0	0.0	228.1	228.1	228.1	228.1	228.1	228.1	228.1	228.1	228.1	2,053.1	2,053.1
1945	0.0	0.0	0.0	836.9	746.7	276.2	0.0	0.0	0.0	0.0	0.0	0.0	1,859.8	1,859.8
1946	0.0	0.0	0.0	2,824.5	2,520.1	932.1	0.0	0.0	0.0	0.0	0.0	0.0	6,276.7	6,276.7
1947	0.0	0.0	0.0	509.1	509.1	509.1	509.1	509.1	509.1	509.1	0.0	0.0	3,563.7	3,563.7
1948	0.0	0.0	0.0	38.9	34.7	12.8	0.0	0.0	0.0	0.0	0.0	0.0	86.4	86.4
1949	0.0	0.0	0.0	292.5	292.5	292.5	292.5	292.5	292.5	292.5	292.5	292.5	2,632.6	2,632.6
1950	0.0	0.0	0.0	659.3	588.2	217.6	0.0	0.0	0.0	0.0	0.0	0.0	1,465.1	1,465.1
1951	0.0	0.0	0.0	1,210.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,210.4	1,210.4
1952	0.0	0.0	0.0	3,419.3	3,050.8	1,128.4	0.0	0.0	0.0	0.0	0.0	0.0	7,598.5	7,598.5
1953	0.0	0.0	0.0	4,786.6	4,270.7	1,579.6	0.0	0.0	0.0	0.0	0.0	0.0	10,636.9	10,636.9
1954	0.0	0.0	0.0	2,059.6	1,837.6	679.7	0.0	0.0	0.0	0.0	0.0	0.0	4,576.9	4,576.9
1955	0.0	0.0	0.0	578.8	578.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,157.7	1,157.7
1956	0.0	0.0	0.0	971.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	971.4	971.4
1957	0.0	0.0	0.0	4,507.0	4,021.2	1,487.3	0.0	0.0	0.0	0.0	0.0	0.0	10,015.5	10,015.5
1958	0.0	0.0	0.0	1,223.8	1,091.9	403.8	0.0	0.0	0.0	0.0	0.0	0.0	2,719.5	2,719.5
1959	0.0	0.0	0.0	5,134.5	4,581.1	1,694.4	0.0	0.0	0.0	0.0	0.0	0.0	11,410.0	11,410.0
1960	0.0	0.0	0.0	271.5	271.5	271.5	271.5	271.5	271.5	271.5	271.5	271.5	2,443.9	2,443.9
1961	0.0	0.0	0.0	301.9	301.9	301.9	301.9	301.9	301.9	301.9	301.9	301.9	2,717.1	2,717.1
1962	0.0	0.0	0.0	556.0	496.1	183.5	0.0	0.0	0.0	0.0	0.0	0.0	1,235.6	1,235.6
1963	0.0	0.0	0.0	1,253.2	1,118.2	413.6	0.0	0.0	0.0	0.0	0.0	0.0	2,785.0	2,785.0
1964	0.0	0.0	0.0	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9	5,065.8	5,065.8
1965	0.0	0.0	0.0	1,668.5	1,488.6	550.6	0.0	0.0	0.0	0.0	0.0	0.0	3,707.7	3,707.7

WY	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Water Year	Cal Year
1966	0.0	0.0	0.0	1,266.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,266.0	1,266.0
1967	0.0	0.0	0.0	3,034.9	2,707.8	1,001.5	0.0	0.0	0.0	0.0	0.0	0.0	6,744.3	6,744.3
1968	0.0	0.0	0.0	4,931.2	4,399.7	1,627.3	0.0	0.0	0.0	0.0	0.0	0.0	10,958.1	10,958.1
1969	0.0	0.0	0.0	2,132.0	183.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,315.8	2,315.8
1970	0.0	0.0	0.0	5,134.5	1,235.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6,369.9	6,369.9
1971	0.0	0.0	0.0	3,368.9	3,005.8	1,111.7	0.0	0.0	0.0	0.0	0.0	0.0	7,486.4	7,486.4
1972	0.0	0.0	0.0	1,195.2	1,066.4	394.4	0.0	0.0	0.0	0.0	0.0	0.0	2,656.1	2,656.1
1973	0.0	0.0	0.0	2,189.5	1,953.6	722.6	0.0	0.0	0.0	0.0	0.0	0.0	4,865.7	4,865.7
1974	0.0	0.0	0.0	2,975.3	2,654.6	981.8	0.0	0.0	0.0	0.0	0.0	0.0	6,611.8	6,611.8
1975	0.0	0.0	0.0	4,512.7	4,026.3	1,489.2	0.0	0.0	0.0	0.0	0.0	0.0	10,028.2	10,028.2
1976	0.0	0.0	0.0	739.4	739.4	739.4	739.4	739.4	739.4	739.4	739.4	0.0	5,915.1	5,915.1
1977	0.0	0.0	0.0	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	86.4	86.4
1978	0.0	0.0	0.0	112.6	100.5	37.2	0.0	0.0	0.0	0.0	0.0	0.0	250.3	250.3
1979	0.0	0.0	0.0	4,199.3	3,746.7	1,385.8	0.0	0.0	0.0	0.0	0.0	0.0	9,331.7	9,331.7
1980	0.0	0.0	0.0	2,656.7	2,370.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,027.1	5,027.1
1981	0.0	0.0	0.0	1,111.7	1,111.7	1,111.7	1,111.7	1,111.7	1,111.7	1,111.7	0.0	0.0	7,782.0	10,005.4
1982	0.0	2,223.4	0.0	38.9	34.7	12.8	0.0	0.0	0.0	0.0	0.0	0.0	2,309.8	86.4
1983	0.0	0.0	0.0	5,134.5	4,581.1	359.4	0.0	0.0	0.0	0.0	0.0	0.0	10,075.0	10,075.0
1984	0.0	0.0	0.0	5,134.5	902.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6,037.1	6,037.1
1985	0.0	0.0	0.0	851.1	30.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	881.8	881.8
1986	0.0	0.0	0.0	1,986.9	1,772.7	655.7	0.0	0.0	0.0	0.0	0.0	0.0	4,415.2	4,415.2
1987	0.0	0.0	0.0	880.8	880.8	880.8	880.8	880.8	880.8	880.8	880.8	0.0	7,046.6	7,927.4
1988	0.0	0.0	880.8	119.1	119.1	119.1	119.1	119.1	119.1	119.1	119.1	119.1	1,953.1	1,072.3
1989	0.0	0.0	0.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	0.0	0.0	322.3	322.3
1990	0.0	0.0	0.0	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	86.4	86.4
1991	0.0	0.0	0.0	55.9	55.9	55.9	55.9	55.9	55.9	55.9	55.9	55.9	502.9	502.9
1992	0.0	0.0	0.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	963.2	963.2
1993	0.0	0.0	0.0	288.3	257.3	95.2	0.0	0.0	0.0	0.0	0.0	0.0	640.8	640.8
1994	0.0	0.0	0.0	571.0	571.0	571.0	571.0	571.0	571.0	571.0	571.0	571.0	5,138.7	5,138.7
1995	0.0	0.0	0.0	532.3	474.9	175.7	0.0	0.0	0.0	0.0	0.0	0.0	1,182.9	1,182.9
1996	0.0	0.0	0.0	1,578.4	1,408.3	520.9	0.0	0.0	0.0	0.0	0.0	0.0	3,507.6	3,507.6
1997	0.0	0.0	0.0	4,407.7	1,663.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6,071.1	6,071.1
1998	0.0	0.0	0.0	3,573.2	3,188.1	958.9	0.0	0.0	0.0	0.0	0.0	0.0	7,720.3	7,720.3
1999	0.0	0.0	0.0	5,134.5	4,581.1	1,694.4	0.0	0.0	0.0	0.0	0.0	0.0	11,410.0	11,410.0
2000	0.0	0.0	0.0	2,871.9	2,562.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,434.4	5,434.4
2001	0.0	0.0	0.0	841.3	841.3	841.3	841.3	841.3	841.3	841.3	841.3	841.3	7,571.8	7,571.8
2002	0.0	0.0	0.0	113.0	113.0	113.0	113.0	113.0	113.0	113.0	113.0	113.0	1,017.0	1,017.0
2003	0.0	0.0	0.0	45.2	40.3	14.9	0.0	0.0	0.0	0.0	0.0	0.0	100.5	100.5
Avg.	**15.6**	**30.0**	**10.7**	**1,630.8**	**1,287.7**	**486.7**	**121.8**	**121.8**	**121.8**	**121.8**	**78.2**	**47.5**	**4,074.4**	**4,074.4**
Max	**1,275.7**	**2,223.4**	**880.8**	**5,134.5**	**4,581.1**	**1,694.4**	**1,267.8**	**1,267.8**	**1,267.8**	**1,267.8**	**880.8**	**841.3**	**11,410.0**	**11,410.0**
Min	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Table D 6 San Luis Obispo FCWCD - Article 21 Water (Acre-Feet) - Study 2020D09E

WY	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Water Year	Cal Year
1922	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1923	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1924	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1925	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1926	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1927	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1928	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1929	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1930	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1931	0.0	0.0	0.0	224.0	224.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	448.0	448.0
1932	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1933	0.0	0.0	0.0	0.0	0.0	224.0	0.0	0.0	0.0	0.0	0.0	0.0	224.0	224.0
1934	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1935	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1936	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1937	0.0	0.0	0.0	0.0	224.0	224.0	0.0	0.0	0.0	0.0	0.0	0.0	448.0	448.0
1938	0.0	0.0	0.0	0.0	0.0	224.0	224.0	224.0	0.0	0.0	0.0	0.0	672.0	672.0
1939	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1940	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1941	0.0	0.0	0.0	0.0	0.0	0.0	224.0	0.0	0.0	0.0	0.0	0.0	224.0	224.0
1942	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1943	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1944	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1945	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1946	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1947	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1948	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1949	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1950	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	224.0
1951	0.0	0.0	224.0	224.0	224.0	224.0	0.0	0.0	0.0	0.0	0.0	0.0	896.0	672.0
1952	0.0	0.0	0.0	0.0	0.0	0.0	224.0	224.0	0.0	0.0	0.0	0.0	448.0	448.0
1953	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1954	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1955	0.0	0.0	0.0	0.0	224.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	224.0	224.0
1956	0.0	0.0	0.0	224.0	224.0	224.0	0.0	0.0	0.0	0.0	0.0	0.0	672.0	672.0
1957	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1958	0.0	0.0	0.0	0.0	0.0	224.0	224.0	224.0	0.0	0.0	0.0	0.0	672.0	672.0
1959	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1960	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1961	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1962	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	224.0

WY	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Water Year	Cal Year
1966	0.0	0.0	224.0	224.0	224.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	672.0	448.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	224.0	224.0	224.0	224.0	94.0	0.0	0.0	0.0	0.0	990.0	990.0
1970	0.0	0.0	0.0	224.0	224.0	224.0	0.0	0.0	0.0	0.0	0.0	0.0	672.0	672.0
1971	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	224.0	224.0	0.0	0.0	0.0	0.0	0.0	0.0	448.0	448.0
1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	224.0	0.0	0.0	0.0	0.0	0.0	224.0	224.0
1983	0.0	0.0	0.0	224.0	224.0	224.0	224.0	94.0	0.0	0.0	0.0	0.0	990.0	990.0
1984	0.0	0.0	0.0	224.0	224.0	224.0	0.0	0.0	0.0	0.0	0.0	0.0	672.0	672.0
1985	0.0	0.0	0.0	224.0	224.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	448.0	448.0
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	0.0	0.0	0.0	0.0	224.0	0.0	0.0	0.0	0.0	224.0	224.0
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	224.0	224.0	224.0	0.0	0.0	0.0	0.0	0.0	0.0	672.0	672.0
1998	0.0	0.0	0.0	0.0	224.0	224.0	224.0	224.0	0.0	0.0	0.0	0.0	896.0	896.0
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	0.0	0.0	0.0	0.0	224.0	224.0	0.0	0.0	0.0	0.0	0.0	0.0	448.0	448.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Avg.	**0.0**	**0.0**	**5.5**	**27.3**	**41.0**	**38.2**	**21.9**	**16.0**	**0.0**	**0.0**	**0.0**	**0.0**	**149.8**	**149.8**
Max	**0.0**	**0.0**	**224.0**	**224.0**	**224.0**	**224.0**	**224.0**	**224.0**	**0.0**	**0.0**	**0.0**	**0.0**	**990.0**	**990.0**
Min	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Appendix E: Model

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Integrated Resource Planning Analysis Approach

The consulting team developed the Coastal Branch Integrated Regional Planning (CBIRP) Analysis Tool (Model) to analyze the SWP role in meeting Central Coast water demands. The initial analysis conducted for this report is not a comprehensive integrated water resources management (IWRM). A comprehensive IWRM analysis should consider all local and imported water supplies and management tools available to water agencies, incorporate available conveyance facilities and reservoirs (including groundwater) in a time series review to assess water supply adequacy to meet needs, and consider measures to reduce water demand, such as water conservation and recycling.

The integrated resource planning analysis using the Model described here is less comprehensive in scope than a full IWRM analysis and focusses primarily on the role of the SWP in meeting Central Coast water management needs. While it does optimize use of water supplies from the SWP, whether they are part of the allocated SWP water supply or are from other sources, the Model does not evaluate optimization opportunities for local water supplies or operations. Water management in the Central Coast has multiple local and regional water supply sources available, including water supplies from the Santa Ynez River, Santa Maria River, Salinas River, and other local watersheds. Additionally, several large groundwater basins in the Central Coast provide long term storage and local supplies based on local recharge sources. The SWP provides a supplemental supply to the Central Coast, augmenting local water supplies and local water management measures.

The Consultant Team initially investigated integrated resource planning for water supplies in the Central Coast using Linear Programming (LP) to represent SWP water operations within the Model. LP has been used for many years to solve water resources problems and its use is well documented within the literature. The benefits of using LP, compared to other optimization techniques, are that a model within the LP framework can be defined easily, provides a global optimal solution to the problem being analyzed and provides insight on which constraints can be adjusted to provide more benefits. However, LP software tends to require tremendous computing resources to solve large problems and may need to be solved many times if paired with simulation models to check the accuracy of the resulting optimal solution. Initial runtimes for the Model exceeded 1 hour using an LP, therefore, the Consultant Team considered using Network Flow Programming (NFP) as a replacement for a LP formulation. Because NFP is used to solve a subset of LP problems that fit its unique formulation, the result is significantly smaller computer memory requirements. In addition, software used to solve NFPs is generally more efficient than general LP software. However, NFP cannot directly model competing resources of different types in the same way that LP can. For example, solving a reservoir problem that has competing objectives to enhance downstream temperature control while maximizing flood control benefits and power production would likely require many more NFP models and iterations of those models than would be required for a general LP implementation. While other Operations Research techniques, such as Dynamic Programming or Non-linear Programming, may be better suited to the task of solving highly non-linear problems, the Consultant Team believes the simplicity of implementing a NFP model to solve water resources problems generally out-weigh the challenges associated with defining a model that can appropriately represent complex real-world problems as a series of linear equations.

The Model was rewritten to use a NFP model to represent the operations of the Coastal Branch of the California Aqueduct. A NFP model is simply a series of flow arcs connected by nodes. Each node can be thought of as a continuity equation and the arcs are the variables for the equations. A basic requirement for the NFP modeling approach used in the Model is that continuity at each node (or equation) must be conserved – that is, the sum of the arcs that flow into each node must equal the sum of the flow for the arcs that flow out of each node. Reservoir and conveyance project operations are easily adapted to NFP modeling since they already are represented by continuity equations. Generally, even contract terms and power production can be converted into a form that can be solved with a NFP model.

Several scenarios[1] have been analyzed using the Model and each scenario requires multiple iterative solutions of the NFP model before a final solution is determined. For example, some of the operations modeled include water losses that are functions of other NFP model arcs (variables). In order to estimate such conditions, the NFP model must be solved and then the losses are computed based on the solution and the appropriate arcs are "fixed" (their upper and lower bounds are set to the same value) to represent the losses and the NFP model is solved again. This continues until an acceptable solution is achieved. The process of estimating losses and other parameters is performed by logic within the Model; the Model then adjusts the various costs and arc boundary conditions (upper and lower arc flow bounds) and then re-runs the NFP model as needed to obtain an optimal operation for the Coastal Branch.

The NFP model is solved using an algorithm called SuperK. SuperK was developed in the early 1970s by R.S. Barr, University of Texas, F. Glover, University of Colorado, and D. Klingman, University of Texas. SuperK implements the Ford-Fulkerson Out-of-Kilter algorithm to solve NFP minimum cost problems and has been found to be very efficient for problems that fit its structure. It has been used for solving many water resources management problems and was the primary compute engine in the California Department of Water Resources' CalSim and DWR Sim models. It was also used by DWR's Division of Operations and Maintenance to schedule energy transmission for the State Water Project (SWP) and simulate hourly operations of many features of the SWP including the Oroville Complex.

NFP is a special case of Linear Programming (LP) where the problem that is being evaluated can be represented as a minimum cost transportation or allocation model. As long as all the "widgets" in the model are the same (i.e., electricity, vehicles, or water), then a NFP can be defined to represent the problem being addressed.

The Model has a study horizon of 98 years with an annual time-step. In other words, the NFP model within the Model does not solve one year at a time but instead represents all 98 years together and solves for the operations of the Coastal Branch for the entire study horizon at the same time. Each year is broken into two sub-periods: an October through April "off-peak" sub-period and a May through September "on-peak" sub-period. These two sub-periods were chosen to provide appropriate detail about turnout deliveries along the Coastal Branch while keeping the NFP model to a reasonable size. The sub-periods are also represented in the NFP model. In its current form, the NFP model has over 20,000 arcs (or decision variables) and over 6,000 nodes (or equations) and takes less a few seconds to solve for each iteration. To complete a scenario, the Model may require many iterative solutions of the NFP model; however, a complete run of the Model takes less than ten seconds.

How the Model represents water management along the Coastal Branch

The Model focuses on the operations of the Coastal Branch but includes other aspects of the Coastal Branch Contractors' water management activities. The Model uses DWR's CalSim II model output for SWP allocations and San Luis Reservoir operations to define the upstream boundary inputs for operations of the Coastal Branch. These parameters represent the available SWP water supply that can be delivered to the Coastal Branch Contractors during each year. It is assumed the SWP has the capacity to directly deliver water to the Coastal Branch Contractors if there is sufficient contracted water supply to meet their demands. The NFP model within the Model is divided into six basic parts to represent the various operations of the SWP and Coastal Branch; (1) SWP Table A allocations to the Coastal Branch Contractors, (2) San Luis Reservoir operations, (3) non-SWP storage/exchange programs that are external to the Central Coast service area, (4) water transfers with other Contractors and purchases from the Dry Year Purchase Program, (5) Coastal Branch operations and (6) operation of Lake Cachuma.

[1] The term scenario is used in describing the development of the Model. The term portfolio is used for the discussion of the five specific scenarios (portfolios) analyzed in this study.

The remainder of this section describes how the Model deals with the following topics:

- Coastal Branch Operations
- SWP Table A Allocations
- San Luis Reservoir Operations
- Non-SWP Storage and Exchange Programs
- Water Transfers
- Lake Cachuma

Coastal Branch Operations

The conveyance is divided into six reaches with each reach ending at a primary turnout point along the aqueduct. The primary turnouts included in the NFP model represent either a single turnout or an aggregation of smaller physical turnouts. The final reach ends with a turnout to Lake Cachuma. Each turnout has a defined demand pattern, but the NFP model is allowed to deliver less water to the turnout if there isn't sufficient water supply or conveyance capacity to meet the turnout demand. The first three reaches flow through San Luis Obispo County and have turnouts to SLOFCWCD service areas. The remaining three reaches flow through the Santa Barbara County and have turnouts to the CCWA service areas with the final reach terminating at Lake Cachuma.

The conveyance through the first three reaches is represented by four sets of flow arcs; two sets represent the flow for CCWA through the Coastal Branch and the other two sets represent the flow for SLOFCWCD . Each set is made up of two flow arcs; one that represents flow for the Contractor using its own portion of the conveyance capacity and the other representing flow for the Contractor using the other Contractor's portion of the conveyance capacity. One set of flow arcs represents operations during the October through April time period and the other represents operations during the May through September time period. The conveyance through the final three reaches is represented by two sets of flow arcs; only CCWA has operations in this portion of the Coastal Branch.

How the Model is Solved

The Model performs nine steps to complete one portfolio analysis. Some of the portfolios may require as few as five solutions of the NFP model during the nine steps of the Model while others require seven or more solutions to complete a model run. Figure E 1 summarizes the nine steps implemented in the Model.

Step 1: The NFP model is constructed based on user-entered run parameters and input data.

Step 2: The NFP model is solved to determine the Coastal Branch inflow to Lake Cachuma. The reservoir losses are estimated by the Model based on this initial NFP model run. A second run of the NFP model is performed if there is a significant difference between the assumed losses prior to the first solution and the computed reservoir losses based on the first solution. After completing the loss computation and a second solution of the NFP model (if necessary), then the minimum inflow from the Coastal Branch to Lake Cachuma is set to the result of this iteration.

Step 3: The Model now constrains the NFP model to use as much Table A as possible to meet each year's demands for both CCWA and SLOFCWCD . This step is necessary to ensure that the NFP model does not attempt to transfer or store allocated Table A when it is needed to avoid shortages in the current year. Since the NFP model has perfect foresight of future hydrology and allocations, it will attempt to avoid the highest cost operation – it may decide to save some of this year's water and allow a shortage this year so that it can store and deliver the water in a subsequent year to avoid a larger shortage then. In reality, water managers would not allow this to occur; therefore, this step was added to ensure the current year's

allocation goes to meeting the current year's demands before water is stored or transferred. At the end of this step, the Model checks to determine if either Coastal Branch Contractor use of the other Coastal Branch Contractor's conveyance capacity conflicts with that Coastal Branch Contractor's use; if so, then the first Coastal Branch Contractor's use of excess conveyance is restricted and the NFP model is re-run. This step ends by setting the lower bounds for delivery of Table A to CCWA and SLOFCWCD turnouts within the NFP model.

Step 4: The Model now allows the NFP model to store water in San Luis Reservoir and external/internal storage/exchange programs (if the option to operate external and/or internal programs was selected for the analysis). Since the minimum deliveries are set in the prior step, only excess Table A for each year is allowed to be put into storage and then returned for delivery or spilled in a future year. As in Step 3, the Model checks and re-runs the NFP model (if necessary) to ensure no conflicts occur with use of the conveyance capacity.

Storage and exchange programs differ from water transfers in that they allow a SWP Contractor to manage their own water supplies in a water management program outside of their service area for use in years other than when the water supplies were made available. In contrast, a transfer program makes water available in the same year. Generally, storage and exchange programs require the SWP Contractor to leave a portion of the water it has stored behind for use by the entity that is managing the water supply. As described previously, the exact portion of the leave behind can vary by program and usually will be related to the cost that an agency pays for the storage or exchange program – generally the higher the monetary cost, the lower the "leave behind" will be. The "leave behind" is generally a function of the amount of water that is exchanged or stored with the entity. The Model includes this step to determine, if there is an exchange or storage program included in the scenario, how much of the water that is delivered into the program will remain with the entity that is managing the program. The NFP model is re-run after the "leave behind" amounts are computed. This step ends with the Model setting the lower bounds for return of water to CCWA and SLOFCWCD within the NFP model.

Step 5: The Model now allows transfers of water between CCWA and SLOFCWCD (if this option was chosen for inclusion in the scenario). As with the previous steps, Model checks and re-runs the NFP model (if necessary) to ensure no conflicts occur with use of the conveyance capacity. This step ends with the Model setting the lower bounds for transfers among CCWA and SLOFCWCD within the NFP model.

Step 6: The Model now allows acquisition of water from the Dry Year Purchase Program (DYPP) and/or other SWP Contractors. In addition, the NFP model was set up to allow CCWA and SLOFCWCD to share each other's access to the DYPP. Generally, the DYPP is activated during dry years to acquire water for SWP Contractors from sources North of the Delta. The SWP Contractors can acquire their pro-rata share of the water supply based on their share of Table A Amounts. Normally, the allocation is made on an individual SWP Contractor basis and they are not allowed to provide their unused share to other specific SWP Contractors. However, this option was added to the NFP model to allow for such a capability if in the future CCWA and SLOFCWCD could successfully merge their Table A Amounts for the purpose of acquiring other water supplies. As with the previous steps, the Model checks and re-runs the NFP model (if necessary) to ensure no conflicts occur with use of the conveyance capacity. This step ends with the Model setting the lower bounds for purchases within the NFP model.

Step 7: The Model performs a final re-check of the loss computation for Lake Cachuma and re-runs the NFP model if necessary. As with the previous steps, the Model checks and re-runs the NFP model (if necessary) to ensure no conflicts occur with use of the conveyance capacity.

Step 8: After Step 7, the Model has determined how much water can be delivered to the turnouts and now is able to allocate any remaining undelivered water for sales to other SWP Contractors. First, it is determined how much water is available for sell each year by each Coastal Branch Contractor. Then, it sets the NFP model upper bounds for transfers and re-runs the NFP model.

Step 9: The Model saves the final NFP model output to an excel tab for post processing. The Model may need to solve the NFP model four to eighteen times to determine the final result for the 98 years.

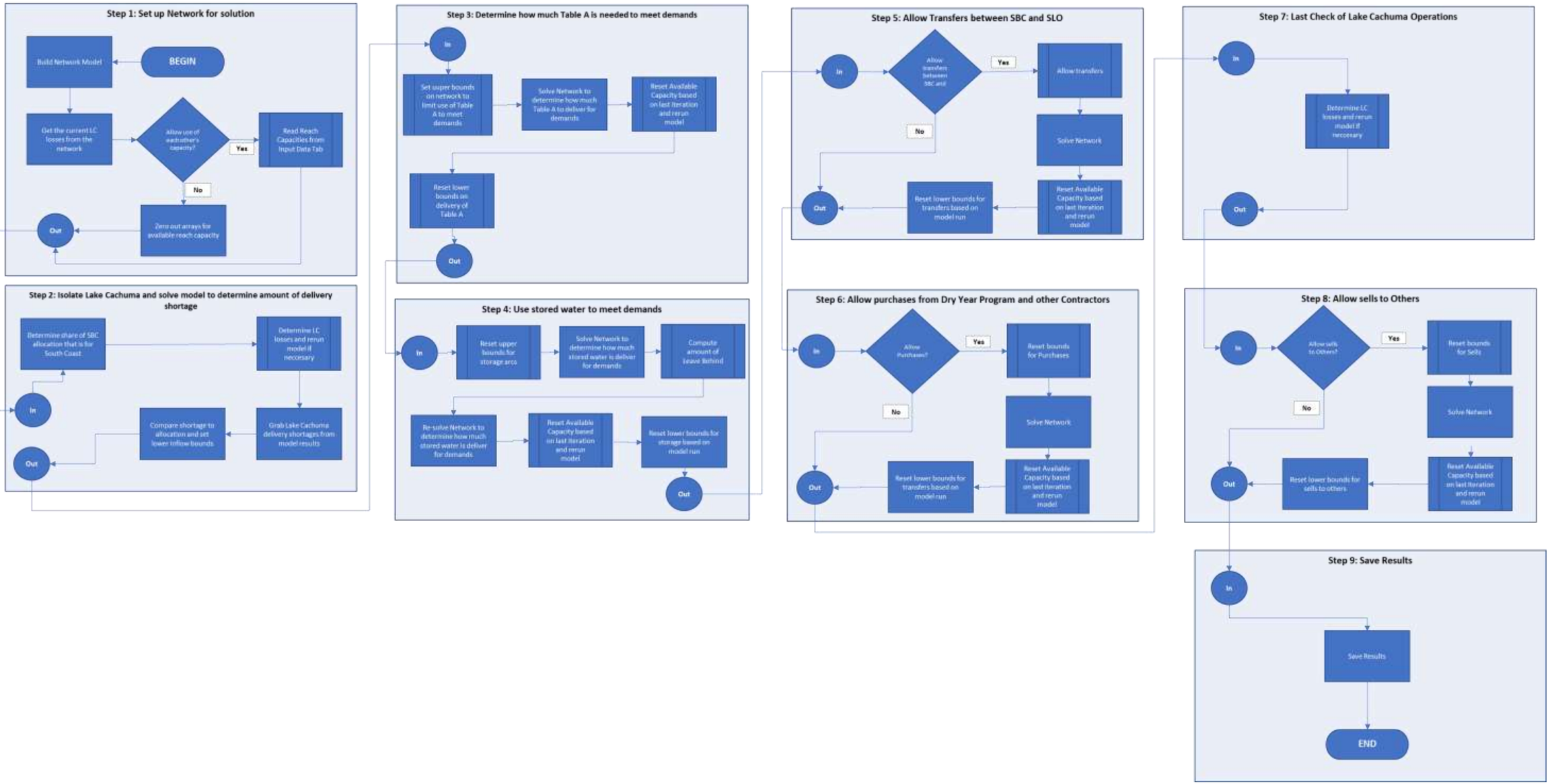


Figure E 1: How the Model is Solved

Model Runs

Many model runs were completed to evaluate a range of potential water management activities. A final set of five portfolios were evaluated and are summarized in Table E 1.

Table E 1: Summary of Model Runs Completed

Scenario	Description	Share Available Coastal Branch Capacity	Allow SLOFCWCD to Transfer to its Sub-contractors	Participate in Dry Year Purchase Program	Allow Transfers between SLOFCWCD and CCWA	If doing DYPP then share unused water	Participate in External Storage Program	Max use of external storage by CCWA	Max use of external storage by SLOFCWCD	Add delivery at Lopez for Groundwater Recharge	Amount added at Lopez for Groundwater Recharge	Acquire Table A from other Contractors	Transfer excess Table A to other Contractors
Portfolio 1	Current Baseline Condition	X		X									
Portfolio 2	Portfolio 1 plus using limited external storage	X	X	X			X	30,000	10,000				
Portfolio 3	Portfolio 2 plus added demand for SLOFCWCD Groundwater Replenishment	X	X	X			X	30,000	10,000	X	1,000		
Portfolio 4	Portfolio 3 plus allow transfers between CCWA and SLOFCWCD	X	X	X	X		X	30,000	10,000	X	1,000		
Portfolio 5	Portfolio 4 plus allow external purchases and sells	X	X	X	X		X	30,000	10,000	X	1,000	X	X

State Water Project Table A Allocations

SWP allocations can be (1) used to meet direct deliveries, (2) stored out of a Contractor's service area in some type of storage/exchange program, including San Luis Reservoir, or (3) transferred to other Contractors. The NFP model represents annual SWP allocations to the Coastal Branch Contractors with three arcs that are "fixed", that is, their upper and lower bounds are the same. The arc bounds are set to the annual allocations for each Coastal Branch Contractor (one arc for CCWA and two arcs representing the contracted and non-contracted portions of SLOFCWCD 's annual allocation). For each of the three sets of Table A allocation arcs, another set disaggregates the annual allocation into (1) Article 56(c)1 deliveries to external storage, (2) delivery to San Luis Reservoir for short-term storage and (3) direct deliveries to the Coastal Branch turnouts to meet demands. The upper bounds for the Article 56(c)1 arcs are set based on the table contained in Article 56(c)1 of the Water Supply Contract. There are no limits for the arcs that represent delivery to San Luis Reservoir for short-term storage as it is assumed that Coastal Branch Contractors would be able to store a portion of their annual allocation for delivery in the first few months of the next year.

CalSim II output from the 2019 SWP Delivery Capability Report was used to estimate the annual Table A allocations for 1922 through 2003. CalSim II estimates SWP operations and Table A allocations using a synthetic timeseries to represent historical hydrology that would have occurred if today's level of development within the watersheds existed during the entire study horizon. CalSim II then imposes sets of operational criteria (Delta minimum flow requirements, Delta water quality requirements, Delta biological objective restrictions, minimum reservoir releases, etc.) onto its representation of the SWP and CVP to determine how much water each project could deliver to their contractors. The Consultant Team then extended the CalSim II output with estimates of what the SWP allocations would have been for 2004 through 2019 given the same operational parameters as used in the CalSim II modeling. The 2004-2019 extension of SWP allocations used actual historical allocations as a starting point, with adjustments for historical allocations during the years 2004 through 2007 when historical operating constraints were significantly different than current constraints.

Table E 2: shows the annual allocations for the Coastal Branch Contractors and summarizes the allocations by Percent of Table A Amount and acre-feet for each of the Coastal Branch Contractors. It also breaks down the SLOFCWCD Table A by contracted and non-contracted amounts. Allocations are also summarized by average year types for Wet, Above Normal, Below Normal, Dry and Critically Dry years.

Table E 2: Annual SWP Allocations

Water Year	SWP Allocations					
	SWP Annual Allocation (%)	CCWA Share (af)	SLOFCWCD Contracted Share (af)	SLOFCWCD Non-Contracted Share (af)	SLOFCWCD Share (af)	Central Coast Total (af)
1922	70%	31,840	7,376	10,124	17,500	49,340
1923	67%	30,476	7,060	9,690	16,750	47,226
1924	14%	6,368	1,475	2,025	3,500	9,868
1925	26%	11,826	2,740	3,760	6,500	18,326
1926	40%	18,194	4,215	5,785	10,000	28,194
1927	71%	32,295	7,481	10,269	17,750	50,045
1928	68%	30,930	7,165	9,835	17,000	47,930
1929	31%	14,101	3,266	4,484	7,750	21,851
1930	14%	6,368	1,475	2,025	3,500	9,868
1931	39%	17,740	4,109	5,641	9,750	27,490
1932	25%	11,372	2,634	3,616	6,250	17,622
1933	40%	18,194	4,215	5,785	10,000	28,194
1934	16%	7,278	1,686	2,314	4,000	11,278
1935	81%	36,844	8,535	11,715	20,250	57,094
1936	53%	24,108	5,585	7,665	13,250	37,358
1937	73%	33,205	7,692	10,558	18,250	51,455
1938	100%	45,486	10,537	14,463	25,000	70,486
1939	38%	17,285	4,004	5,496	9,500	26,785
1940	57%	25,927	6,006	8,244	14,250	40,177
1941	93%	42,302	9,799	13,451	23,250	65,552
1942	76%	34,569	8,008	10,992	19,000	53,569
1943	89%	40,483	9,378	12,872	22,250	62,733
1944	37%	16,830	3,899	5,351	9,250	26,080
1945	69%	31,385	7,271	9,979	17,250	48,635
1946	60%	27,292	6,322	8,678	15,000	42,292
1947	56%	25,472	5,901	8,099	14,000	39,472
1948	48%	21,833	5,058	6,942	12,000	33,833
1949	35%	15,920	3,688	5,062	8,750	24,670
1950	50%	22,743	5,269	7,232	12,500	35,243
1951	74%	33,660	7,797	10,703	18,500	52,160
1952	93%	42,302	9,799	13,451	23,250	65,552
1953	60%	27,292	6,322	8,678	15,000	42,292
1954	65%	29,566	6,849	9,401	16,250	45,816
1955	40%	18,194	4,215	5,785	10,000	28,194
1956	88%	40,028	9,273	12,727	22,000	62,028

Water Year	SWP Allocations					
	SWP Annual Allocation (%)	CCWA Share (af)	SLOFCWCD Contracted Share (af)	SLOFCWCD Non-Contracted Share (af)	SLOFCWCD Share (af)	Central Coast Total (af)
1957	50%	22,743	5,269	7,232	12,500	35,243
1958	100%	45,486	10,537	14,463	25,000	70,486
1959	45%	20,469	4,742	6,508	11,250	31,719
1960	50%	22,743	5,269	7,232	12,500	35,243
1961	32%	14,556	3,372	4,628	8,000	22,556
1962	51%	23,198	5,374	7,376	12,750	35,948
1963	64%	29,111	6,744	9,256	16,000	45,111
1964	59%	26,837	6,217	8,533	14,750	41,587
1965	52%	23,653	5,479	7,521	13,000	36,653
1966	71%	32,295	7,481	10,269	17,750	50,045
1967	96%	43,667	10,116	13,884	24,000	67,667
1968	62%	28,201	6,533	8,967	15,500	43,701
1969	100%	45,486	10,537	14,463	25,000	70,486
1970	74%	33,660	7,797	10,703	18,500	52,160
1971	49%	22,288	5,163	7,087	12,250	34,538
1972	64%	29,111	6,744	9,256	16,000	45,111
1973	71%	32,295	7,481	10,269	17,750	50,045
1974	88%	40,028	9,273	12,727	22,000	62,028
1975	71%	32,295	7,481	10,269	17,750	50,045
1976	50%	22,743	5,269	7,232	12,500	35,243
1977	6%	2,729	632	868	1,500	4,229
1978	82%	37,299	8,640	11,860	20,500	57,799
1979	68%	30,930	7,165	9,835	17,000	47,930
1980	88%	40,028	9,273	12,727	22,000	62,028
1981	40%	18,194	4,215	5,785	10,000	28,194
1982	100%	45,486	10,537	14,463	25,000	70,486
1983	100%	45,486	10,537	14,463	25,000	70,486
1984	74%	33,660	7,797	10,703	18,500	52,160
1985	72%	32,750	7,587	10,413	18,000	50,750
1986	75%	34,115	7,903	10,847	18,750	52,865
1987	28%	12,736	2,950	4,050	7,000	19,736
1988	11%	5,003	1,159	1,591	2,750	7,753
1989	49%	22,288	5,163	7,087	12,250	34,538
1990	13%	5,913	1,370	1,880	3,250	9,163
1991	25%	11,372	2,634	3,616	6,250	17,622
1992	17%	7,733	1,791	2,459	4,250	11,983
1993	65%	29,566	6,849	9,401	16,250	45,816

Water Year	SWP Allocations					
	SWP Annual Allocation (%)	CCWA Share (af)	SLOFCWCD Contracted Share (af)	SLOFCWCD Non-Contracted Share (af)	SLOFCWCD Share (af)	Central Coast Total (af)
1994	31%	14,101	3,266	4,484	7,750	21,851
1995	100%	45,486	10,537	14,463	25,000	70,486
1996	86%	39,118	9,062	12,438	21,500	60,618
1997	75%	34,115	7,903	10,847	18,750	52,865
1998	100%	45,486	10,537	14,463	25,000	70,486
1999	70%	31,840	7,376	10,124	17,500	49,340
2000	74%	33,660	7,797	10,703	18,500	52,160
2001	26%	11,826	2,740	3,760	6,500	18,326
2002	43%	19,559	4,531	6,219	10,750	30,309
2003	44%	20,014	4,636	6,364	11,000	31,014
2004	45%	20,469	4,742	6,508	11,250	31,719
2005	85%	38,663	8,956	12,294	21,250	59,913
2006	95%	43,212	10,010	13,740	23,750	66,962
2007	60%	27,292	6,322	8,678	15,000	42,292
2008	35%	15,920	3,688	5,062	8,750	24,670
2009	40%	18,194	4,215	5,785	10,000	28,194
2010	50%	22,743	5,269	7,232	12,500	35,243
2011	80%	36,389	8,430	11,570	20,000	56,389
2012	65%	29,566	6,849	9,401	16,250	45,816
2013	35%	15,920	3,688	5,062	8,750	24,670
2014	5%	2,274	527	723	1,250	3,524
2015	20%	9,097	2,107	2,893	5,000	14,097
2016	60%	27,292	6,322	8,678	15,000	42,292
2017	85%	38,663	8,956	12,294	21,250	59,913
2018	35%	15,920	3,688	5,062	8,750	24,670
2019	75%	34,115	7,903	10,847	18,750	52,865
	Annual Averages					
All Years	58%	26,396	6,115	8,393	14,508	40,903
Wet Years	83%	37,571	8,704	11,946	20,650	58,221
Above Normal Years	68%	30,995	7,180	9,856	17,036	48,031
Below Normal Years	56%	25,444	5,894	8,090	13,984	39,428
Dry Years	45%	20,409	4,728	6,489	11,217	31,627
Critical Years	22%	9,946	2,304	3,163	5,467	15,413

San Luis Reservoir Operations

The NFP model represents San Luis Reservoir operations with three separate sets of arcs with each set representing the operations of a separate reservoir dedicated to storing water for the Coastal Branch Contractors: one set for CCWA and two for SLOFCWCD . Each set of arcs represents a continuity equation; one arc for the prior year's ending storage, one arc for the current year's ending storage, inflow of the Coastal Branch Contractor's current year Table A under Article 56(c)1, return of carry over that was previously stored in the reservoir, and spill of carryover. The arcs representing end-of-year storage are set based on the pre-processing analysis described below.

The Model allocates a share of San Luis Reservoir for the Coastal Branch Contractors to store a portion of their allocated SWP Table A water each year. The Model uses CalSim II output to determine how much storage would be available within San Luis Reservoir for all Contractors. The Model then processes the storage values to determine the amount of storage that would be available to the Coastal Branch Contractors. The results are then used to set upper bounds for specific arcs within the NFP model that represent how much water can be stored in San Luis Reservoir for the Coastal Branch Contractors. If the NFP model determines that stored water cannot be returned to the Coastal Branch Contractors (or sold to other Contractors if that feature is allowed in the modeling scenario), then the model will "spill" any amount of water stored above the Coastal Branch Contractor's allotted share of San Luis Reservoir storage.

The amount of Table A water that can be carried over in San Luis Reservoir on a long-term basis (which is referred to as Carryover) is limited by the Water Supply Contract to a portion of each SWP Contractor's Annual Table A Amount. SWP Contractors can carry over more Table A water but the additional amount must be delivered back to the SWP Contractor the following year before the end of March. If it is not delivered, the water reverts back to the SWP and is used as part of the water supply to meet the next year SWP Table A allocations. If the Coastal Branch Contractors are unable to take delivery of their Carryover water prior to San Luis Reservoir completely filling, the remaining Carryover is deemed as "spilled" from the SWP and is no longer available for delivery.

The Model determines the amount of Coastal Branch Contractors' Carryover water that is at risk of spilling by analyzing CalSim II model output. To do this, two output tables from CalSim II were used to estimate the amount of San Luis Reservoir storage that is needed for the SWP operations and the amount that would be available for use by the Coastal Branch Contractors. One table contains the monthly storage for the SWP share of San Luis Reservoir. This includes SWP Contractor Carryover water. CalSim II does not account for individual SWP Contractor Carryover use and does not allocate space based on each SWP Contractor's Table A Amount. Instead, it assumes an aggregated amount to be used by all SWP Contractors. The other table from CalSim II output contains an estimate of monthly Carryover water that is in San Luis Reservoir. The Model uses the data in the two tables to determine how much space would be available for use by the Coastal Branch Contractors. San Luis Reservoir reaches its maximum storage in the spring just prior to the start of the irrigation season and the start of the spring fishery pulse flow period on the San Joaquin River. After April 1st of each year, the SWP and Central Valley Project are nearly always unable to divert enough water from the Sacramento-San Joaquin Delta to meet the growing seasonal demands within their respective service areas. Therefore, maximum storage use will occur sometime between the end of December and the end of March.

The maximum storage in that time period is subtracted from the maximum storage capacity for the SWP in San Luis Reservoir (1,067,000 acre-feet). The result is the amount of available storage space that can be allocated to all SWP Contractors for storage of their Carryover water. The two largest SWP Contractors, Metropolitan Water District of Southern California (MWD) and the Kern County Water Agency (KCWA), represent about 69% of the Total Annual Table A Amount and generally do not use all of their allotted space; thus, allowing the remaining twenty-seven SWP Contractors an opportunity to carry over more of their water. An assumption was made that the MWD and KCWA would not routinely store more than 300 taf of their water in San Luis Reservoir, so in years when their aggregated share would be greater than 300 taf, the amount above 300 taf would be allocated to the smaller SWP Contractors.

It is important to recognize this as a rough estimate of how much space would be needed by the two largest SWP Contractors. In reality, they might use all of their allotted space. However, the Consultant Team believes this assumption about maximum storage is reasonable for evaluating use by other SWP Contractors on a long-term basis.

The final computation is to allocate a portion of the available storage space to the Coastal Branch Contractors, which is computed based on their pro-rata share of the small SWP Contractors' Table A amounts. These estimates are computed prior to any NFP model runs and the pre-processed values are put into the NFP model as upper bounds on use of San Luis Reservoir annual storage for the Coastal Branch Contractors' Carryover water. For the period 2004 through 2019, the Consultant Team separately analyzed historical SWP operations to determine the amount of San Luis Reservoir storage that would be available to the Coastal Branch Contractors. This was done as the CalSim II study horizon only goes through 2003. Table E 3 shows the result of the processing that is done in the Model.

Table E 3: Summary of Amount of San Luis Reservoir Storage Available to Coastal Branch Contractors

Water Year	San Luis Operations				
	Max Winter-Spring SAN LUIS RESERVOIR SWP Storage for small Contractors (taf)	CCWA Max Use of SAN LUIS RESERVOIR (af)	SLOFCWCD Contracted Max Use of SAN LUIS RESERVOIR (af)	SLOFCWCD Non-Contracted Max Use of SAN LUIS RESERVOIR (af)	SLOFCWCD Max Use of SAN LUIS RESERVOIR (af)
1922	125	4,447	1,030	1,414	2,444
1923	77	2,752	637	875	1,512
1924	452	16,086	3,726	5,115	8,841
1925	111	3,933	911	1,251	2,162
1926	34	1,193	276	379	656
1927	57	2,030	470	645	1,116
1928	34	1,225	284	390	674
1929	116	4,114	953	1,308	2,261
1930	354	12,587	2,916	4,002	6,918
1931	-	-	-	-	-
1932	119	4,235	981	1,346	2,327
1933	9	317	74	101	174
1934	327	11,623	2,693	3,696	6,388
1935	5	171	40	55	94
1936	266	9,472	2,194	3,012	5,206
1937	5	179	42	57	99
1938	-	-	-	-	-
1939	118	4,186	970	1,331	2,301
1940	202	7,188	1,665	2,286	3,951
1941	-	-	-	-	-
1942	123	4,374	1,013	1,391	2,404
1943	20	726	168	231	399
1944	348	12,379	2,868	3,936	6,804
1945	18	637	147	202	350
1946	131	4,656	1,079	1,480	2,559
1947	51	1,821	422	579	1,001
1948	457	16,276	3,770	5,175	8,946
1949	65	2,325	539	739	1,278
1950	108	3,861	894	1,228	2,122
1951	-	-	-	-	-
1952	-	-	-	-	-
1953	144	5,139	1,190	1,634	2,825

Water Year	San Luis Operations				
	Max Winter-Spring SAN LUIS RESERVOIR SWP Storage for small Contractors (taf)	CCWA Max Use of SAN LUIS RESERVOIR (af)	SLOFCWCD Contracted Max Use of SAN LUIS RESERVOIR (af)	SLOFCWCD Non-Contracted Max Use of SAN LUIS RESERVOIR (af)	SLOFCWCD Max Use of SAN LUIS RESERVOIR (af)
1954	70	2,484	575	790	1,365
1955	15	521	121	166	286
1956	-	-	-	-	-
1957	280	9,949	2,305	3,163	5,468
1958	-	-	-	-	-
1959	509	18,124	4,199	5,763	9,962
1960	100	3,555	824	1,130	1,954
1961	162	5,759	1,334	1,831	3,165
1962	242	8,621	1,997	2,741	4,738
1963	104	3,694	856	1,175	2,030
1964	47	1,681	389	534	924
1965	223	7,940	1,839	2,525	4,364
1966	-	-	-	-	-
1967	56	1,977	458	629	1,086
1968	113	4,025	932	1,280	2,212
1969	-	-	-	-	-
1970	20	704	163	224	387
1971	357	12,706	2,943	4,040	6,984
1972	17	620	144	197	341
1973	22	800	185	254	440
1974	38	1,335	309	425	734
1975	175	6,236	1,445	1,983	3,427
1976	150	5,347	1,239	1,700	2,939
1977	512	18,228	4,223	5,796	10,019
1978	60	2,123	492	675	1,167
1979	50	1,780	412	566	978
1980	12	416	96	132	229
1981	396	14,084	3,263	4,478	7,741
1982	-	-	-	-	-
1983	-	-	-	-	-
1984	15	544	126	173	299
1985	8	285	66	91	157
1986	14	483	112	154	265
1987	191	6,787	1,572	2,158	3,730
1988	458	16,312	3,779	5,187	8,965

Water Year	San Luis Operations				
	Max Winter-Spring SAN LUIS RESERVOIR SWP Storage for small Contractors (taf)	CCWA Max Use of SAN LUIS RESERVOIR (af)	SLOFCWCD Contracted Max Use of SAN LUIS RESERVOIR (af)	SLOFCWCD Non-Contracted Max Use of SAN LUIS RESERVOIR (af)	SLOFCWCD Max Use of SAN LUIS RESERVOIR (af)
1989	89	3,180	737	1,011	1,748
1990	370	13,167	3,050	4,187	7,237
1991	119	4,231	980	1,345	2,325
1992	297	10,562	2,447	3,358	5,805
1993	215	7,665	1,776	2,437	4,213
1994	212	7,557	1,750	2,403	4,153
1995	30	1,050	243	334	577
1996	28	983	228	313	540
1997	20	697	162	222	383
1998	-	-	-	-	-
1999	66	2,353	545	748	1,293
2000	13	475	110	151	261
2001	227	8,070	1,870	2,566	4,436
2002	121	4,318	1,000	1,373	2,373
2003	526	18,711	4,334	5,949	10,284
2004	550	19,577	4,535	6,225	10,760
2005	550	19,577	4,535	6,225	10,760
2006	550	19,577	4,535	6,225	10,760
2007	550	19,577	4,535	6,225	10,760
2008	550	19,577	4,535	6,225	10,760
2009	550	19,577	4,535	6,225	10,760
2010	550	19,577	4,535	6,225	10,760
2011	0	-	-	-	-
2012	550	19,577	4,535	6,225	10,760
2013	550	19,577	4,535	6,225	10,760
2014	550	19,577	4,535	6,225	10,760
2015	550	19,577	4,535	6,225	10,760
2016	550	19,577	4,535	6,225	10,760
2017	0	-	-	-	-
2018	550	19,577	4,535	6,225	10,760
2019	0	-	-	-	-

The computations above apply only to the use of San Luis Reservoir storage for carrying over water on a long-term basis. Such use is limited by Article 56 of the SWP Water Supply Contract; however, SWP Contractors may store additional water in San Luis Reservoir for up to three months after the end of the year. This "short-term" carryover of the prior year's allocated Table A allows SWP Contractors more flexibility to use their water supplies beyond the end of the year. For the purpose of the Model, it was assumed that sufficient space would be available to **ALWAYS** carry over water on a short-term basis and it would either be delivered or would spill by the end of March. In reality, the carryover of a SWP Contractor's Table A from one year to the next on either a long-term or short-term basis could result in spill of those supplies beginning as early as January 1. A SWP Contractor's Table A that is carried over from earlier years could spill earlier than January 1 if the SWP is able to fill San Luis Reservoir before the end of the prior year. Based on the output from CalSim II, the Consultant Team found that in only 4 of 82 years of study did San Luis Reservoir reach capacity in December. Based on this information, the Consultant Team concluded the risk of spilling before the end of the year is sufficiently small and did not need to be analyzed as a separate spill event.

To encourage the model to avoid the spill of the Coastal Branch Contractors' Table A from San Luis Reservoir, a penalty was set for the Carryover Spill arcs (Table E 4). The penalty function was set sufficiently high as to force the NFP model to use the carryover before it would acquire external supplies.

Table E 4: Carryover Spill Penalty as a function of Water Year Classification

Year Type Classification	Carryover Spill Penalty ($/af)
Wet Year	$ 500
Above Normal Year	$ 600
Below Normal Year	$ 1,000
Dry Year	$ 1,100
Critically Dry Year	$ 1,200

Non-SWP Storage and Exchange Programs

The Model is capable of modeling storage and exchange programs that could be utilized to store excess SWP water during years when water supplies for the Coastal Branch Contractors exceed their demands. Since no internal storage and/or exchange programs were identified, this feature was not developed further within the Model. However, the ability to model storage/exchange programs external to the Coastal Branch Contractors' service areas was fully developed and used in selected portfolio analyses. Output from a portfolio analysis that includes an external storage/exchange program could be post-processed to estimate how an internal storage/exchange program might work.

For the external storage/exchange program, the amount that can be stored each year is limited by the same Water Supply Contract provision that limits Carryover storage in San Luis Reservoir. However, the major difference is that water stored in an external storage/exchange program is assumed to **NOT** be subject to spill as it is when stored in San Luis Reservoir. Any storage program that is wholly within one of the Coastal Branch Contractor's service areas would not have an Article 56(c)1 limitation but may require an exchange component to return water to that Coastal Branch Contractor because it may require that any water delivered through a turnout stays within that turnout service area. Additionally, if the other Coastal Branch Contractor used the same storage program, it would be subject to the storage limitation in the Water Supply Contract.

Programs with other SWP Contractors to bank (store) or exchange water are similar to each other. They require delivery of a water supply to the banking or exchange program, a payment for the storage or regulation service provided, and a means to return a portion of the water that was delivered to the program. Payment for an external banking or exchange program can be monetary, water supply left behind for the banking/exchanging partner, or some combination of both. It is not uncommon for exchange programs to require a 50% leave behind factor, for example, one or more acre-feet is left behind for every acre-foot returned. Banking programs will normally require 10-15% of the water stored is "lost", either as a physical evaporation loss in recharge operations, as mitigation to avoid local impacts or to recognize the value provided by the program (regulating the supply so the SWP Contractor can effectively use most of it). The NFP model cannot directly model the portion of water that is delivered to the program and left behind. This must be done in an iterative fashion; the NFP model is solved and the solution is evaluated to determine how much water has been delivered to the storage/exchange program. Based on this, the amount of annual leave behind is determined and the appropriate arc in the model is "fixed", meaning its upper and lower bounds are set to the same value, to the amount of leave behind and the NFP model is solved again.

Similar to any other type of storage operation, the NFP model represents the external storage/exchange program as a reservoir problem. Inflows include the prior time step ending storage and the amount of water that the Coastal Branch Contractor wants to "put" into the program. Outflows include the ending storage for the current time step, return of water to the Coastal Branch Contractor, and any water that is left behind for the storage/exchange program partner Table E 5 summarizes the parameters that were used for the scenarios that included external storage/exchange programs.

Table E 5: Input Parameters for External Storage/Exchange Program

External Storage/Exchange Program Input Data						
Year Type	Leave Behind Amount	Cost based on year type		External Storage Size	Max Annual Put Amount	Max Annual Return Amount
Wet Year	0.15	$ 50	CCWA Capacity (af)	30000	10000	10000
Above Normal Year	0.15	$ 50	SLOFCWCD (Cnt) Capacity (af)	10000	10000	10000
Below Normal Year	0.15	$ 75	SLOFCWCD (NC) Capacity (af)	0	10000	10000
Dry Year	0.15	$ 125	Cost ($/af)	$ -	$ 10	$ 1
Critically Dry Year	0.15	$ 250				

Turnout Demands

The Model aggregates the turnouts along the Coastal Branch into six turnout locations that represent either a single physical turnout or amounts of multiple turnouts. The turnout groups used were the same as those previously described in the Conveyance Capacity chapter of the Water Management Strategies report. Three turnout groups were used for SLOFCWCD (Shandon, Chorro Valley and Lopez Valley) and for CCWA (North County, Mid County and South Coast). The historical delivery amounts to these turnout groups, are shown in Table E 6.

Table E 6: Historical delivery amounts to SLOFCWCD and CCWA Turnout Groups

	Group Coastal Branch Oct-Apr						Group Coastal Branch May-Sep					
Contract	North SLO	Chorro	Lopez	North County	Mid County	South Coast	North SLO	Chorro	Lopez	North County	Mid County	South Coast
1998	0	1,181	910	5,149	2,235	1,817	0	1057	708	5,514	2,522	2,074
1999	0	1,148	556	5,887	2,332	718	0	1031	752	6,102	2,942	2,219
2000	0	1,298	706	6,415	1,986	1,447	0	1177	814	6,972	3,323	3,267
2001	0	1,225	890	5,916	2,004	379	0	1145	970	5,539	2,946	2,907
2002	0	1,260	982	5,701	2,049	1,994	0	1182	989	7,115	2,924	4,648
2003	0	1,169	945	6,247	2,595	5,339	0	1220	1,040	6,858	3,834	4,567
2004	0	1,260	888	6,427	2,629	996	0	1091	1,057	7,010	3,620	6,922
2005	0	978	1,086	5,451	1,799	3,694	0	1022	1,090	7,466	3,659	2,393
2006	0	1,067	1,213	6,465	2,368	1,094	0	953	783	7,261	3,521	2,628
2007	0	1,166	1,261	7,175	2,997	1,606	0	971	896	6,668	3,356	5,943
2008	0	1,152	569	4,801	2,313	2,077	0	1073	598	4,217	2,048	5,254
2009	0	1,144	515	3,628	850	1,469	0	986	858	4,530	2,126	2,921
2010	0	789	866	3,592	579	966	0	1038	1,067	6,535	1,570	4,010
2011	0	1,012	1,144	5,168	1,862	1,472	0	994	875	6,601	2,384	2,911
2012	0	1,065	741	5,694	1,978	420	0	971	1,027	6,554	2,654	2,594
2013	0	1,085	1,157	5,419	1,587	511	0	978	695	4,788	2,070	3,694
2014	0	1,097	1,033	1,963	597	5,861	0	948	277	493	574	6,959
2015	0	1,040	363	985	187	7,162	0	617	1,218	2,182	547	2,629
2016	0	815	900	2,616	941	3,661	0	737	1,425	5,955	1,300	6,594
2017	0	845	1,209	5,807	1,714	8,553	40	772	682	6,230	2,445	6,572
2018	16	715	175	4,978	1,561	7,309	37	867	346	5,134	1,717	7,034
2019	27	881	451	4,017	1,533	4,741	16	873	346	5,944	1,905	2,050
2020	0	982	496	4,175	2,227	366	0	952	347	3,004	2,098	2,202
Average	2	1,060	829	4,942	1,779	2,767	4	985	820	5,594	2,438	4,043
Maximum	27	1,298	1,261	7,175	2,997	8,553	40	1,220	1,425	7,466	3,834	7,034

The historical deliveries were reviewed for patterns, including comparison to the SWP Table A allocation amounts. Based on this review, a few patterns were identified, as follows. The Chorro Valley and Lopez Valley turnout groups had very consistent diversions from year to year and generally show minimal variation based on the Table A Allocations. The North County and Mid County deliveries both reflected Table A Allocations with deliveries being are higher in high SWP allocation years and lower in low SWP allocation years. This seems like a reasonable outcome given that many of the North County and Mid County users have access to supplemental groundwater supplies for use when SWP supplies are limited. The South Coast deliveries tended to be higher in low SWP allocation years and lower in high SWP allocation years. The South Coast water use appears to reflect their local situation, with a local water supply source in Lake Cachuma and limited supplemental water supplies (outside of the SWP) in dry years. The Shandon group had minimal deliveries in the last five years and was not reviewed in detail.

Three approaches to the Model demand inputs were identified: average, maximum and variable demands. Averages of the historical deliveries were the first approach used. The average delivery amounts resulted in the Model easily meeting demands and not resulting in the need for intensive water management actions. A variable demand approach, with demands varying depending on SWP Table A allocation, was used for the North County and Mid County turnout groups (the SLOFCWCD County turnouts were all left at maximum delivery amounts, and the South Coast demands are considered together with Cachuma Project operations). As with the average demand level, the variable demands resulted in no need for intensive water management. The final approach used was to take the maximum semi-annual delivery amounts and use those as the Model demanded. The maximum demands stressed the available supply the most and resulted in the most intense need for water

management components. After initial exploratory analysis, the maximum demand level was used for the Model portfolios presented in the Water Management Strategy report.

Additional analysis could be performed to refine the demand assumptions that were used. As stated previously, a full Integrated Resource Planning Analysis would consider all water supplies available, not just the SWP supply. Updating the Model to include local supply sources (other than Cachuma Project) would be the most representative of local water management needs. Finally, even the maximum demand level that has been used for the Model is lower than the contractual level of Table A Amount that can be allocated to the Coastal Branch Contractors.

Water Transfers

The Model represents transfers (or sales) of water (1) from SLOFCWCD 's non-contracted Table A to its participants, (2) between the two Coastal Branch Contractors, (3) purchases from the Dry Year Purchase Program (DYPP) managed by the State Water Contractors (SWC), and (4) between the Coastal Branch Contractors and other SWP Contractors. Transfers between SWP Contractors are assumed to be flexible enough to occur anytime during the semi-annual time steps of the Model. Therefore, water purchased from other SWP Contractors could be delivered to meet a Coastal Branch Contractors' demands during the October-April or May-September sub-time step periods. Transfer of the SWC DYPP is assumed to be limited to the May through September semi-annual time step for each year, since movement of water from north of the Delta generally occurs from July through the end of September. As described elsewhere, water transfers are an optional water management component that can be turned on or off in a specific portfolio analysis.

The NFP model represents transfers as arcs either coming into specific nodes for a Coastal Branch Contractor (in the case of a purchase) or flowing out from a Coastal Branch Contractor node (in the case of a sale). The upper bounds and costs for the transfer arcs are set prior to running the Model. The Consultant Team evaluated the potential for purchases of water supplies from various sources and developed a set of criteria for price and availability based on water year classification. The assumed prices and availability were developed based on professional judgement considering historical costs, amounts and the potential effects of recent regulatory initiatives, primarily the Sustainable Groundwater Management Act (SGMA). Prices during Critical Water Year types are especially likely to be subject to considerable variability based on a wide variety of factors. Implementation of Sustainable Groundwater Management Act (SGMA)seems likely to increase the price for Wet and Above Normal Water Year type transfers, which previously were year types with low prices. The Coastal Branch Contractors' service areas represent a relatively small part of the overall water transfer market, which is dominated by agricultural users in the Central Valley and large water agencies in other areas of California. The prices and availability of water transfers from outside sources are likely to vary considerably in the future as SGMA is implemented, as agricultural commodity prices vary and as other water users implement more sophisticated water management programs.

Table E 7 summarizes the amount of water that is assumed to be available to all SWP Contractors from the DYPP as well as the cost for the water. The amount of water supply that can be made available to the Coastal Branch Contractors is limited by their pro-rata share which is based on their share of all SWP Contractors Table A Amounts. Since the SWP needs all of its pumping capacity to move SWP water supplies in wetter years, the Consultant Team assumed that no water could be moved in Below Normal, Above Normal or Wet Water Year types.

Table E 7: Dry Year Purchase Program

Dry Year Purchase Program		
Year Type	Cost based on year type ($/AF)	Max amount that can be purchased each year by all SWP Contractors (AF)
Wet Years	$ 75	0
Above Normal Years	$75	0
Below Normal Years	$ 500	0
Dry Years	$ 750	100,000
Critically Dry Years	$1,500	40,000

Table E 8 summarizes the amount of water and cost of the water that could be made available to the Coastal Branch Contractors through purchases from other SWP Contractors. It is assumed this is the amount that would be available to the Coastal Branch Contractors and varies based on water year type. The Model sets the upper bound on an aggregated arc in the NFP model for delivery of water purchases to the two Coastal Branch Contractors. Since SLOFCWCD is primarily a seller and not a buyer of water, there is little chance of a conflict between CCWA and SLOFCWCD for the supply. However, this may need additional analysis in the future to ensure that to be the case if additional scenarios are developed and run.

Table E 8 Purchase Program with Other SWP Contractors

External Purchase Program		
Year Type	Purchase Price for water from Others based on year type ($/AF)	Potential Annual Supply to Coastal Branch Contractors (AF)
Wet Years	$ 40	15,000
Above Normal Years	$ 40	8,000
Below Normal Years	$ 250	5,000
Dry Years	$ 1,000	2,000
Critically Dry Years	$ 2,000	500

Lake Cachuma

Lake Cachuma is unique in the Model as it reflects a combination of local and SWP water supplies to meet combined South Coast water demands. Lake Cachuma operations are modeled in an integrated fashion with the rest of CCWA's deliveries from the Coastal Branch. When available, local inflows to Lake Cachuma can meet all South Coast demands thus allowing for potentially higher delivery of SWP water to the CCWA North County and Mid County turnout groups along the Coastal Branch. Alternatively, the other demands that are met directly from Lake Cachuma beyond the South Coast contract amounts can avoid shortages in dry conditions because a portion of CCWA's SWP water is delivered and used to bolster the reservoir storage. This integrated operation does result in irregular deliveries of Coastal Branch supplies to Lake Cachuma, which may result in some operational challenges if flows are cut off for several years. However, it optimizes the use of

Lake Cachuma for water supply purposes by reducing spill and utilizes more of the storage capability for water supply. The Model does not consider other uses of the reservoir such as recreation as it decides how much water to deliver into storage from the SWP. Figure E 2 shows the probability of end-of-year Lake Cachuma being above various storage levels. This particular example is for Portfolio 1 which tends to exercise the reservoir to a greater degree than the other portfolio runs. The graphic shows that about 30% of the time, Lake Cachuma would end the year full, about 50% of the time it would have about 150 taf of water in it, and approximately 18% of the time, the reservoir storage would be below 100 taf.

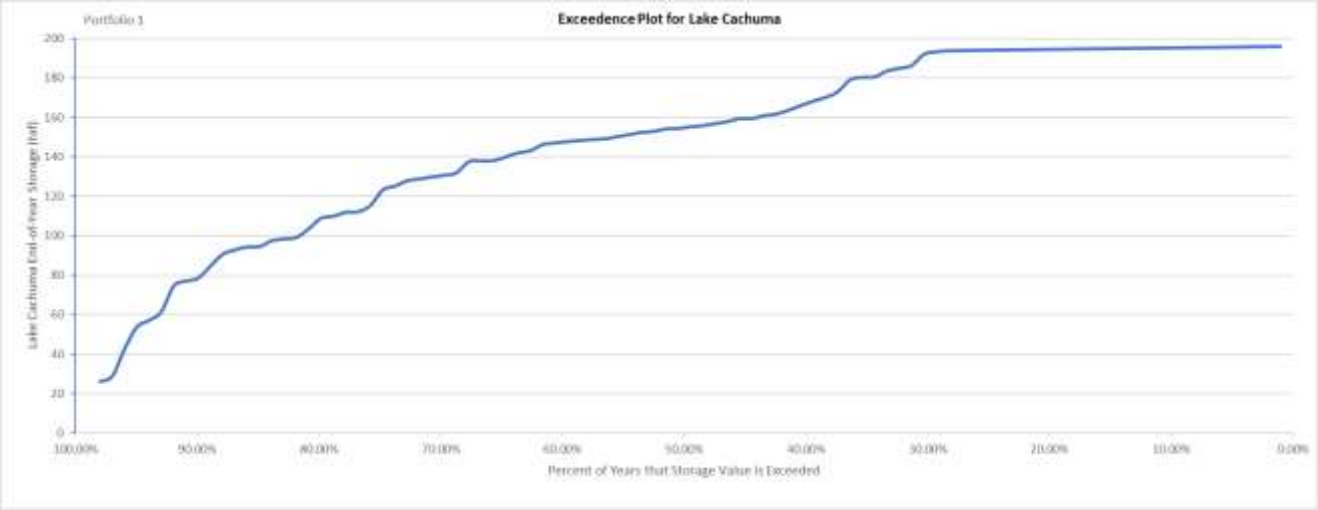


Figure E 2: Exceedance Plot for Lake Cachuma

Historical operations data on the Cachuma Project was obtained from USBR Cachuma Project monthly operations reports for 1993 through 2019. The Cachuma Project report includes Cachuma Reservoir inflows, diversions to the Tecolote Tunnel for deliveries to South Coast Users, releases for downstream users, stream channel releases and evaporation values. Based on the 1993-2019 reports, a Tecolote Tunnel annual demand of 30,000 acre-feet was identified. As noted earlier, this Tecolote Tunnel is primarily supplied by local Cachuma Reservoir inflow, with SWP supplies used as a supplemental source in drier years. Downstream delivery demands, including required instream flows, were set to 10,000 acre-feet per year.

Other Cachuma Operations Report values, such as local inflows and evaporation losses, were summarized annually for direct use in the Model. Cachuma Project local inflows were extended for the 1922 through 1992 period through correlation with precipitation measurements at Gibralter. The formula for Cachuma Reservoir inflows, with an r-squared value of 0.907, is as follows:

Cachuma Inflow (AF) = Gibralter Precipitation (inches) * 7070 – 103,000

The resulting projected inflows for 1922 through 2002 are shown with actual inflows for 1993 through 2019 in Figure E 3.

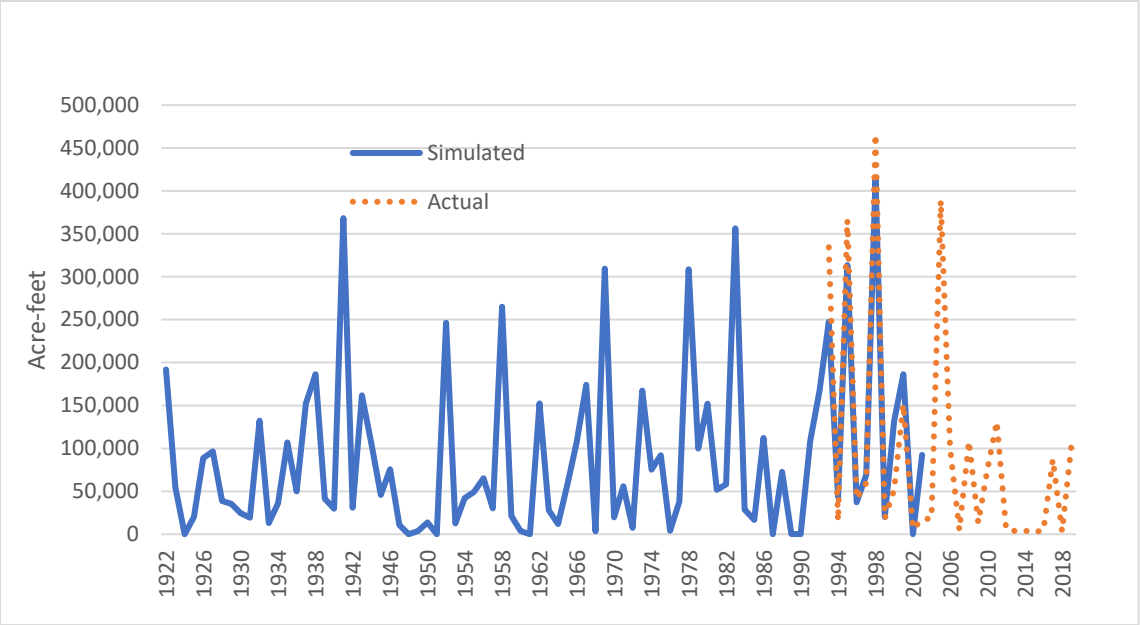


Figure E 3: Cachuma Reservoir Inflows

A correlation was also used to estimate Cachuma Reservoir evaporation based on reservoir storage. Based on this correlation, which had a r-squared correlation value of .781, Cachuma Reservoir evaporation was computed based on Cachuma Reservoir storage using the following formula:

Cachuma Reservoir Evaporation (AF) = Cachuma Reservoir Storage (AF) *.038 + 5,653

As described earlier, the evaporation amount was one of the factors that the Model computes, then adjusts specific arcs on the NFP model and reruns the NFP model.

Portfolio 1: Baseline Model Run

Portfolio 1 represents baseline Coastal Branch SWP operational conditions that generally match historical SWP water use. Each Coastal Branch Contractor controls the use of its own SWP water supply. The Coastal Branch Contractors are assumed to have access to available Coastal Branch capacity that is not restricted to their contract shares. This portfolio also includes access to the SWC Dry Year Purchase Program. Not included in this portfolio is the transfer of non-contracted water by SLOFCWCD to its participants. Normally, SLOFCWCD will make its allocated non-contracted Table A available to its participants on a first right of refusal basis. From the summary table below, one can determine that the total shortage to the participants is just over 5 taf over the 98-year study period.

Summary of Portfolio 1 Analysis

	Central Coast Water Authority (CCWA)							CCWA					CCWA							CCWA				CCWA		CCWA	
	Sources of Water Delivered							Fate of Annual Table A Allocation					What Happens to water stored in San Luis Reservoir					How much water is delivered to each turnout			Delivery Shortages				Water Purchases				Sells to Others	
		Carryover		Return from Storage/Exchange Programs			Purchases		Storage in San Luis Reservoir		Transfers		Carryover Delivered		Carryover Spilled		Carryover Sold to Others							Transfers from SLOFCWCD		Other Transfers			
Time Period	Table A	Long-Term	Short-Term	External	Internal	Transfers from SLOFCWCD	Dry Year Purchase	SWP Contractors	Direct Delivery	Long-Term	Short-Term	Sells to SLOFCWCD	Sells to Others	Long-Term	Short-Term	Long-Term	Short-Term		North County	Mid County	Lake Cachuma	North County	Mid-County		Lake Cachuma	Table A and Long-term Carryover	Short-term Carryover	Dry Year Purchase	SWP Contractors	SLOFCWCD	SWP Contractors
98-Year Summary																															
Total	1,900,278	154,955	-	-		-	17,031	-	1,900,278	677,255	9,259	-	-	154,955	-	522,300	9,259	-	1,239,478	622,409	210,377	195,340	47,029		4,835	-	-	17,031	-	-	-
Average	19,391	1,581	-	-		-	174	-	19,391	6,911	94	-	-	1,581	-	5,330	94	-	12,648	6,351	2,147	1,993	480		49	-	-	174	-	-	-
Water Year Averages																															
Wet	22,404	-	-	-		-	-	-	22,404	14,859	309	-	-	-	-	12,147	212	-	14,641	6,831	932	-	-		-	-	-	-	-	-	-
Above Normal	22,294	7	-	-		-	-	-	22,294	8,702	-	-	-	7	-	4,179	-	-	14,338	6,770	1,193	303	61		-	-	-	-	-	-	-
Below Normal	21,784	512	-	-		-	-	-	21,784	3,660	-	-	-	512	-	6,211	182	-	12,761	6,494	3,041	1,880	337		302	-	-	-	-	-	-
Dry	18,187	3,796	-	-		-	469	-	18,187	2,222	-	-	-	3,796	-	-	-	-	12,268	6,214	3,970	2,373	617		-	-	-	469	-	-	-
Critically Dry	9,946	3,956	-	-		-	416	-	9,946	-	-	-	-	3,956	-	-	-	-	7,545	5,057	1,716	7,096	1,774		-	-	-	416	-	-	-
Critical Period Averages																															
1928-1934	13,789	1,526	-	-		-	514	-	13,789	1,351	-	-	-	1,526	-	1,371	-	-	9,833	5,997	-	4,808	834		-	-	-	514	-	-	-
1987-1992	10,705	2,324	-	-		-	520	-	10,705	136	-	-	-	2,324	-	-	-	-	7,889	5,660	-	6,752	1,172		-	-	-	520	-	-	-
2013-2017	18,248	2,983	-	-		-	432	-	18,248	401	-	-	-	2,983	-	-	-	-	4,062	3,046	14,556	10,579	3,785		600	-	-	432	-	-	-
1977	2,729	6,618	-	-		-	480	-	2,729	-	-	-	-	6,618	-	-	-	-	5,328	4,499	-	9,313	2,332		-	-	-	480	-	-	-

	San Luis Obispo County Flood Control and Water Conservation District (SLOFCWCD)								SLOFCWCD					SLOFCWCD					SLOFCWCD							SLOFCWCD				SLOFCWCD	
	Sources of Water Delivered								Fate of Annual Table A Allocation					What Happens to water stored in San Luis Reservoir					How much water is delivered to each turnout			Delivery Shortages				Water Purchases				Sells to Others	
		Carryover		Return from Storage/Exchange Programs			Purchases			Storage in San Luis Reservoir		Transfers		Carryover Delivered		Carryover Spilled		Carryover Sold to Others													
Time Period	Table A	Long-Term	Short-Term	External	Internal	Transfers from CCWA	Dry Year Purchase	SWP Contractors	Direct Delivery	Long-Term	Short-Term	Sells to CCWA	Sells to Others	Long-Term	Short-Term	Long-Term	Short-Term		Shandon	Chorro Valley	Lopez Pipeline	Shandon	Chorro Valley	Lopez Pipeline		Dry Year Purchase	SWP Contractors			CCWA	SWP Contractors
98-Year Summary																															
Total	444,485	17,370	49,598	-		-	1,956	-	444,485	227,950	749,315	-	-	17,370	49,598	207,948	688,870	-	6,527	245,443	261,439	39	1,321	1,789		1,956	-			-	-
Average	4,536	177	506	-		-	20	-	4,536	2,326	7,646	-	-	177	506	2,122	7,029	-	67	2,505	2,668	0	13	18		20	-			-	-
Water Year Averages																															
Wet	5,267	-	4	-		-	-	-	5,267	-	10,831	-	-	-	4	4,348	9,949	-	67	2,518	2,686	-	-	-		-	-			-	-
Above Normal	5,225	0	45	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-			-	-
Below Normal	5,013	79	178	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-			-	-
Dry	4,284	259	717	-		-	11	-	4,284	-	5,955	-	-	259	717	943	5,749	-	67	2,518	2,686	-	-	-		11	-			-	-
Critically Dry	2,304	676	1,968	-		-	113	-	2,304	-	2,989	-	-	676	1,968	63	2,407	-	64	2,430	2,567	3	88	119		113	-			-	-
Critical Period Averages																															
1928-1934	3,237	136	1,712	-		-	82	-	3,237	678	4,406	-	-	136	1,712	676	3,831	-	66	2,474	2,626	1	44	60		82	-			-	-
1987-1992	2,511	262	2,011	-		-	176	-	2,511	569	2,878	-	-	262	2,011	514	2,122	-	63	2,380	2,517	4	138	169		176	-			-	-
2013-2017	3,373	947	938	-		-	13	-	3,373	2,430	4,447	-	-	947	938	1,455	3,408	-	67	2,518	2,686	-	-	-		13	-			-	-
1977	632	1,239	2,586	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-			-	-

	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
Periods	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
1922	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1923	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1924	6,368	10,715	-	-	17,083	-	-	480	-	480	1,475	1,210	2,586	-	5,271	-	-	-
1925	11,826	1,041	-	-	12,867	-	-	1,199	-	1,199	2,740	506	2,025	-	5,271	-	-	-
1926	18,194	-	-	-	18,194	-	-	1,199	-	1,199	4,215	-	1,056	-	5,271	-	-	-
1927	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1928	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1929	14,101	6,569	-	-	20,670	-	-	480	-	480	3,266	-	2,005	-	5,271	-	-	-
1930	6,368	4,114	-	-	10,482	-	-	1,199	-	1,199	1,475	953	2,586	-	5,014	-	-	-
1931	17,740	-	-	-	17,740	-	-	480	-	480	4,109	-	1,162	-	5,271	-	-	-
1932	11,372	-	-	-	11,372	-	-	480	-	480	2,634	-	2,586	-	5,220	-	-	-
1933	18,194	-	-	-	18,194	-	-	480	-	480	4,215	-	1,056	-	5,271	-	-	-
1934	7,278	-	-	-	7,278	-	-	480	-	480	1,686	-	2,586	-	4,272	-	-	-
1935	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1936	23,929	-	-	-	23,929	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1937	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1938	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1939	17,285	4,187	-	-	21,472	-	-	-	-	-	4,004	1,267	-	-	5,271	-	-	-
1940	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1941	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1942	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1943	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1944	16,830	6,632	-	-	23,462	-	-	-	-	-	3,899	21	1,351	-	5,271	-	-	-
1945	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1946	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1947	25,472	8,655	-	-	34,127	-	-	1,199	-	1,199	5,271	-	-	-	5,271	-	-	-
1948	21,833	-	-	-	21,833	-	-	-	-	-	5,058	-	213	-	5,271	-	-	-
1949	15,920	1,821	-	-	17,741	-	-	1,199	-	1,199	3,688	419	1,164	-	5,271	-	-	-
1950	22,743	-	-	-	22,743	-	-	1,199	-	1,199	5,268	3	-	-	5,271	-	-	-
1951	33,660	-	-	-	33,660	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1952	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-

Periods	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
1953	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1954	22,248	-	-	-	22,248	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1955	18,194	6,797	-	-	24,991	-	-	-	-	-	4,215	797	259	-	5,271	-	-	-
1956	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1957	21,472	-	-	-	21,472	-	-	-	-	-	5,268	3	-	-	5,271	-	-	-
1958	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1959	20,469	1,003	-	-	21,472	-	-	-	-	-	4,742	-	529	-	5,271	-	-	-
1960	21,472	-	-	-	21,472	-	-	-	-	-	5,268	3	-	-	5,271	-	-	-
1961	14,556	4,826	-	-	19,382	-	-	1,199	-	1,199	3,372	824	1,075	-	5,271	-	-	-
1962	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1963	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1964	21,472	5,958	-	-	27,430	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1965	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1966	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1967	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1968	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1969	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1970	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1971	21,472	-	-	-	21,472	-	-	-	-	-	5,163	-	108	-	5,271	-	-	-
1972	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1973	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1974	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1975	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1976	21,472	5,476	-	-	26,948	-	-	-	-	-	5,268	3	-	-	5,271	-	-	-
1977	2,729	6,618	-	-	9,347	-	-	480	-	480	632	1,239	2,586	-	4,457	-	-	-
1978	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1979	21,472	14,047	-	-	35,519	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1980	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1981	18,194	4,472	-	-	22,666	-	-	-	-	-	4,215	96	960	-	5,271	-	-	-
1982	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-

	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
Periods	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
1983	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1984	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1985	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1986	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1987	12,736	6,338	-	-	19,074	-	-	1,199	-	1,199	2,950	-	2,321	-	5,271	-	-	-
1988	5,003	5,844	-	-	10,847	-	-	480	-	480	1,159	855	2,586	-	4,600	-	-	-
1989	21,472	-	-	-	21,472	-	-	-	-	-	5,163	-	108	-	5,271	-	-	-
1990	5,913	1,759	-	-	7,672	-	-	480	-	480	1,370	644	2,586	-	4,600	-	-	-
1991	11,372	-	-	-	11,372	-	-	480	-	480	2,634	-	1,880	-	4,514	-	-	-
1992	7,733	-	-	-	7,733	-	-	480	-	480	1,791	73	2,586	-	4,450	-	-	-
1993	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1994	14,101	7,371	-	-	21,472	-	-	-	-	-	3,266	-	2,005	-	5,271	-	-	-
1995	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1996	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1997	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1998	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1999	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
2000	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
2001	11,826	9,646	-	-	21,472	-	-	-	-	-	2,740	656	1,875	-	5,271	-	-	-
2002	19,559	1,913	-	-	21,472	-	-	-	-	-	4,531	419	321	-	5,271	-	-	-
2003	20,014	101	-	-	20,115	-	-	-	-	-	4,636	-	635	-	5,271	-	-	-
2004	20,469	1,003	-	-	21,472	-	-	-	-	-	4,742	-	529	-	5,271	-	-	-
2005	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
2006	21,606	-	-	-	21,606	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
2007	21,472	2,297	-	-	23,769	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
2008	15,920	5,552	-	-	21,472	-	-	-	-	-	3,688	1,583	-	-	5,271	-	-	-
2009	18,194	3,278	-	-	21,472	-	-	-	-	-	4,215	1,056	-	-	5,271	-	-	-
2010	21,472	-	-	-	21,472	-	-	-	-	-	5,268	3	-	-	5,271	-	-	-
2011	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
2012	29,566	-	-	-	29,566	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-

Periods	CCWA Operations										SLOFCWCD Operations							
	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
2013	15,920	-	-	-	15,920	-	-	1,199	-	1,199	3,688	202	1,381	-	5,271	-	-	-
2014	2,274	10,593	-	-	12,867	-	-	480	-	480	527	2,158	2,586	-	5,271	-	-	-
2015	9,097	4,324	-	-	13,421	-	-	480	-	480	2,107	2,377	723	-	5,207	-	-	-
2016	27,292	-	-	-	27,292	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
2017	36,658	-	-	-	36,658	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
2018	15,920	2,005	-	-	17,925	-	-	-	-	-	3,688	-	1,583	-	5,271	-	-	-
2019	34,114	-	-	-	34,114	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sum	1,900,278	154,955	-	-	2,055,233	-	-	17,031	-	17,031	444,485	17,370	49,598	-	511,453	-	-	-
Average	19,391	1,581	-	-	20,972	-	-	174	-	174	4,536	177	506	-	5,219	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Year Averages	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wet	22,404	-	-	-	22,404	-	-	-	-	-	5,267	-	4	-	5,271	-	-	-
Above Normal	22,294	7	-	-	22,301	-	-	-	-	-	5,225	0	45	-	5,271	-	-	-
Below Normal	21,784	512	-	-	22,296	-	-	-	-	-	5,013	79	178	-	5,271	-	-	-
Dry	18,187	3,796	-	-	21,983	-	-	469	-	469	4,284	259	717	-	5,260	-	-	-
Critically Dry	9,946	3,956	-	-	13,903	-	-	416	-	416	2,304	676	1,968	-	4,948	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Period Averages	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928-34	13,789	1,526	-	-	15,315	-	-	514	-	514	3,237	136	1,712	-	5,084	-	-	-
1987-92	10,705	2,324	-	-	13,028	-	-	520	-	520	2,511	262	2,011	-	4,784	-	-	-
2013-17	18,248	2,983	-	-	21,232	-	-	432	-	432	3,373	947	938	-	5,258	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Driest 1-Year	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1977	2,729	6,618	-	-	9,347	-	-	480	-	480	632	1,239	2,586	-	4,457	-	-	-

	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
Periods	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
1983	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1984	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1985	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1986	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1987	20,273	-	5,012	259	67	67	20,273	-	4,883	321	2,518	2,518	20,273	-	2,686	-	2,686	2,686
1988	11,327	-	4,864	-	57	67	11,327	-	4,807	-	2,263	2,518	11,327	-	2,544	-	2,544	2,686
1989	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1990	8,152	-	4,864	-	63	67	8,152	-	4,801	-	2,396	2,518	8,152	-	2,405	-	2,405	2,686
1991	11,852	-	4,778	-	60	67	11,852	-	4,718	-	2,266	2,518	11,852	-	2,452	-	2,452	2,686
1992	8,213	-	4,714	-	63	67	8,213	-	4,651	-	2,321	2,518	8,213	-	2,330	-	2,330	2,686
1993	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1994	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1995	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1996	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1997	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1998	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1999	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2000	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2001	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2002	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2003	20,115	-	5,012	259	67	67	20,115	-	4,883	321	2,518	2,518	20,115	-	2,686	-	2,686	2,686
2004	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2005	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2006	21,606	-	5,012	259	67	67	21,606	-	4,883	321	2,518	2,518	21,606	-	2,686	-	2,686	2,686
2007	23,769	-	5,012	259	67	67	23,769	-	4,883	321	2,518	2,518	23,769	-	2,686	-	2,686	2,686
2008	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2009	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2010	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2011	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2012	29,566	-	5,012	259	67	67	29,566	-	4,883	321	2,518	2,518	29,566	-	2,686	-	2,686	2,686

	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
Periods	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
2013	17,119	-	5,012	259	67	67	17,119	-	4,883	321	2,518	2,518	17,119	-	2,686	-	2,686	2,686
2014	13,347	-	5,012	259	67	67	13,347	-	4,883	321	2,518	2,518	13,347	-	2,686	-	2,686	2,686
2015	13,901	-	5,012	259	67	67	13,901	-	4,883	321	2,518	2,518	13,901	-	2,686	-	2,686	2,686
2016	27,292	-	5,012	259	67	67	27,292	-	4,883	321	2,518	2,518	27,292	-	2,686	-	2,686	2,686
2017	36,658	-	5,012	259	67	67	36,658	-	4,883	321	2,518	2,518	36,658	-	2,686	-	2,686	2,686
2018	17,925	-	5,012	259	67	67	17,925	-	4,883	321	2,518	2,518	17,925	-	2,686	-	2,686	2,686
2019	34,114	-	5,012	259	67	67	34,114	-	4,883	321	2,518	2,518	34,114	-	2,686	-	2,686	2,686
Sum	2,072,264	-	489,581	23,828	6,527	6,566	2,072,264	-	477,350	29,532	245,443	246,764	2,072,264	-	261,439	-	261,439	263,228
Average	21,146	-	4,996	243	67	67	21,146	-	4,871	301	2,505	2,518	21,146	-	2,668	-	2,668	2,686
Water Year Averages																		
Wet	22,404	-	5,012	259	67	67	22,404	-	4,883	321	2,518	2,518	22,404	-	2,686	-	2,686	2,686
Above Normal	22,301	-	5,012	259	67	67	22,301	-	4,883	321	2,518	2,518	22,301	-	2,686	-	2,686	2,686
Below Normal	22,296	-	5,012	259	67	67	22,296	-	4,883	321	2,518	2,518	22,296	-	2,686	-	2,686	2,686
Dry	22,453	-	5,012	259	67	67	22,453	-	4,883	321	2,518	2,518	22,453	-	2,686	-	2,686	2,686
Critically Dry	14,319	-	4,906	155	64	67	14,319	-	4,804	193	2,430	2,518	14,319	-	2,567	-	2,567	2,686
													-	-				
Critical Period Averages													-	-				
1928-34	15,830	-	4,944	222	66	67	15,830	-	4,825	275	2,474	2,518	15,830	-	2,626	-	2,626	2,686
1987-92	13,548	-	4,874	86	63	67	13,548	-	4,791	107	2,380	2,518	13,548	-	2,517	-	2,517	2,686
2013-17	21,663	-	5,012	259	67	67	21,663	-	4,883	321	2,518	2,518	21,663	-	2,686	-	2,686	2,686
Driest 1-Year																		
1977	9,827	-	4,721	-	63	67	9,827	-	4,658	-	2,328	2,518	9,827	-	2,330	-	2,330	2,686

	Reach 4 Operations			Reach 5 Operations			Lake Cachuma Operations						
	CCWA			CCWA									
Periods	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
1922	21,472	14,641	14,641	6,831	6,831	6,831	-	192,009	11,277	196,000	14,000	30,000	30,000
1923	21,472	14,641	14,641	6,831	6,831	6,831	-	54,915	13,059	193,856	14,000	30,000	30,000
1924	17,563	11,115	14,641	6,448	6,448	6,831	-	-	11,951	137,905	14,000	30,000	30,000
1925	14,066	7,918	14,641	6,148	6,148	6,831	-	19,917	10,224	103,598	14,000	30,000	30,000
1926	19,393	12,945	14,641	6,448	6,448	6,831	-	88,712	10,208	138,102	14,000	30,000	30,000
1927	21,472	14,641	14,641	6,831	6,831	6,831	-	96,630	11,617	179,115	14,000	30,000	30,000
1928	21,472	14,641	14,641	6,831	6,831	6,831	-	38,724	12,038	161,801	14,000	30,000	30,000
1929	21,150	14,319	14,641	6,831	6,831	6,831	-	35,543	11,296	142,048	14,000	30,000	30,000
1930	11,681	5,983	14,641	5,698	5,698	6,831	-	24,442	10,306	112,184	14,000	30,000	30,000
1931	18,220	11,772	14,641	6,448	6,448	6,831	-	19,422	9,044	78,562	14,000	30,000	30,000
1932	11,852	6,154	14,641	5,698	5,698	6,831	-	132,123	9,830	156,855	14,000	30,000	30,000
1933	18,674	12,226	14,641	6,448	6,448	6,831	-	12,988	10,459	115,384	14,000	30,000	30,000
1934	7,758	3,733	14,641	4,025	4,025	6,831	-	36,250	9,269	98,365	14,000	30,000	30,000
1935	21,472	14,641	14,641	6,831	6,831	6,831	-	106,812	9,867	151,310	14,000	30,000	30,000
1936	23,929	14,641	14,641	9,288	6,831	6,831	2,457	49,754	10,717	148,804	14,000	30,000	30,000
1937	21,472	14,641	14,641	6,831	6,831	6,831	-	152,344	11,852	196,000	14,000	30,000	30,000
1938	21,472	14,641	14,641	6,831	6,831	6,831	-	186,211	13,101	196,000	14,000	30,000	30,000
1939	21,472	14,641	14,641	6,831	6,831	6,831	-	41,411	12,806	180,605	14,000	30,000	30,000
1940	21,472	14,641	14,641	6,831	6,831	6,831	-	29,816	12,005	154,416	14,000	30,000	30,000
1941	21,472	14,641	14,641	6,831	6,831	6,831	-	368,484	12,301	196,000	14,000	30,000	30,000
1942	21,472	14,641	14,641	6,831	6,831	6,831	-	30,806	12,608	170,198	14,000	30,000	30,000
1943	21,472	14,641	14,641	6,831	6,831	6,831	-	161,889	12,608	196,000	14,000	30,000	30,000
1944	23,462	14,641	14,641	8,821	6,831	6,831	1,990	104,761	13,101	196,000	14,000	30,000	30,000
1945	21,472	14,641	14,641	6,831	6,831	6,831	-	45,795	12,888	184,907	14,000	30,000	30,000
1946	21,472	14,641	14,641	6,831	6,831	6,831	-	75,561	12,888	196,000	14,000	30,000	30,000
1947	35,326	13,063	14,641	22,263	6,336	6,831	15,927	10,655	12,530	166,052	14,000	30,000	30,000
1948	21,833	3,733	14,641	18,100	3,750	6,831	14,350	-	11,180	125,222	14,000	30,000	30,000
1949	18,940	5,599	14,641	13,341	3,750	6,831	9,591	3,514	9,629	84,698	14,000	30,000	30,000
1950	23,942	4,111	14,641	19,831	4,444	6,831	15,387	13,837	8,423	61,499	14,000	30,000	30,000
1951	33,660	11,397	14,641	22,263	6,336	6,831	15,927	-	7,317	26,109	14,000	30,000	30,000
1952	21,472	14,641	14,641	6,831	6,831	6,831	-	246,309	9,873	196,000	14,000	30,000	30,000

Periods	Reach 4 Operations			Reach 5 Operations			Lake Cachuma Operations						
	CCWA			CCWA									
	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
1953	21,472	14,641	14,641	6,831	6,831	6,831	-	12,635	12,270	152,365	14,000	30,000	30,000
1954	22,248	14,641	14,641	7,607	6,831	6,831	776	42,047	11,196	139,992	14,000	30,000	30,000
1955	24,991	14,641	14,641	10,350	6,831	6,831	3,519	48,976	10,899	137,588	14,000	30,000	30,000
1956	21,472	14,641	14,641	6,831	6,831	6,831	-	65,238	11,026	147,800	14,000	30,000	30,000
1957	21,472	14,641	14,641	6,831	6,831	6,831	-	30,099	10,723	123,176	14,000	30,000	30,000
1958	21,472	14,641	14,641	6,831	6,831	6,831	-	265,046	11,670	196,000	14,000	30,000	30,000
1959	21,472	14,641	14,641	6,831	6,831	6,831	-	21,331	12,432	160,899	14,000	30,000	30,000
1960	21,472	14,641	14,641	6,831	6,831	6,831	-	3,797	10,786	109,910	14,000	30,000	30,000
1961	20,581	14,133	14,641	6,448	6,448	6,831	-	-	8,797	57,113	14,000	30,000	30,000
1962	21,472	14,641	14,641	6,831	6,831	6,831	-	152,344	9,646	155,811	14,000	30,000	30,000
1963	21,472	14,641	14,641	6,831	6,831	6,831	-	27,977	10,977	128,811	14,000	30,000	30,000
1964	27,430	14,641	14,641	12,789	6,831	6,831	5,958	11,857	9,745	92,881	14,000	30,000	30,000
1965	21,472	14,641	14,641	6,831	6,831	6,831	-	57,744	9,111	97,514	14,000	30,000	30,000
1966	21,472	14,641	14,641	6,831	6,831	6,831	-	106,812	10,155	150,171	14,000	30,000	30,000
1967	21,472	14,641	14,641	6,831	6,831	6,831	-	173,909	12,116	196,000	14,000	30,000	30,000
1968	21,472	14,641	14,641	6,831	6,831	6,831	-	3,231	12,094	143,137	14,000	30,000	30,000
1969	21,472	14,641	14,641	6,831	6,831	6,831	-	309,518	12,094	196,000	14,000	30,000	30,000
1970	21,472	14,641	14,641	6,831	6,831	6,831	-	19,776	12,403	159,373	14,000	30,000	30,000
1971	21,472	14,641	14,641	6,831	6,831	6,831	-	55,764	11,698	159,439	14,000	30,000	30,000
1972	21,472	14,641	14,641	6,831	6,831	6,831	-	7,261	10,778	111,922	14,000	30,000	30,000
1973	21,472	14,641	14,641	6,831	6,831	6,831	-	167,263	11,482	196,000	14,000	30,000	30,000
1974	21,472	14,641	14,641	6,831	6,831	6,831	-	75,349	13,101	196,000	14,000	30,000	30,000
1975	21,472	14,641	14,641	6,831	6,831	6,831	-	92,176	13,101	196,000	14,000	30,000	30,000
1976	26,948	14,641	14,641	12,307	6,831	6,831	5,476	3,868	12,210	149,134	14,000	30,000	30,000
1977	9,827	5,328	14,641	4,499	4,499	6,831	-	37,805	10,990	131,949	14,000	30,000	30,000
1978	21,472	14,641	14,641	6,831	6,831	6,831	-	308,669	11,881	196,000	14,000	30,000	30,000
1979	35,519	14,641	14,641	20,878	6,831	6,831	14,047	99,953	13,101	196,000	14,000	30,000	30,000
1980	21,472	14,641	14,641	6,831	6,831	6,831	-	152,203	13,101	196,000	14,000	30,000	30,000
1981	22,666	14,641	14,641	8,025	6,831	6,831	1,194	51,875	13,024	192,045	14,000	30,000	30,000
1982	21,472	14,641	14,641	6,831	6,831	6,831	-	58,238	12,969	193,314	14,000	30,000	30,000

Periods	Reach 4 Operations			Reach 5 Operations			Lake Cachuma Operations						
	CCWA			CCWA									
	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
1983	21,472	14,641	14,641	6,831	6,831	6,831	-	356,323	13,046	196,000	14,000	30,000	30,000
1984	21,472	14,641	14,641	6,831	6,831	6,831	-	28,826	12,571	168,255	14,000	30,000	30,000
1985	21,472	14,641	14,641	6,831	6,831	6,831	-	16,877	11,304	129,828	14,000	30,000	30,000
1986	21,472	14,641	14,641	6,831	6,831	6,831	-	112,114	11,631	186,311	14,000	30,000	30,000
1987	20,273	13,442	14,641	6,831	6,831	6,831	-	-	11,629	130,682	14,000	30,000	30,000
1988	11,327	5,629	14,641	5,698	5,698	6,831	-	72,521	10,883	148,320	14,000	30,000	30,000
1989	21,472	14,641	14,641	6,831	6,831	6,831	-	403	10,163	94,560	14,000	30,000	30,000
1990	8,152	3,733	14,641	4,419	4,419	6,831	-	-	8,111	42,449	14,000	30,000	30,000
1991	11,852	6,154	14,641	5,698	5,698	6,831	-	108,933	8,153	99,229	14,000	30,000	30,000
1992	8,213	3,733	14,641	4,480	4,480	6,831	-	167,121	11,154	196,000	14,000	30,000	30,000
1993	21,472	14,641	14,641	6,831	6,831	6,831	-	334,360	13,101	196,000	14,000	30,000	30,000
1994	21,472	14,641	14,641	6,831	6,831	6,831	-	15,575	12,324	155,251	14,000	30,000	30,000
1995	21,472	14,641	14,641	6,831	6,831	6,831	-	366,102	12,324	196,000	14,000	30,000	30,000
1996	21,472	14,641	14,641	6,831	6,831	6,831	-	41,187	12,802	180,385	14,000	30,000	30,000
1997	21,472	14,641	14,641	6,831	6,831	6,831	-	59,768	12,556	183,597	14,000	30,000	30,000
1998	21,472	14,641	14,641	6,831	6,831	6,831	-	465,884	12,855	196,000	14,000	30,000	30,000
1999	21,472	14,641	14,641	6,831	6,831	6,831	-	18,239	12,374	157,865	14,000	30,000	30,000
2000	21,472	14,641	14,641	6,831	6,831	6,831	-	51,869	11,569	154,165	14,000	30,000	30,000
2001	21,472	14,641	14,641	6,831	6,831	6,831	-	151,409	12,296	196,000	14,000	30,000	30,000
2002	21,472	14,641	14,641	6,831	6,831	6,831	-	6,421	12,154	146,267	14,000	30,000	30,000
2003	20,115	13,638	14,641	6,477	6,477	6,831	-	17,144	10,490	108,921	14,000	30,000	30,000
2004	21,472	14,641	14,641	6,831	6,831	6,831	-	18,695	9,110	74,506	14,000	30,000	30,000
2005	21,472	14,641	14,641	6,831	6,831	6,831	-	388,819	10,774	196,000	14,000	30,000	30,000
2006	21,606	14,641	14,641	6,965	6,831	6,831	134	100,283	13,101	196,000	14,000	30,000	30,000
2007	23,769	14,641	14,641	9,128	6,831	6,831	2,297	4,920	12,169	147,048	14,000	30,000	30,000
2008	21,472	14,641	14,641	6,831	6,831	6,831	-	108,331	12,169	196,000	14,000	30,000	30,000
2009	21,472	14,641	14,641	6,831	6,831	6,831	-	13,188	12,280	152,908	14,000	30,000	30,000
2010	21,472	14,641	14,641	6,831	6,831	6,831	-	75,948	11,834	173,022	14,000	30,000	30,000
2011	21,472	14,641	14,641	6,831	6,831	6,831	-	131,349	12,655	196,000	14,000	30,000	30,000
2012	29,566	7,603	14,641	21,963	6,036	6,831	15,927	6,429	12,499	163,692	14,000	28,165	30,000

Periods	Reach 4 Operations CCWA			Reach 5 Operations CCWA			Lake Cachuma Operations						
	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
2013	17,119	1	14,641	17,118	1,191	6,831	15,927	3,520	11,212	127,927	14,000	30,000	30,000
2014	13,347	1	14,641	13,346	754	6,831	12,592	3,942	9,816	90,645	14,000	30,000	30,000
2015	13,901	1	14,641	13,900	754	6,831	13,146	2,264	8,398	53,657	14,000	30,000	30,000
2016	27,292	5,667	14,641	21,625	5,698	6,831	15,927	4,694	7,169	26,109	14,000	27,000	30,000
2017	36,658	14,641	14,641	22,017	6,831	6,831	15,186	87,303	7,611	76,987	14,000	30,000	30,000
2018	17,925	11,477	14,641	6,448	6,448	6,831	-	3,373	7,657	28,703	14,000	30,000	30,000
2019	34,114	14,641	14,641	19,473	6,831	6,831	12,642	104,953	7,981	94,317	14,000	30,000	30,000
Sum	2,072,264	1,239,478	1,434,818	832,786	622,409	669,438	210,377	8,291,482	1,101,773	14,553,545	1,372,000	2,935,165	2,940,000
Average	21,146	12,648	14,641	8,498	6,351	6,831	2,147	84,607	11,243	148,506	14,000	29,951	30,000
Water Year Averages													
Wet	22,404	14,641	14,641	7,763	6,831	6,831	932	142,380	11,860	173,218	14,000	30,000	30,000
Above Normal	22,301	14,338	14,641	7,963	6,770	6,831	1,193	123,800	11,442	158,835	14,000	30,000	30,000
Below Normal	22,296	12,761	14,641	9,535	6,494	6,831	3,041	38,054	10,958	134,450	14,000	29,698	30,000
Dry	22,453	12,268	14,641	10,184	6,214	6,831	3,970	40,225	11,157	136,500	14,000	30,000	30,000
Critically Dry	14,319	7,545	14,641	6,773	5,057	6,831	1,716	50,188	10,256	122,841	14,000	30,000	30,000
Critical Period Averages													
1928-34	15,830	9,833	14,641	5,997	5,997	6,831	-	42,785	10,320	123,600	14,000	30,000	30,000
1987-92	13,548	7,889	14,641	5,660	5,660	6,831	-	58,163	10,016	118,540	14,000	30,000	30,000
2013-17	21,663	4,062	14,641	17,601	3,046	6,831	14,556	20,345	8,841	75,065	14,000	29,400	30,000
Driest 1-Year													
1977	9,827	5,328	14,641	4,499	4,499	6,831	-	37,805	10,990	131,949	14,000	30,000	30,000

Periods	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
1922	10,368	-	-	-	12,229	-	-	-	-	-	-	-	-	-	-
1923	9,004	-	-	7,616	11,479	-	-	-	12,026	-	-	-	-	-	-
1924	-	10,715	-	-	2,025	3,796	-	-	3,034	-	-	-	-	-	-
1925	-	1,041	-	-	3,760	2,531	-	-	3,691	-	-	-	-	-	-
1926	-	-	-	-	5,785	1,056	-	-	2,704	-	-	-	-	-	-
1927	10,823	-	-	-	12,479	-	-	-	6,164	-	-	-	-	-	-
1928	9,458	-	-	9,598	11,729	-	-	-	12,755	-	-	-	-	-	-
1929	-	6,569	-	-	4,484	2,005	-	-	7,463	-	-	-	-	-	-
1930	-	4,114	-	-	2,025	3,539	-	-	3,206	-	-	-	-	-	-
1931	-	-	-	-	5,641	1,162	-	-	863	-	-	-	-	-	-
1932	-	-	-	-	3,616	2,586	-	-	2,954	-	-	-	-	-	-
1933	-	-	-	-	5,785	1,056	-	-	2,560	-	-	-	-	-	-
1934	-	-	-	-	2,314	2,586	-	-	1,753	-	-	-	-	-	-
1935	15,372	-	-	-	14,979	-	-	-	3,806	-	-	-	-	-	-
1936	179	-	-	15,372	7,979	-	-	-	15,034	-	-	-	-	-	-
1937	11,733	-	-	-	12,979	-	-	-	7,880	-	-	-	-	-	-
1938	24,014	-	-	11,912	19,729	-	-	-	13,078	-	-	-	-	-	-
1939	-	4,187	-	15,641	5,496	1,267	-	-	16,161	-	-	-	-	-	-
1940	4,455	-	-	-	8,979	-	-	-	4,541	-	-	-	-	-	-
1941	20,830	-	-	8,641	17,979	-	-	-	12,235	-	-	-	-	-	-
1942	13,097	-	-	16,456	13,729	-	-	-	16,966	-	-	-	-	-	-
1943	19,011	-	-	17,471	16,979	-	-	-	14,742	-	-	-	-	-	-
1944	-	6,632	-	-	5,351	1,372	-	-	8,803	-	-	-	-	-	-
1945	9,913	-	-	11,742	11,979	-	-	-	11,806	-	-	-	-	-	-
1946	5,820	-	-	5,894	9,729	-	-	-	12,328	-	-	-	-	-	-
1947	-	8,655	-	-	8,729	-	-	-	8,728	-	-	-	-	-	-
1948	-	-	-	-	6,942	213	-	-	8,559	-	-	-	-	-	-
1949	-	1,821	-	-	5,062	1,583	-	-	5,039	-	-	-	-	-	-
1950	-	-	-	-	7,232	3	-	-	4,573	-	-	-	-	-	-
1951	-	-	-	-	13,229	-	-	-	8,996	-	-	-	-	-	-
1952	20,830	-	-	-	17,979	-	-	-	13,229	-	-	-	-	-	-

	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
Periods	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
1953	5,820	-	-	20,830	9,729	-	-	-	17,979	-	-	-	-	-	-
1954	7,318	-	-	5,820	10,979	-	-	-	9,729	-	-	-	-	-	-
1955	-	6,797	-	-	5,785	1,056	-	-	9,636	-	-	-	-	-	-
1956	18,556	-	-	521	16,729	-	-	-	6,072	-	-	-	-	-	-
1957	1,271	-	-	8,607	7,232	3	-	-	11,258	-	-	-	-	-	-
1958	24,014	-	-	11,220	19,729	-	-	-	12,700	-	-	-	-	-	-
1959	-	1,003	-	19,456	6,508	529	-	-	18,373	-	-	-	-	-	-
1960	1,271	-	-	-	7,232	3	-	-	5,378	-	-	-	-	-	-
1961	-	4,826	-	-	4,628	1,899	-	-	5,456	-	-	-	-	-	-
1962	1,726	-	-	-	7,479	-	-	-	3,718	-	-	-	-	-	-
1963	7,639	-	-	1,726	10,729	-	-	-	10,220	-	-	-	-	-	-
1964	5,365	5,958	-	-	9,479	-	-	-	9,806	-	-	-	-	-	-
1965	2,181	-	-	7,046	7,729	-	-	-	10,402	-	-	-	-	-	-
1966	10,823	-	-	2,181	12,479	-	-	-	7,729	-	-	-	-	-	-
1967	22,195	-	-	10,823	18,729	-	-	-	12,479	-	-	-	-	-	-
1968	6,729	-	-	18,170	10,229	-	-	-	16,517	-	-	-	-	-	-
1969	24,014	-	-	10,754	19,729	-	-	-	12,441	-	-	-	-	-	-
1970	12,188	-	-	23,310	13,229	-	-	-	19,342	-	-	-	-	-	-
1971	816	-	-	12,892	7,087	108	-	-	13,508	-	-	-	-	-	-
1972	7,639	-	-	196	10,729	-	-	-	6,890	-	-	-	-	-	-
1973	10,823	-	-	7,459	12,479	-	-	-	10,487	-	-	-	-	-	-
1974	18,556	-	-	10,288	16,729	-	-	-	12,609	-	-	-	-	-	-
1975	10,823	-	-	19,891	12,479	-	-	-	17,038	-	-	-	-	-	-
1976	1,271	5,476	-	-	7,232	3	-	-	9,537	-	-	-	-	-	-
1977	-	6,618	-	-	868	3,825	-	-	2,838	-	-	-	-	-	-
1978	15,827	-	-	-	15,229	-	-	-	4,376	-	-	-	-	-	-
1979	9,458	14,047	-	-	11,729	-	-	-	14,251	-	-	-	-	-	-
1980	18,556	-	-	11,238	16,729	-	-	-	12,707	-	-	-	-	-	-
1981	-	4,472	-	-	5,785	1,056	-	-	7,932	-	-	-	-	-	-
1982	24,014	-	-	14,084	19,729	-	-	-	13,526	-	-	-	-	-	-

	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
Periods	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
1983	24,014	-	-	24,014	19,729	-	-	-	19,729	-	-	-	-	-	-
1984	12,188	-	-	24,014	13,229	-	-	-	19,729	-	-	-	-	-	-
1985	11,278	-	-	11,903	12,729	-	-	-	13,072	-	-	-	-	-	-
1986	12,642	-	-	11,080	13,479	-	-	-	12,886	-	-	-	-	-	-
1987	-	6,338	-	-	4,050	2,321	-	-	8,575	-	-	-	-	-	-
1988	-	5,844	-	-	1,591	3,441	-	-	452	-	-	-	-	-	-
1989	816	-	-	-	7,087	108	-	-	3,506	-	-	-	-	-	-
1990	-	1,759	-	-	1,880	3,230	-	-	3,156	-	-	-	-	-	-
1991	-	-	-	-	3,616	1,880	-	-	-	-	-	-	-	-	-
1992	-	-	-	-	2,459	2,659	-	-	126	-	-	-	-	-	-
1993	8,094	-	-	-	10,979	-	-	-	4,708	-	-	-	-	-	-
1994	-	7,371	-	-	4,484	2,005	-	-	4,993	-	-	-	-	-	-
1995	24,014	-	-	-	19,729	-	-	-	8,232	-	-	-	-	-	-
1996	17,646	-	-	23,754	16,229	-	-	-	19,734	-	-	-	-	-	-
1997	12,642	-	-	17,932	13,479	-	-	-	16,295	-	-	-	-	-	-
1998	24,014	-	-	13,339	19,729	-	-	-	13,641	-	-	-	-	-	-
1999	10,368	-	-	24,014	12,229	-	-	-	19,729	-	-	-	-	-	-
2000	12,188	-	-	9,893	13,229	-	-	-	12,229	-	-	-	-	-	-
2001	-	9,646	-	-	3,760	2,531	-	-	7,455	-	-	-	-	-	-
2002	-	1,913	-	-	6,219	740	-	-	3,890	-	-	-	-	-	-
2003	-	101	-	-	6,364	635	-	-	4,029	-	-	-	-	-	-
2004	-	1,003	-	-	6,508	529	-	-	4,244	-	-	-	-	-	-
2005	17,191	-	-	-	15,979	-	-	-	4,881	-	-	-	-	-	-
2006	21,606	-	-	17,191	18,479	-	-	-	23,125	-	-	-	-	-	-
2007	5,820	2,297	-	-	9,729	-	-	-	10,756	-	-	-	-	-	-
2008	-	5,552	-	-	5,062	1,583	-	-	5,641	-	-	-	-	-	-
2009	-	3,278	-	-	5,785	1,056	-	-	5,062	-	-	-	-	-	-
2010	1,271	-	-	-	7,232	3	-	-	5,785	-	-	-	-	-	-
2011	14,917	-	-	17,570	14,729	-	-	-	16,401	-	-	-	-	-	-
2012	-	-	-	-	10,979	-	-	-	10,371	-	-	-	-	-	-

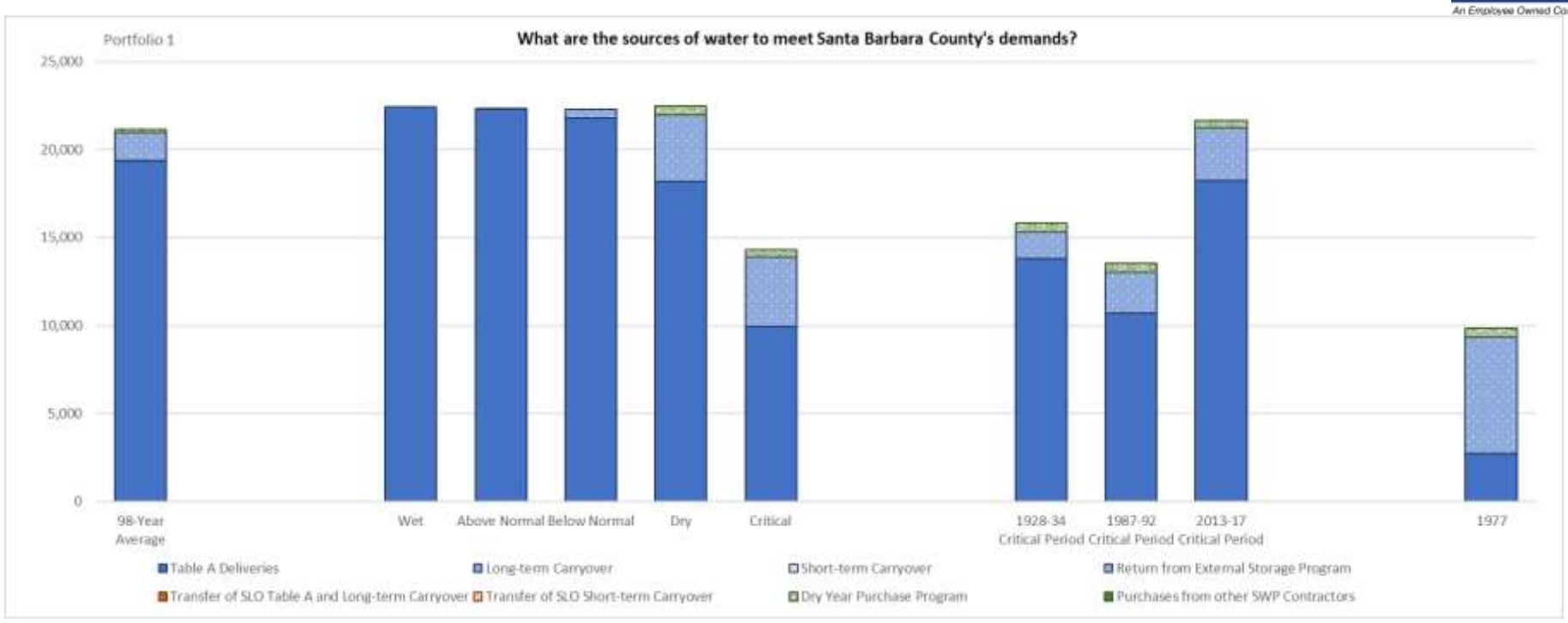
Periods	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
2013	-	-	-	-	5,062	1,583	-	-	4,260	-	-	-	-	-	-
2014	-	10,593	-	-	723	4,744	-	-	1,210	-	-	-	-	-	-
2015	-	4,324	-	-	2,893	3,100	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	9,729	-	-	-	2,893	-	-	-	-	-	-
2017	2,005	-	-	-	15,979	-	-	-	15,954	-	-	-	-	-	-
2018	-	2,005	-	-	5,062	1,583	-	-	4,564	-	-	-	-	-	-
2019	-	-	-	-	13,479	-	-	-	14,894	-	-	-	-	-	-
Sum	686,514	154,955	-	531,559	977,265	66,968	-	-	896,818	-	-	-	-	-	-
Average	7,005	1,581	-	5,424	9,972	683	-	-	9,151	-	-	-	-	-	-
Water Year Averages															
Wet	15,167	-	-	12,359	15,383	4	-	-	14,297	-	-	-	-	-	-
Above Normal	8,702	7	-	4,179	11,810	46	-	-	8,513	-	-	-	-	-	-
Below Normal	3,660	512	-	6,392	8,971	258	-	-	9,859	-	-	-	-	-	-
Dry	2,222	3,796	-	-	6,933	976	-	-	6,693	-	-	-	-	-	-
Critically Dry	-	3,956	-	-	3,163	2,644	-	-	2,470	-	-	-	-	-	-
Critical Period Averages															
1928-34	1,351	1,526	-	1,371	5,085	1,848	-	-	4,508	-	-	-	-	-	-
1987-92	136	2,324	-	-	3,447	2,273	-	-	2,636	-	-	-	-	-	-
2013-17	401	2,983	-	-	6,877	1,885	-	-	4,863	-	-	-	-	-	-
Driest 1-Year															
1977	-	6,618	-	-	868	3,825	-	-	2,838	-	-	-	-	-	-

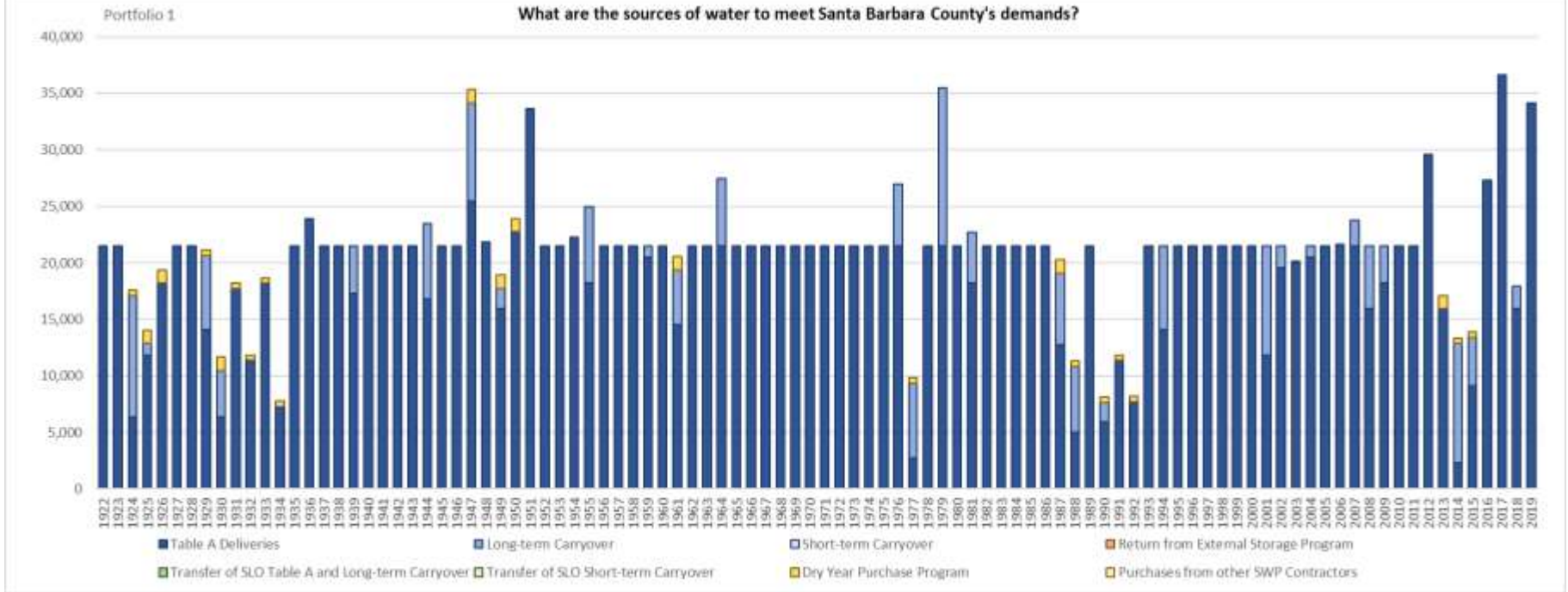
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCD Purchases from Others	SLOFCWCD Purchases from CCWA
1922	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	-	-	480	-	-	-
1925	-	-	-	-	-	-	1,199	-	-	-
1926	-	-	-	-	-	-	1,199	-	-	-
1927	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	480	-	-	-
1930	-	-	-	-	-	-	1,199	-	257	-
1931	-	-	-	-	-	-	480	-	-	-
1932	-	-	-	-	-	-	480	-	51	-
1933	-	-	-	-	-	-	480	-	-	-
1934	-	-	-	-	-	-	480	-	264	-
1935	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	1,199	-	-	-
1948	-	-	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	1,199	-	-	-
1950	-	-	-	-	-	-	1,199	-	-	-
1951	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-

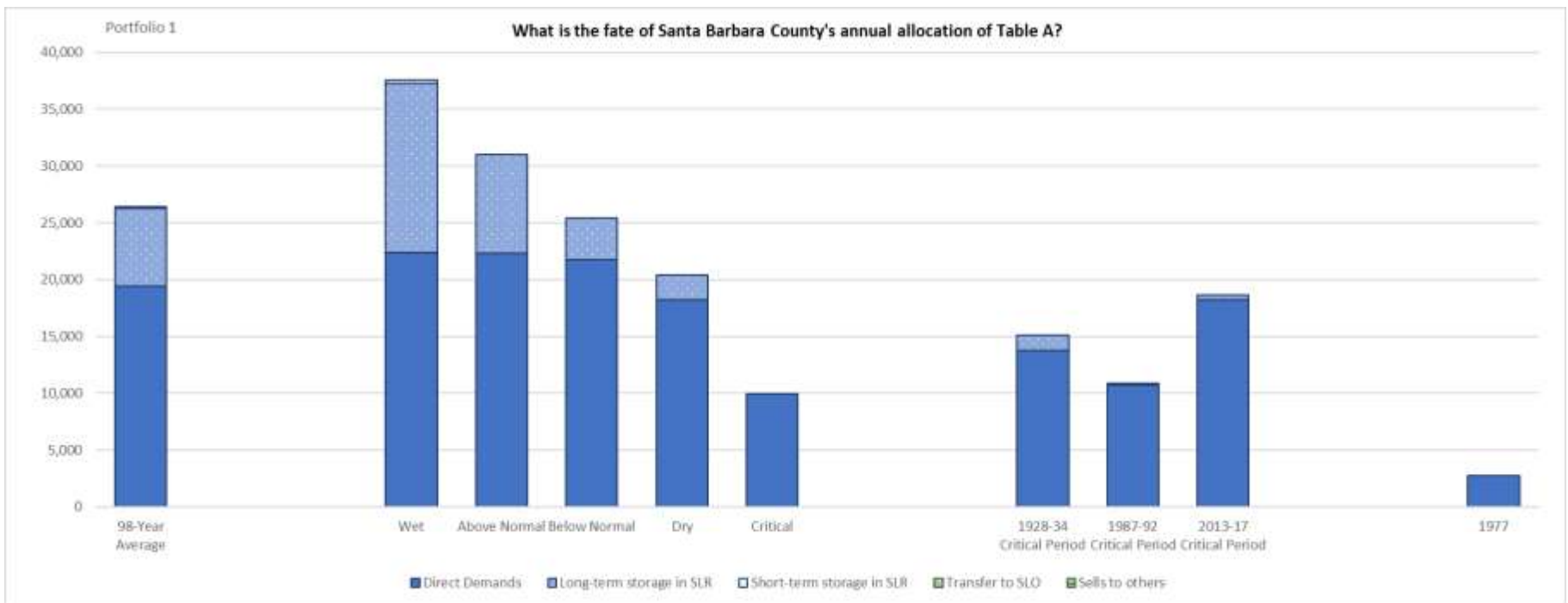
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCD Purchases from Others	SLOFCWCD Purchases from CCWA
1953	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	1,199	-	-	-
1962	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-	-	-
1976	-	-	-	-	-	-	-	-	-	-
1977	-	-	-	-	-	-	480	-	264	-
1978	-	-	-	-	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	-	-	-	-	-	-	-	-	-	-
1982	-	-	-	-	-	-	-	-	-	-

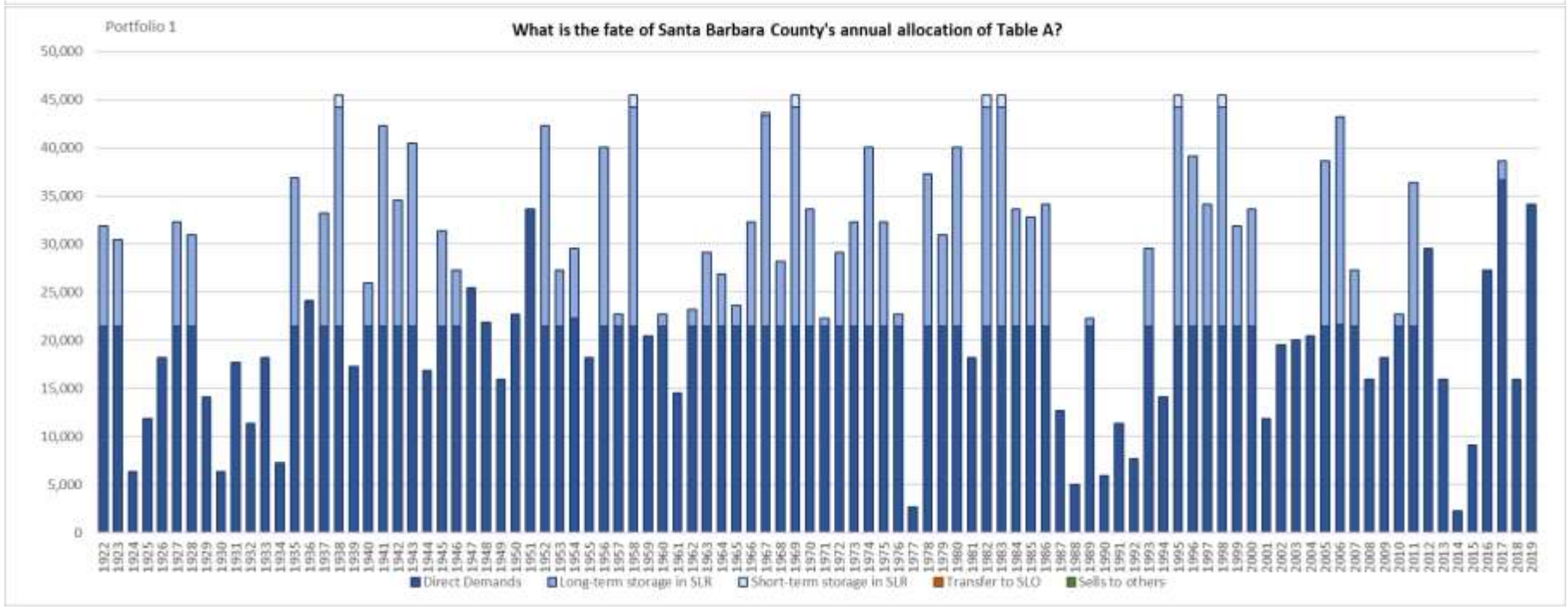
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCD Purchases from Others	SLOFCWCD Purchases from CCWA
1983	-	-	-	-	-	-	-	-	-	-
1984	-	-	-	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-	-	-	-
1986	-	-	-	-	-	-	-	-	-	-
1987	-	-	-	-	-	-	1,199	-	-	-
1988	-	-	-	-	-	-	480	-	264	-
1989	-	-	-	-	-	-	-	-	-	-
1990	-	-	-	-	-	-	480	-	264	-
1991	-	-	-	-	-	-	480	-	264	-
1992	-	-	-	-	-	-	480	-	264	-
1993	-	-	-	-	-	-	-	-	-	-
1994	-	-	-	-	-	-	-	-	-	-
1995	-	-	-	-	-	-	-	-	-	-
1996	-	-	-	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	-	-	-
1998	-	-	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-	-	-	-
2000	-	-	-	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-

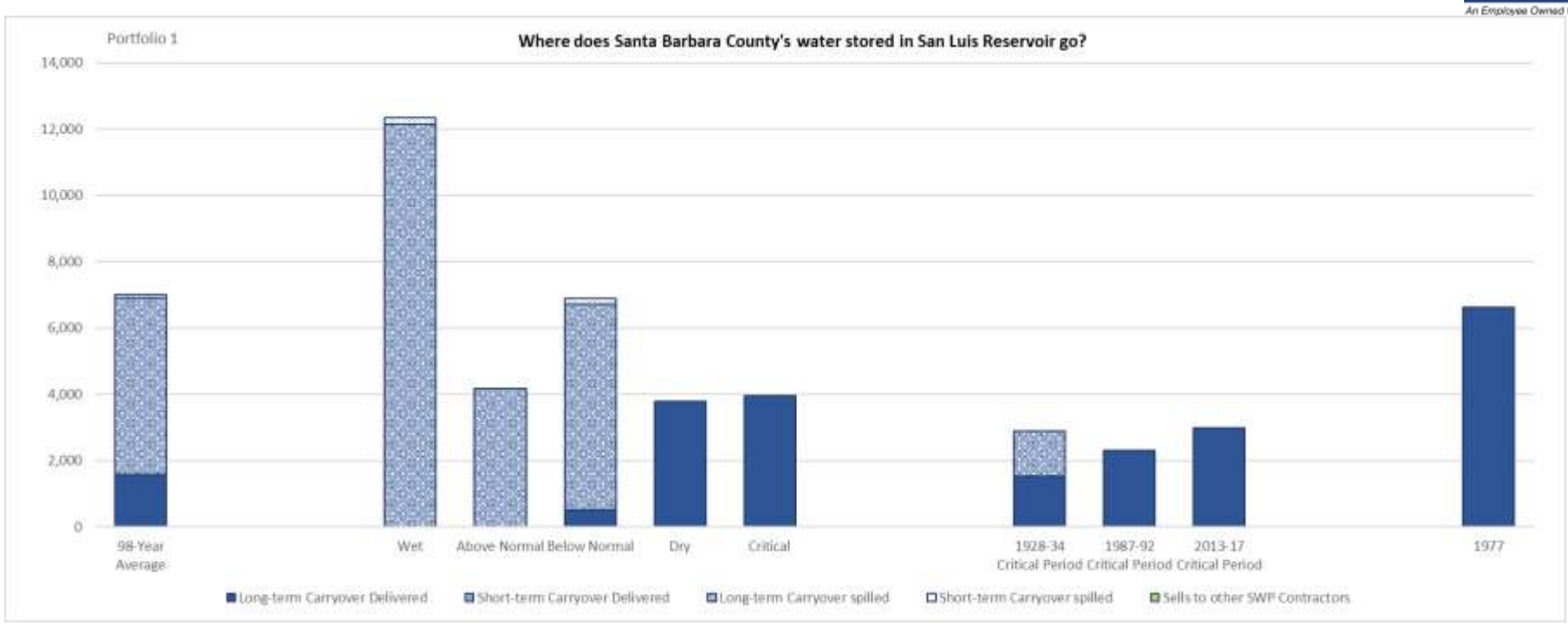
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCD Purchases from Others	SLOFCWCD Purchases from CCWA
2013	-	-	-	-	-	-	1,199	-	-	-
2014	-	-	-	-	-	-	480	-	-	-
2015	-	-	-	-	-	-	480	-	64	-
2016	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-
Sum	-	-	-	-	-	-	17,031	-	1,956	-
Average	-	-	-	-	-	-	174	-	20	-
Water Year Averages										
Wet	-	-	-	-	-	-	-	-	-	-
Above Normal	-	-	-	-	-	-	-	-	-	-
Below Normal	-	-	-	-	-	-	-	-	-	-
Dry	-	-	-	-	-	-	469	-	11	-
Critically Dry	-	-	-	-	-	-	416	-	113	-
Critical Period Averages										
1928-34	-	-	-	-	-	-	514	-	82	-
1987-92	-	-	-	-	-	-	520	-	176	-
2013-17	-	-	-	-	-	-	432	-	13	-
Driest 1-Year										
1977	-	-	-	-	-	-	480	-	264	-

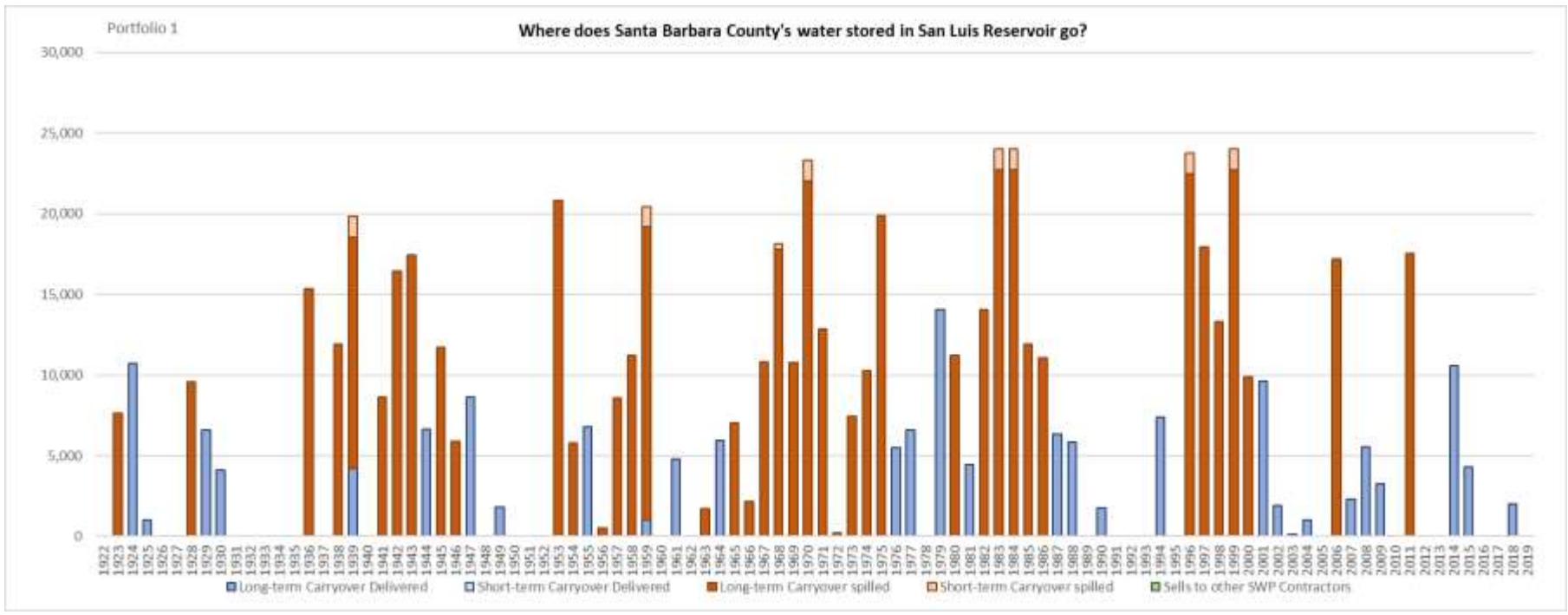

Portfolio 1
What are the sources of water to meet Santa Barbara County's demands?
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer of SLO Table A and Long-term Carryover
Transfer of SLO Short-term Carryover
Dry Year Purchase Program
Purchases from other SWP Contractors

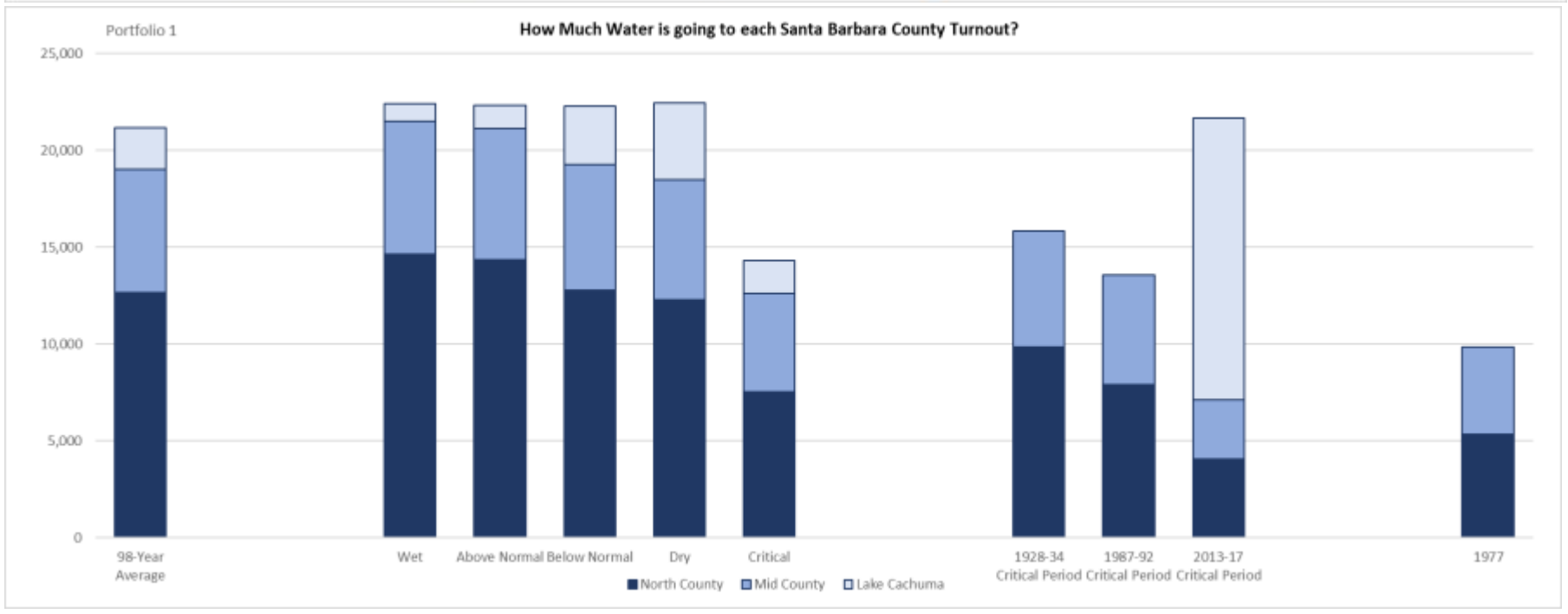

Portfolio 1
What are the sources of water to meet Santa Barbara County's demands?
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer of SLO Table A and Long-term Carryover
Transfer of SLO Short-term Carryover
Dry Year Purchase Program
Purchases from other SWP Contractors

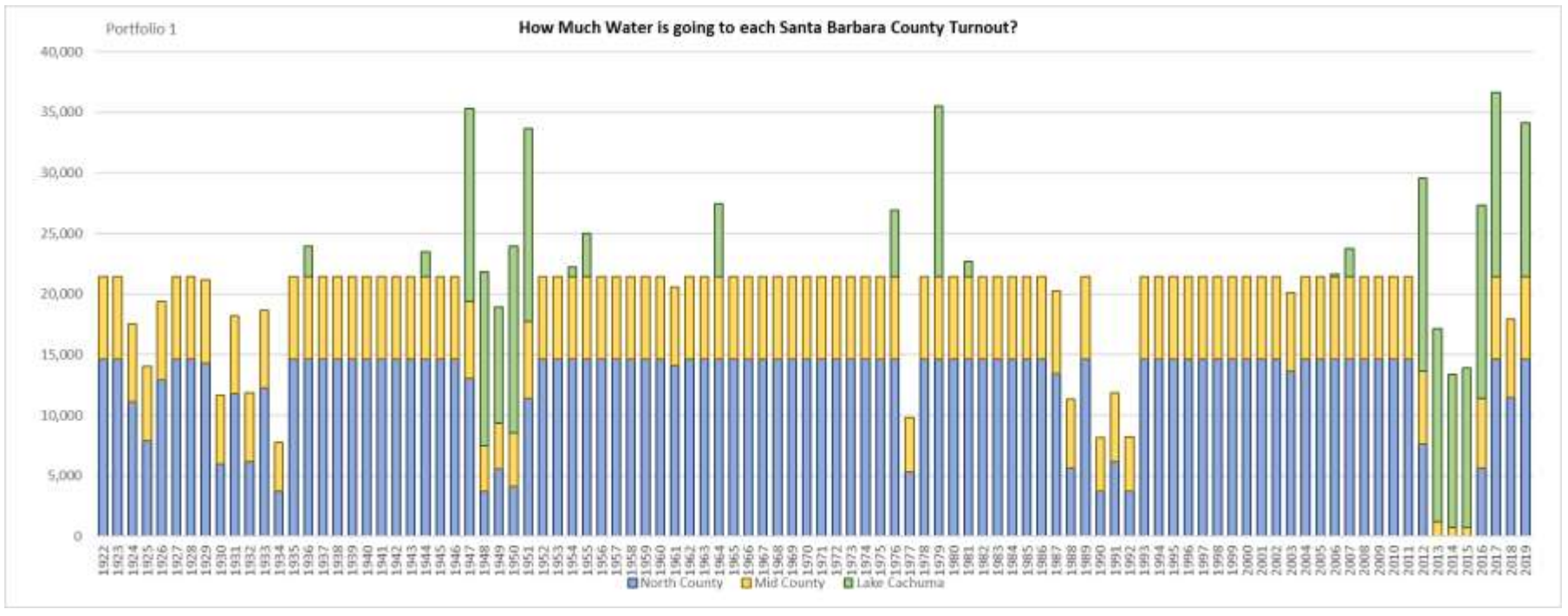

Portfolio 1
What is the fate of Santa Barbara County's annual allocation of Table A?
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Direct Demands
Long-term storage in SLR
Short-term storage in SLR
Transfer to SLO
Sells to others

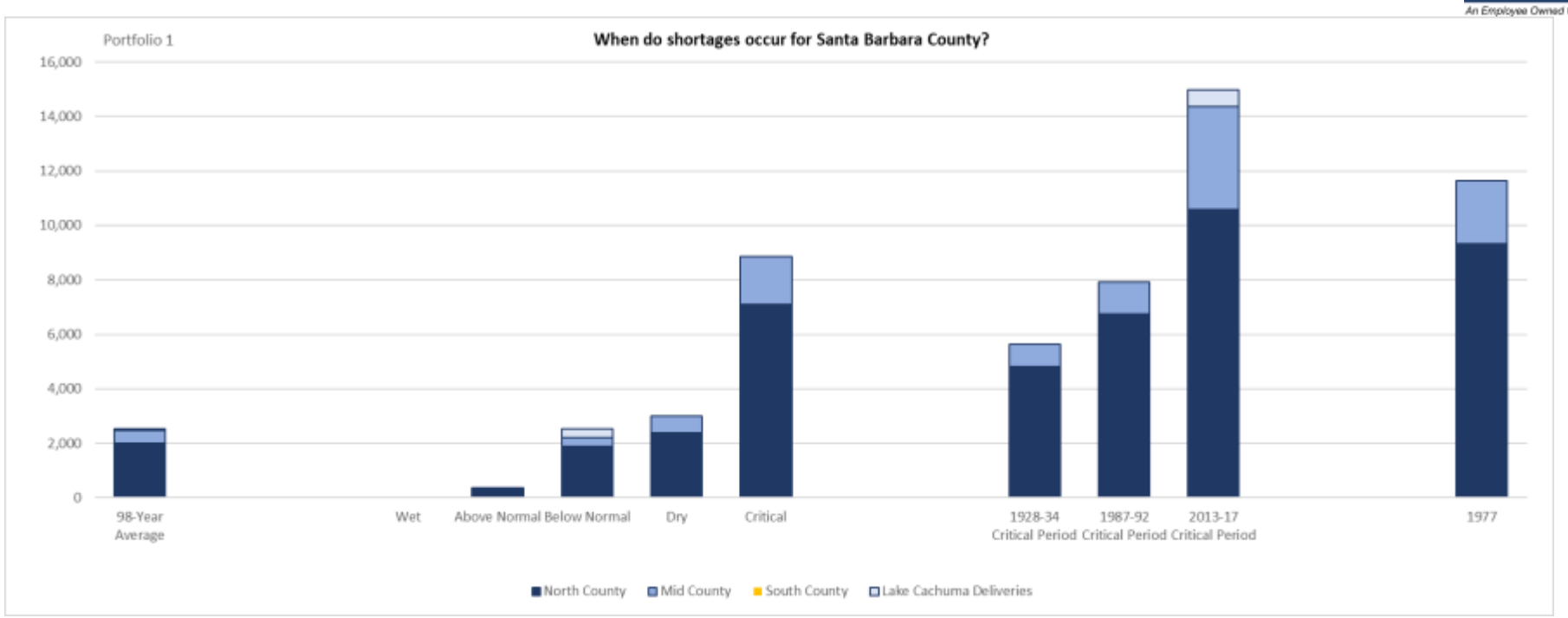

Portfolio 1
What is the fate of Santa Barbara County's annual allocation of Table A?
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Direct Demands
Long-term storage in SLR
Short-term storage in SLR
Transfer to SLO
Sells to others

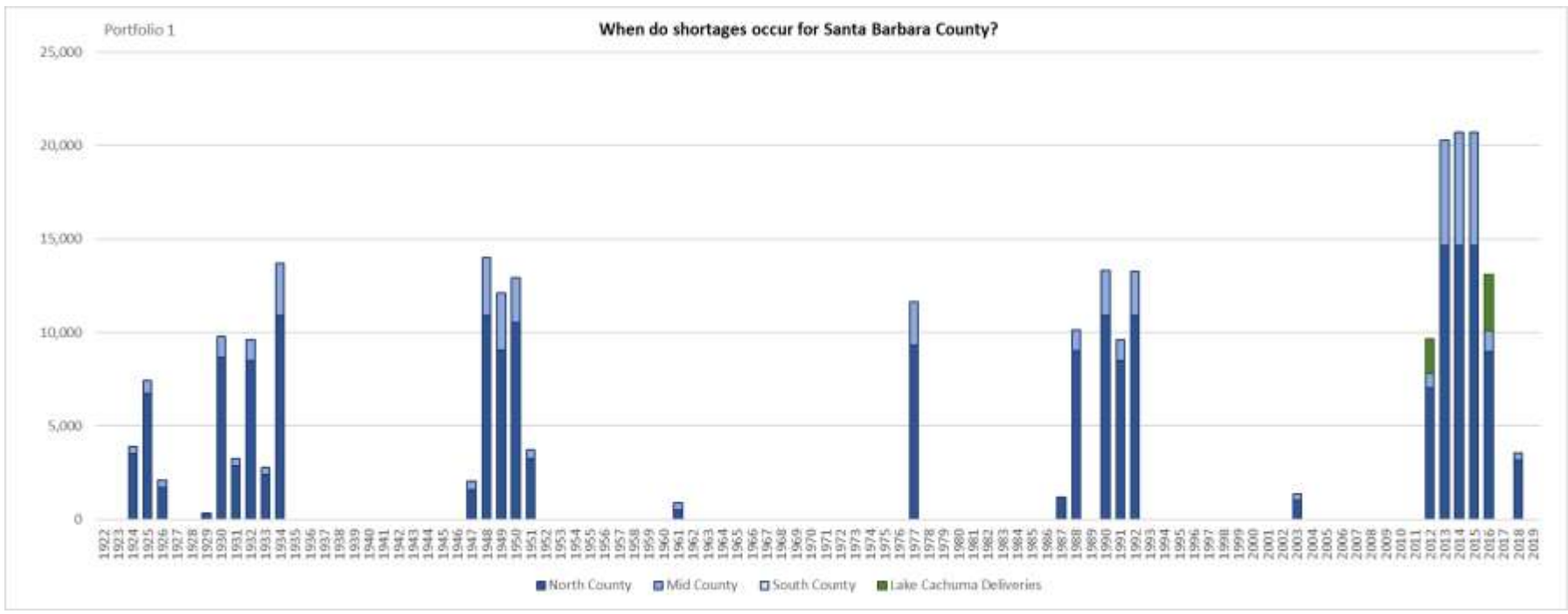

Portfolio 1
Where does Santa Barbara County's water stored in San Luis Reservoir go?
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Sells to other SWP Contractors

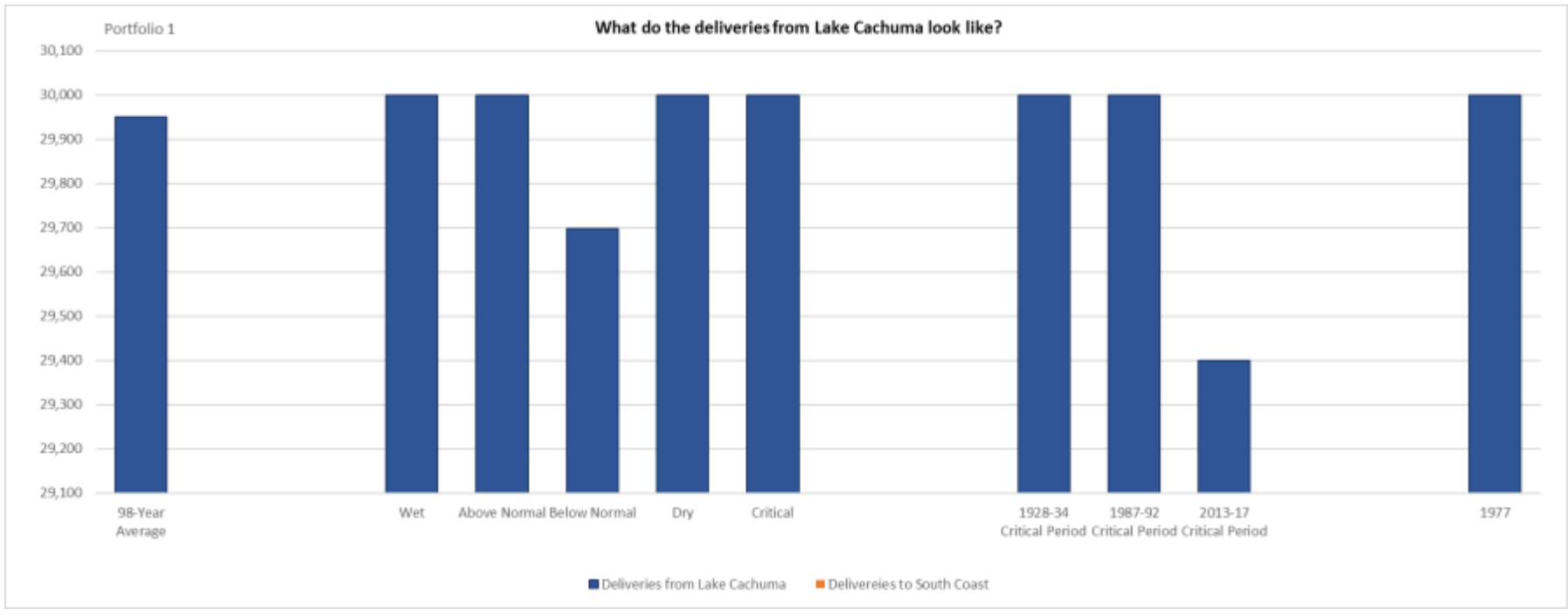

Portfolio 1
Where does Santa Barbara County's water stored in San Luis Reservoir go?
30,000
25,000
20,000
15,000
10,000
5,000
0
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Sells to other SWP Contractors

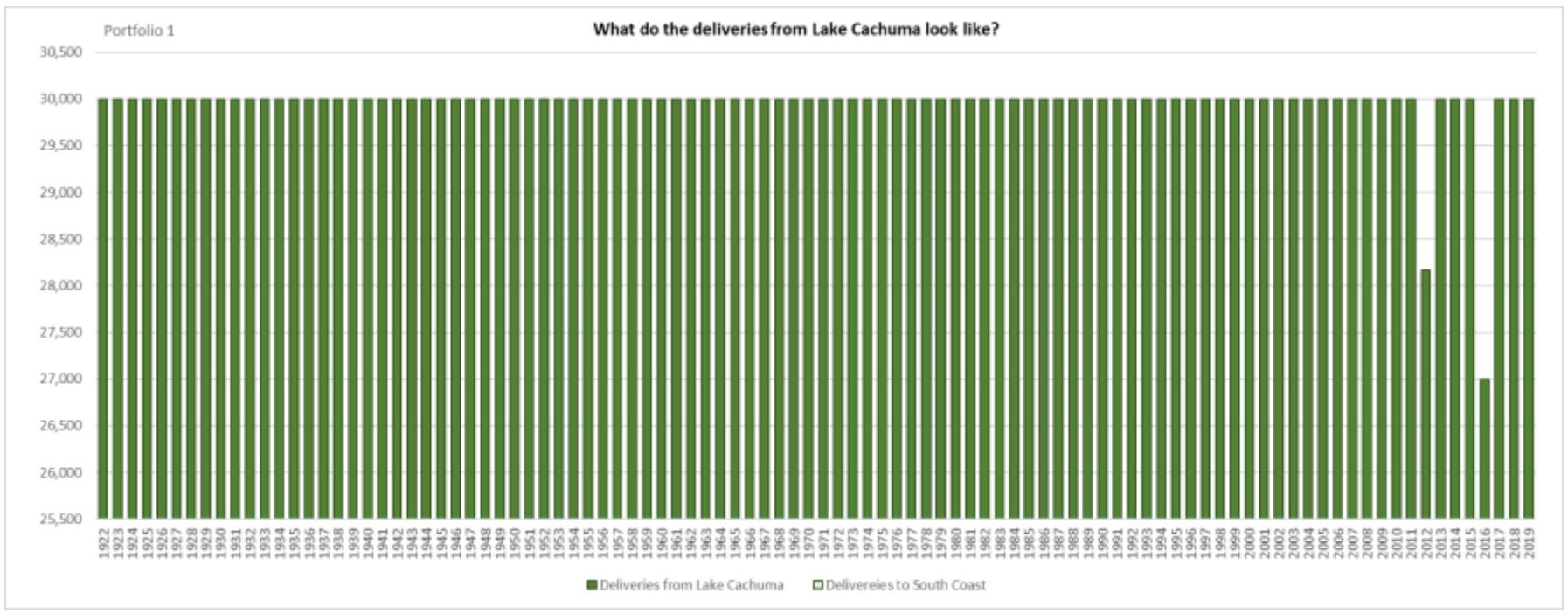

Portfolio 1
How Much Water is going to each Santa Barbara County Turnout?
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
North County
Mid County
Lake Cachuma

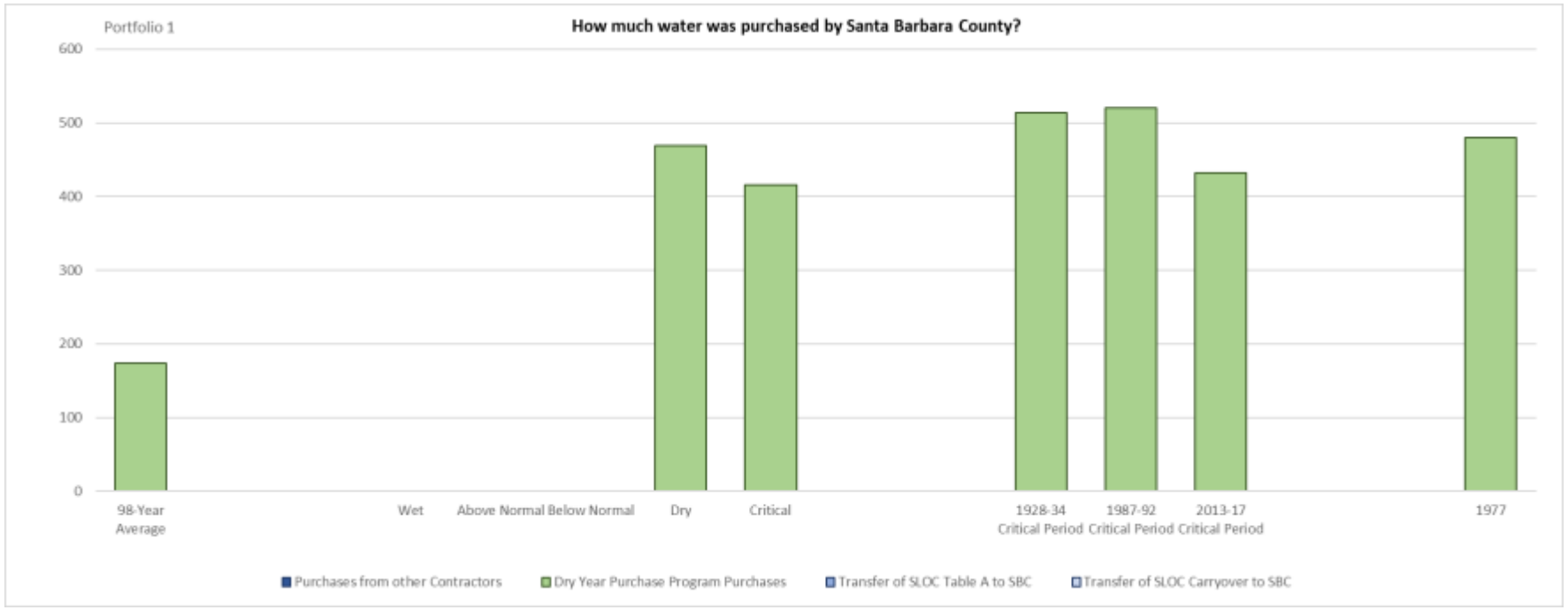

Portfolio 1
How Much Water is going to each Santa Barbara County Turnout?
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
North County
Mid County
Lake Cachuma

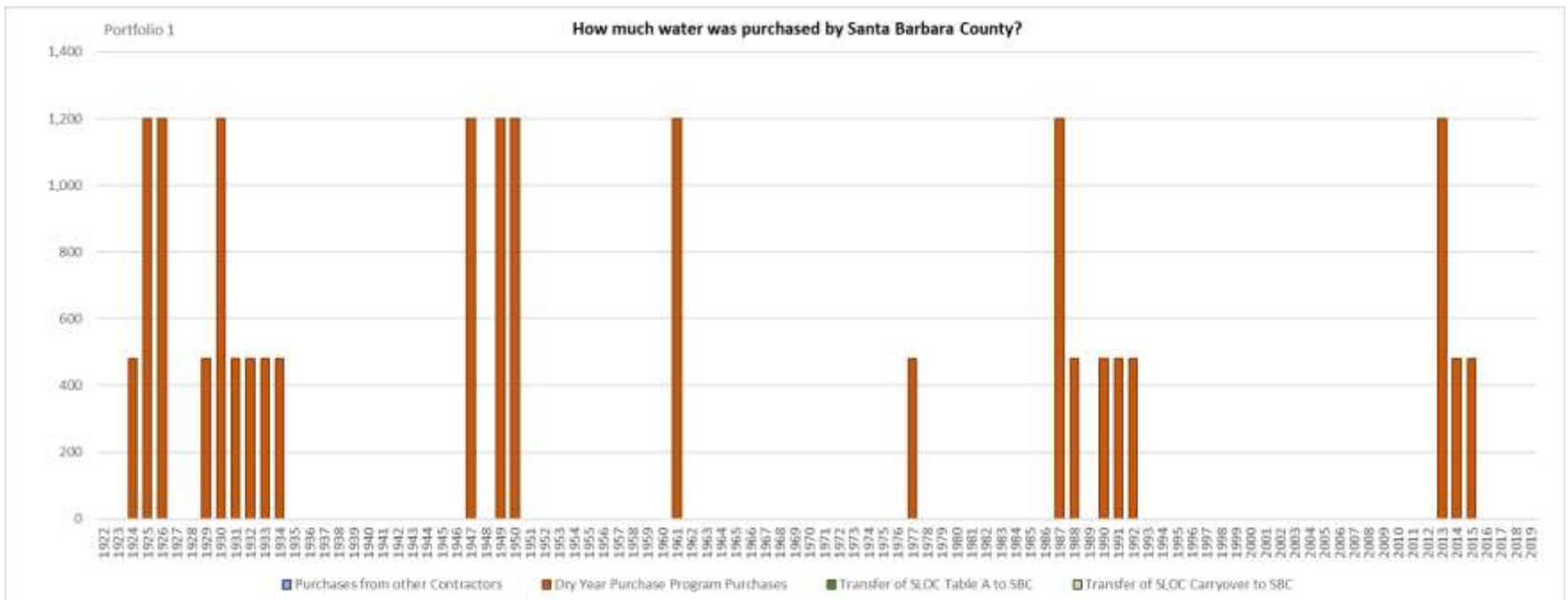

Portfolio 1
When do shortages occur for Santa Barbara County?
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
North County
Mid County
South County
Lake Cachuma Deliveries

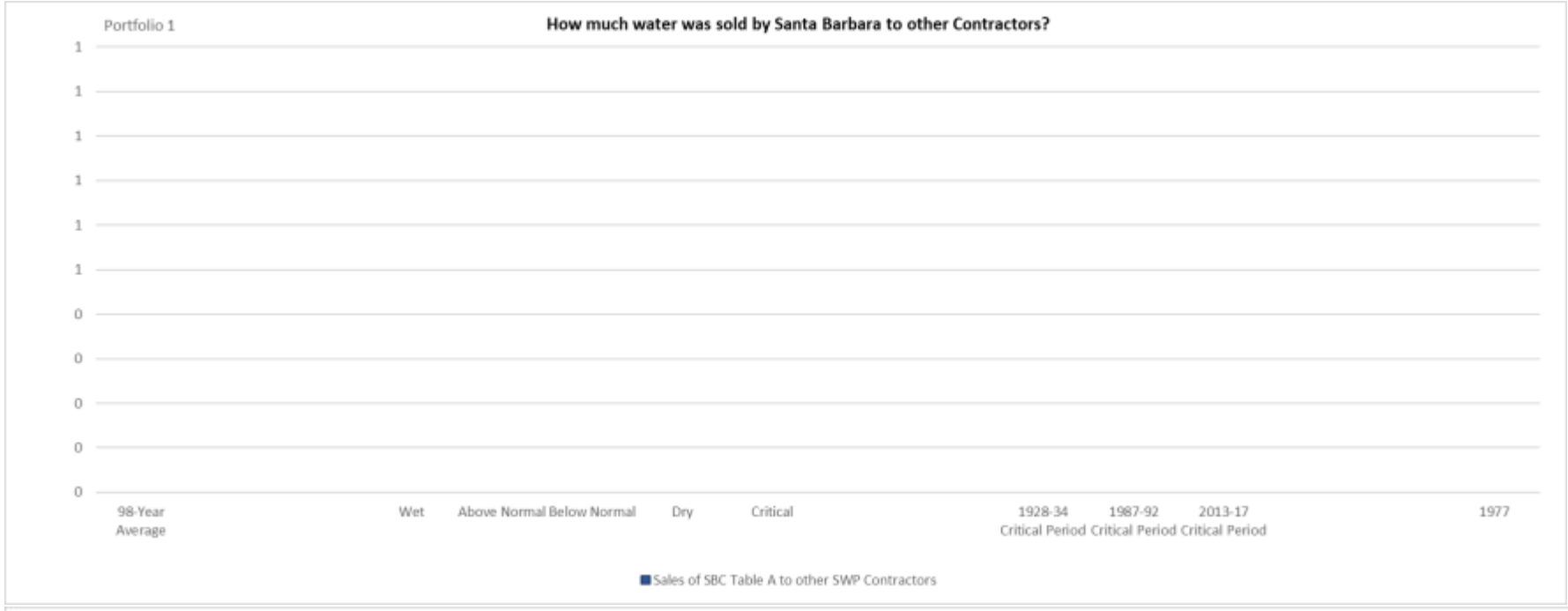

Portfolio 1
When do shortages occur for Santa Barbara County?
25,000
20,000
15,000
10,000
5,000
0
North County
Mid County
South County
Lake Cachuma Deliveries

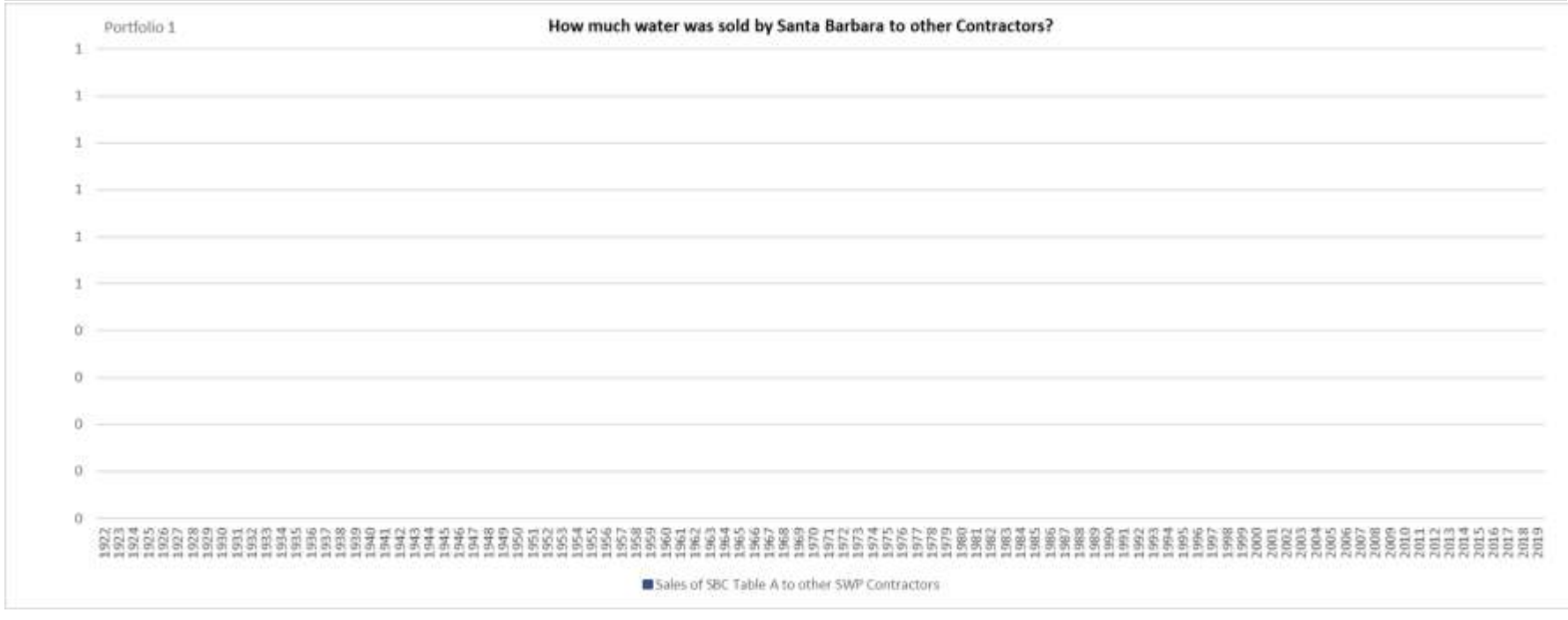

Portfolio 1
What do the deliveries from Lake Cachuma look like?
30,100
30,000
29,900
29,800
29,700
29,600
29,500
29,400
29,300
29,200
29,100
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Deliveries from Lake Cachuma
Delivereies to South Coast


Portfolio 1
What do the deliveries from Lake Cachuma look like?
30,500
30,000
29,500
29,000
28,500
28,000
27,500
27,000
26,500
26,000
25,500
Deliveries from Lake Cachuma
Delivereies to South Coast


Portfolio 1
How much water was purchased by Santa Barbara County?
600
500
400
300
200
100
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Purchases from other Contractors
Dry Year Purchase Program Purchases
Transfer of SLOC Table A to SBC
Transfer of SLOC Carryover to SBC


Portfolio 1
How much water was purchased by Santa Barbara County?
1,400
1,200
1,000
800
600
400
200
0
Purchases from other Contractors
Dry Year Purchase Program Purchases
Transfer of SLOC Table A to SBC
Transfer of SLOC Carryover to SBC


Portfolio 1
How much water was sold by Santa Barbara to other Contractors?
1
1
1
1
1
0
0
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Sales of SBC Table A to other SWP Contractors


Portfolio 1
How much water was sold by Santa Barbara to other Contractors?
1
1
1
1
1
1
0
0
0
0
Sales of SBC Table A to other SWP Contractors

Portfolio 1

Portfolio 2 "Baseline with External Storage"

Portfolio 2 represents historical baseline operations for Coastal Branch Contractors, with the addition of external storage as provided for in Article 56 of the SWP Water Supply Contract and transfer of a portion of SLOFCWCD 's allocated non-contracted Table A to its participants. For analysis purposes, the total amount of external storage assumed in the Model was 10,000 acre-feet for SLOFCWCD and 30,000 acre-feet for CCWA.

Summary of Portfolio 2 Analysis

Central Coast Water Authority (CCWA) – Sources of Water Delivered

Time Period	Table A	Carryover Long-Term	Carryover Short-Term	Return from Storage/Exchange Programs External	Return from Storage/Exchange Programs Internal	Transfers from SLOFCWCD	Purchases Dry Year Purchase	Purchases SWP Contractors
98-Year Summary								
Total	1,897,045	132,419	-	114,437		-	14,633	-
Average	19,358	1,351	-	1,168		-	149	-
Water Year Averages								
Wet	22,404	-	-	-		-	-	-
Above Normal	22,238	79	-	257		-	-	-
Below Normal	21,630	450	-	1,000		-	-	-
Dry	18,187	2,665	-	1,347		-	365	-
Critically Dry	9,946	4,188	-	4,256		-	416	-
Critical Period Averages								
1928-1934	13,789	1,526	-	1,729		-	514	-
1987-1992	10,705	2,324	-	5,000		-	520	-
2013-2017	18,248	2,983	-	4,778		-	432	-
1977	2,729	6,618	-	7,500		-	480	-

CCWA – Fate of Annual Table A Allocation / What Happens to water stored in San Luis Reservoir

Time Period	Direct Delivery	Storage in San Luis Reservoir Long-Term	Storage in San Luis Reservoir Short-Term	Transfers Sells to SLOFCWCD	Transfers Sells to Others	Carryover Delivered Long-Term	Carryover Delivered Short-Term	Carryover Spilled Long-Term	Carryover Spilled Short-Term	Carryover Sold to Others
98-Year Summary										
Total	1,897,045	680,488	9,259	-	-	132,419	-	418,531	9,259	-
Average	19,358	6,944	94	-	-	1,351	-	4,271	94	-
Water Year Averages										
Wet	22,404	14,859	309	-	-	-	-	10,517	212	-
Above Normal	22,238	8,757	-	-	-	79	-	2,238	-	-
Below Normal	21,630	3,814	-	-	-	450	-	4,480	182	-
Dry	18,187	2,222	-	-	-	2,665	-	-	-	-
Critically Dry	9,946	-	-	-	-	4,188	-	-	-	-
Critical Period Averages										
1928-1934	13,789	1,351	-	-	-	1,526	-	-	-	-
1987-1992	10,705	136	-	-	-	2,324	-	-	-	-
2013-2017	18,248	401	-	-	-	2,983	-	-	-	-
1977	2,729	-	-	-	-	6,618	-	-	-	-

CCWA – How much water is delivered to each turnout / Delivery Shortages / Water Purchases / Sells to Others

Time Period	Delivered North County	Delivered Mid County	Delivered Lake Cachuma	Shortages North County	Shortages Mid-County	Shortages (blank)	Shortages Lake Cachuma	Transfers from SLOFCWCD Table A and Long-term Carryover	Transfers from SLOFCWCD Short-term Carryover	Other Transfers Dry Year Purchase	Other Transfers SWP Contractors	Sells to Others SLOFCWCD	Sells to Others SWP Contractors
98-Year Summary													
Total	1,320,023	648,962	189,549	114,795	20,476		-	-	-	14,633	-	-	-
Average	13,470	6,622	1,934	1,171	209		-	-	-	149	-	-	-
Water Year Averages													
Wet	14,641	6,831	932	-	-		-	-	-	-	-	-	-
Above Normal	14,641	6,804	1,130	-	27		-	-	-	-	-	-	-
Below Normal	13,417	6,684	2,979	1,224	147		-	-	-	-	-	-	-
Dry	13,048	6,578	2,939	1,593	253		-	-	-	365	-	-	-
Critically Dry	10,736	6,037	2,034	3,905	794		-	-	-	416	-	-	-
Critical Period Averages													
1928-1934	11,032	6,526	-	3,609	305		-	-	-	514	-	-	-
1987-1992	12,073	6,476	-	2,569	355		-	-	-	520	-	-	-
2013-2017	6,255	4,677	15,509	8,386	2,154		-	-	-	432	-	-	-
1977	11,179	6,148	-	3,462	683		-	-	-	480	-	-	-

San Luis Obispo County Flood Control and Water Conservation District (SLOFCWCD) – Sources of Water Delivered

Time Period	Table A	Carryover Long-Term	Carryover Short-Term	Return from Storage/Exchange Programs External	Return from Storage/Exchange Programs Internal	Transfers from CCWA	Purchases Dry Year Purchase	Purchases SWP Contractors
98-Year Summary								
Total	469,592	13,903	30,685	2,378		-	-	-
Average	4,792	142	313	24		-	-	-
Water Year Averages								
Wet	5,267	4	-	-		-	-	-
Above Normal	5,225	-	-	46		-	-	-
Below Normal	5,043	209	-	19		-	-	-
Dry	4,845	222	204	-		-	-	-
Critically Dry	3,086	357	1,733	95		-	-	-
Critical Period Averages								
1928-1934	3,955	-	1,316	-		-	-	-
1987-1992	3,410	298	1,477	86		-	-	-
2013-2017	4,076	632	564	-		-	-	-
1977	632	1,140	2,586	913		-	-	-

SLOFCWCD – Fate of Annual Table A Allocation / What Happens to water stored in San Luis Reservoir

Time Period	Direct Delivery	Storage in San Luis Reservoir Long-Term	Storage in San Luis Reservoir Short-Term	Transfers Sells to CCWA	Transfers Sells to Others	Carryover Delivered Long-Term	Carryover Delivered Short-Term	Carryover Spilled Long-Term	Carryover Spilled Short-Term	Carryover Sold to Others
98-Year Summary										
Total	454,504	310,890	656,356	-	-	28,991	30,685	265,585	614,824	-
Average	4,638	3,172	6,698	-	-	296	313	2,710	6,274	-
Water Year Averages										
Wet	5,267	-	9,664	-	-	4	-	5,098	9,227	-
Above Normal	-	-	-	-	-	-	-	-	-	-
Below Normal	-	-	-	-	-	-	-	-	-	-
Dry	4,457	-	5,036	-	-	610	204	1,464	4,956	-
Critically Dry	2,676	-	2,168	-	-	767	1,733	144	1,909	-
Critical Period Averages										
1928-1934	3,729	1,268	3,325	-	-	226	1,316	794	3,136	-
1987-1992	2,868	717	2,373	-	-	840	1,477	423	1,837	-
2013-2017	4,039	2,611	3,600	-	-	668	564	1,915	2,935	-
1977	-	-	-	-	-	-	-	-	-	-

SLOFCWCD – How much water is delivered to each turnout / Delivery Shortages / Water Purchases / Sells to Others

Time Period	Delivered Shandon	Delivered Chorro Valley	Delivered Lopez Pipeline	Shortages Shandon	Shortages Chorro Valley	Shortages Lopez Pipeline	Purchases Dry Year Purchase	Purchases SWP Contractors	Sells to Others CCWA	Sells to Others SWP Contractors
98-Year Summary										
Total	6,566	246,764	263,228	-	-	-	-	-	-	-
Average	67	2,518	2,686	-	-	-	-	-	-	-
Water Year Averages										
Wet	67	2,518	2,686	-	-	-	-	-	-	-
Above Normal	-	-	-	-	-	-	-	-	-	-
Below Normal	-	-	-	-	-	-	-	-	-	-
Dry	67	2,518	2,686	-	-	-	-	-	-	-
Critically Dry	67	2,518	2,686	-	-	-	-	-	-	-
Critical Period Averages										
1928-1934	67	2,518	2,686	-	-	-	-	-	-	-
1987-1992	67	2,518	2,686	-	-	-	-	-	-	-
2013-2017	67	2,518	2,686	-	-	-	-	-	-	-
1977	-	-	-	-	-	-	-	-	-	-

	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
Periods	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
1922	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1923	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1924	6,368	11,756	-	2,868	20,992	-	-	480	-	480	2,685	-	2,586	-	5,271	-	-	-
1925	11,826	-	-	-	11,826	-	-	1,199	-	1,199	5,271	-	-	-	5,271	-	-	-
1926	18,194	-	-	-	18,194	-	-	1,199	-	1,199	4,215	-	1,056	-	5,271	-	-	-
1927	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1928	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1929	14,101	6,569	-	322	20,992	-	-	480	-	480	4,057	-	1,214	-	5,271	-	-	-
1930	6,368	1,678	-	3,622	11,668	-	-	1,199	-	1,199	3,500	-	1,771	-	5,271	-	-	-
1931	17,740	2,436	-	816	20,992	-	-	480	-	480	5,271	-	-	-	5,271	-	-	-
1932	11,372	-	-	2,232	13,604	-	-	480	-	480	2,685	-	2,586	-	5,271	-	-	-
1933	18,194	-	-	-	18,194	-	-	480	-	480	4,215	-	1,056	-	5,271	-	-	-
1934	7,278	-	-	5,109	12,387	-	-	480	-	480	2,685	-	2,586	-	5,271	-	-	-
1935	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1936	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1937	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1938	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1939	17,285	4,187	-	-	21,472	-	-	-	-	-	4,004	1,008	-	259	5,271	-	-	-
1940	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1941	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1942	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1943	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1944	16,830	4,642	-	-	21,472	-	-	-	-	-	4,451	820	-	-	5,271	-	-	-
1945	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1946	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1947	25,472	8,655	-	2,777	36,904	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1948	21,833	-	-	7,500	29,333	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1949	15,920	1,821	-	7,500	25,241	-	-	1,199	-	1,199	4,685	259	327	-	5,271	-	-	-
1950	22,743	-	-	7,500	30,243	-	-	1,199	-	1,199	5,268	-	3	-	5,271	-	-	-
1951	33,660	-	-	3,244	36,904	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1952	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-

	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
Periods	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
1953	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1954	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1955	18,194	3,278	-	-	21,472	-	-	-	-	-	4,977	294	-	-	5,271	-	-	-
1956	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1957	21,472	-	-	-	21,472	-	-	-	-	-	5,268	-	-	3	5,271	-	-	-
1958	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1959	20,469	1,003	-	-	21,472	-	-	-	-	-	5,001	270	-	-	5,271	-	-	-
1960	21,472	-	-	-	21,472	-	-	-	-	-	5,268	3	-	-	5,271	-	-	-
1961	14,556	4,826	-	2,090	21,472	-	-	-	-	-	4,447	824	-	-	5,271	-	-	-
1962	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1963	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1964	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1965	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1966	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1967	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1968	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1969	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1970	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1971	21,472	-	-	-	21,472	-	-	-	-	-	5,163	108	-	-	5,271	-	-	-
1972	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1973	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1974	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1975	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1976	21,472	5,182	-	-	26,654	-	-	-	-	-	5,268	3	-	-	5,271	-	-	-
1977	2,729	6,618	-	7,500	16,847	-	-	480	-	480	632	1,140	2,586	913	5,271	-	-	-
1978	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1979	21,472	5,569	-	-	27,041	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1980	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1981	18,194	4,472	-	-	22,666	-	-	-	-	-	4,668	603	-	-	5,271	-	-	-
1982	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-

Periods	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
1983	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1984	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1985	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1986	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1987	12,736	6,338	-	-	19,074	-	-	1,199	-	1,199	4,204	1,067	-	-	5,271	-	-	-
1988	5,003	6,787	-	7,500	19,290	-	-	480	-	480	2,426	259	2,586	-	5,271	-	-	-
1989	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1990	5,913	816	-	7,500	14,229	-	-	480	-	480	2,685	-	2,586	-	5,271	-	-	-
1991	11,372	-	-	7,500	18,872	-	-	480	-	480	3,660	-	1,379	232	5,271	-	-	-
1992	7,733	-	-	7,500	15,233	-	-	480	-	480	2,212	463	2,310	286	5,271	-	-	-
1993	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1994	14,101	7,371	-	-	21,472	-	-	-	-	-	4,623	274	374	-	5,271	-	-	-
1995	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1996	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1997	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1998	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
1999	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
2000	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
2001	11,826	9,646	-	-	21,472	-	-	-	-	-	4,505	766	-	-	5,271	-	-	-
2002	19,559	1,913	-	-	21,472	-	-	-	-	-	4,531	-	740	-	5,271	-	-	-
2003	20,014	1,104	-	354	21,472	-	-	-	-	-	4,636	-	-	635	5,271	-	-	-
2004	20,469	-	-	1,003	21,472	-	-	-	-	-	4,742	479	-	50	5,271	-	-	-
2005	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
2006	21,606	-	-	-	21,606	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
2007	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
2008	15,920	5,552	-	-	21,472	-	-	-	-	-	3,688	259	1,324	-	5,271	-	-	-
2009	18,194	3,278	-	-	21,472	-	-	-	-	-	4,215	259	797	-	5,271	-	-	-
2010	21,472	-	-	-	21,472	-	-	-	-	-	5,268	3	-	-	5,271	-	-	-
2011	21,472	-	-	-	21,472	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
2012	29,566	-	-	6,110	35,676	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-

Periods	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
2013	15,920	-	-	7,500	23,420	-	-	1,199	-	1,199	5,069	202	-	-	5,271	-	-	-
2014	2,274	11,698	-	7,500	21,472	-	-	480	-	480	527	2,468	2,276	-	5,271	-	-	-
2015	9,097	3,219	-	7,500	19,816	-	-	480	-	480	4,240	489	542	-	5,271	-	-	-
2016	27,292	-	-	1,390	28,682	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
2017	36,658	-	-	-	36,658	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
2018	15,920	2,005	-	-	17,925	-	-	-	-	-	3,688	1,583	-	-	5,271	-	-	-
2019	34,114	-	-	-	34,114	-	-	-	-	-	5,271	-	-	-	5,271	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sum	1,897,045	132,419	-	114,437	2,143,901	-	-	14,633	-	14,633	469,592	13,903	30,685	2,378	516,558	-	-	-
Average	19,358	1,351	-	1,168	21,877	-	-	149	-	149	4,792	142	313	24	5,271	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Year Averages	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wet	22,404	-	-	-	22,404	-	-	-	-	-	5,267	4	-	-	5,271	-	-	-
Above Normal	22,238	79	-	257	22,574	-	-	-	-	-	5,225	-	-	46	5,271	-	-	-
Below Normal	21,630	450	-	1,000	23,080	-	-	-	-	-	5,043	209	-	19	5,271	-	-	-
Dry	18,187	2,665	-	1,347	22,200	-	-	365	-	365	4,845	222	204	-	5,271	-	-	-
Critically Dry	9,946	4,188	-	4,256	18,391	-	-	416	-	416	3,086	357	1,733	95	5,271	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Period Averages	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928-34	13,789	1,526	-	1,729	17,044	-	-	514	-	514	3,955	-	1,316	-	5,271	-	-	-
1987-92	10,705	2,324	-	5,000	18,028	-	-	520	-	520	3,410	298	1,477	86	5,271	-	-	-
2013-17	18,248	2,983	-	4,778	26,010	-	-	432	-	432	4,076	632	564	-	5,271	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Driest 1-Year	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1977	2,729	6,618	-	7,500	16,847	-	-	480	-	480	632	1,140	2,586	913	5,271	-	-	-

	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
Periods	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
1922	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1923	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1924	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1925	13,025	-	5,012	259	67	67	13,025	-	4,883	321	2,518	2,518	13,025	-	2,686	-	2,686	2,686
1926	19,393	-	5,012	259	67	67	19,393	-	4,883	321	2,518	2,518	19,393	-	2,686	-	2,686	2,686
1927	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1928	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1929	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1930	12,867	-	5,012	259	67	67	12,867	-	4,883	321	2,518	2,518	12,867	-	2,686	-	2,686	2,686
1931	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1932	14,084	-	5,012	259	67	67	14,084	-	4,883	321	2,518	2,518	14,084	-	2,686	-	2,686	2,686
1933	18,674	-	5,012	259	67	67	18,674	-	4,883	321	2,518	2,518	18,674	-	2,686	-	2,686	2,686
1934	12,867	-	5,012	259	67	67	12,867	-	4,883	321	2,518	2,518	12,867	-	2,686	-	2,686	2,686
1935	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1936	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1937	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1938	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1939	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1940	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1941	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1942	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1943	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1944	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1945	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1946	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1947	36,904	-	5,012	259	67	67	36,904	-	4,883	321	2,518	2,518	36,658	246	2,686	-	2,686	2,686
1948	29,333	-	5,012	259	67	67	29,333	-	4,883	321	2,518	2,518	29,333	-	2,686	-	2,686	2,686
1949	26,440	-	5,012	259	67	67	26,440	-	4,883	321	2,518	2,518	26,440	-	2,686	-	2,686	2,686
1950	31,442	-	5,012	259	67	67	31,442	-	4,883	321	2,518	2,518	31,442	-	2,686	-	2,686	2,686
1951	36,904	-	5,012	259	67	67	36,904	-	4,883	321	2,518	2,518	36,658	246	2,686	-	2,686	2,686
1952	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686

	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
Periods	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
1953	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1954	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1955	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1956	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1957	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1958	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1959	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1960	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1961	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1962	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1963	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1964	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1965	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1966	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1967	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1968	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1969	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1970	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1971	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1972	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1973	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1974	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1975	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1976	26,654	-	5,012	259	67	67	26,654	-	4,883	321	2,518	2,518	26,654	-	2,686	-	2,686	2,686
1977	17,327	-	5,012	259	67	67	17,327	-	4,883	321	2,518	2,518	17,327	-	2,686	-	2,686	2,686
1978	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1979	27,041	-	5,012	259	67	67	27,041	-	4,883	321	2,518	2,518	27,041	-	2,686	-	2,686	2,686
1980	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1981	22,666	-	5,012	259	67	67	22,666	-	4,883	321	2,518	2,518	22,666	-	2,686	-	2,686	2,686
1982	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686

Periods	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
1983	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1984	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1985	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1986	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1987	20,273	-	5,012	259	67	67	20,273	-	4,883	321	2,518	2,518	20,273	-	2,686	-	2,686	2,686
1988	19,770	-	5,012	259	67	67	19,770	-	4,883	321	2,518	2,518	19,770	-	2,686	-	2,686	2,686
1989	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1990	14,709	-	5,012	259	67	67	14,709	-	4,883	321	2,518	2,518	14,709	-	2,686	-	2,686	2,686
1991	19,352	-	5,012	259	67	67	19,352	-	4,883	321	2,518	2,518	19,352	-	2,686	-	2,686	2,686
1992	15,713	-	5,012	259	67	67	15,713	-	4,883	321	2,518	2,518	15,713	-	2,686	-	2,686	2,686
1993	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1994	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1995	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1996	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1997	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1998	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
1999	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2000	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2001	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2002	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2003	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2004	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2005	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2006	21,606	-	5,012	259	67	67	21,606	-	4,883	321	2,518	2,518	21,606	-	2,686	-	2,686	2,686
2007	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2008	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2009	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2010	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2011	21,472	-	5,012	259	67	67	21,472	-	4,883	321	2,518	2,518	21,472	-	2,686	-	2,686	2,686
2012	35,676	-	5,012	259	67	67	35,676	-	4,883	321	2,518	2,518	35,676	-	2,686	-	2,686	2,686

	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
Periods	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
2013	24,619	-	5,012	259	67	67	24,619	-	4,883	321	2,518	2,518	24,619	-	2,686	-	2,686	2,686
2014	21,952	-	5,012	259	67	67	21,952	-	4,883	321	2,518	2,518	21,952	-	2,686	-	2,686	2,686
2015	20,296	-	5,012	259	67	67	20,296	-	4,883	321	2,518	2,518	20,296	-	2,686	-	2,686	2,686
2016	28,682	-	5,012	259	67	67	28,682	-	4,883	321	2,518	2,518	28,682	-	2,686	-	2,686	2,686
2017	36,658	-	5,012	259	67	67	36,658	-	4,883	321	2,518	2,518	36,658	-	2,686	-	2,686	2,686
2018	17,925	-	5,012	259	67	67	17,925	-	4,883	321	2,518	2,518	17,925	-	2,686	-	2,686	2,686
2019	34,114	-	5,012	259	67	67	34,114	-	4,883	321	2,518	2,518	34,114	-	2,686	-	2,686	2,686
Sum	2,158,534	-	491,176	25,382	6,566	6,566	2,158,534	-	478,534	31,458	246,764	246,764	2,158,042	492	263,228	-	263,228	263,228
Average	22,026	-	5,012	259	67	67	22,026	-	4,883	321	2,518	2,518	22,021	5	2,686	-	2,686	2,686
Water Year Averages																		
Wet	22,404	-	5,012	259	67	67	22,404	-	4,883	321	2,518	2,518	22,404	-	2,686	-	2,686	2,686
Above Normal	22,574	-	5,012	259	67	67	22,574	-	4,883	321	2,518	2,518	22,557	18	2,686	-	2,686	2,686
Below Normal	23,080	-	5,012	259	67	67	23,080	-	4,883	321	2,518	2,518	23,080	-	2,686	-	2,686	2,686
Dry	22,565	-	5,012	259	67	67	22,565	-	4,883	321	2,518	2,518	22,554	11	2,686	-	2,686	2,686
Critically Dry	18,807	-	5,012	259	67	67	18,807	-	4,883	321	2,518	2,518	18,807	-	2,686	-	2,686	2,686
													-	-				
Critical Period Averages													-	-				
1928-34	17,558	-	5,012	259	67	67	17,558	-	4,883	321	2,518	2,518	17,558	-	2,686	-	2,686	2,686
1987-92	18,548	-	5,012	259	67	67	18,548	-	4,883	321	2,518	2,518	18,548	-	2,686	-	2,686	2,686
2013-17	26,441	-	5,012	259	67	67	26,441	-	4,883	321	2,518	2,518	26,441	-	2,686	-	2,686	2,686
Driest 1-Year																		
1977	17,327	-	5,012	259	67	67	17,327	-	4,883	321	2,518	2,518	17,327	-	2,686	-	2,686	2,686

Periods	Reach 4 Operations			Reach 5 Operations			Lake Cachuma Operations						
	CCWA			CCWA									
	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
1922	21,472	14,641	14,641	6,831	6,831	6,831	-	192,009	11,277	196,000	14,000	30,000	30,000
1923	21,472	14,641	14,641	6,831	6,831	6,831	-	54,915	13,059	193,856	14,000	30,000	30,000
1924	21,472	14,641	14,641	6,831	6,831	6,831	-	-	11,951	137,905	14,000	30,000	30,000
1925	13,025	6,877	14,641	6,148	6,148	6,831	-	19,917	10,224	103,598	14,000	30,000	30,000
1926	19,393	12,945	14,641	6,448	6,448	6,831	-	88,712	10,208	138,102	14,000	30,000	30,000
1927	21,472	14,641	14,641	6,831	6,831	6,831	-	96,630	11,617	179,115	14,000	30,000	30,000
1928	21,472	14,641	14,641	6,831	6,831	6,831	-	38,724	12,038	161,801	14,000	30,000	30,000
1929	21,472	14,641	14,641	6,831	6,831	6,831	-	35,543	11,296	142,048	14,000	30,000	30,000
1930	12,867	6,719	14,641	6,148	6,148	6,831	-	24,442	10,306	112,184	14,000	30,000	30,000
1931	21,472	14,641	14,641	6,831	6,831	6,831	-	19,422	9,044	78,562	14,000	30,000	30,000
1932	14,084	7,636	14,641	6,448	6,448	6,831	-	132,123	9,830	156,855	14,000	30,000	30,000
1933	18,674	12,226	14,641	6,448	6,448	6,831	-	12,988	10,459	115,384	14,000	30,000	30,000
1934	12,867	6,719	14,641	6,148	6,148	6,831	-	36,250	9,269	98,365	14,000	30,000	30,000
1935	21,472	14,641	14,641	6,831	6,831	6,831	-	106,812	9,867	151,310	14,000	30,000	30,000
1936	21,472	14,641	14,641	6,831	6,831	6,831	-	49,754	10,690	146,374	14,000	30,000	30,000
1937	21,472	14,641	14,641	6,831	6,831	6,831	-	152,344	11,826	196,000	14,000	30,000	30,000
1938	21,472	14,641	14,641	6,831	6,831	6,831	-	186,211	13,101	196,000	14,000	30,000	30,000
1939	21,472	14,641	14,641	6,831	6,831	6,831	-	41,411	12,806	180,605	14,000	30,000	30,000
1940	21,472	14,641	14,641	6,831	6,831	6,831	-	29,816	12,005	154,416	14,000	30,000	30,000
1941	21,472	14,641	14,641	6,831	6,831	6,831	-	368,484	12,301	196,000	14,000	30,000	30,000
1942	21,472	14,641	14,641	6,831	6,831	6,831	-	30,806	12,608	170,198	14,000	30,000	30,000
1943	21,472	14,641	14,641	6,831	6,831	6,831	-	161,889	12,608	196,000	14,000	30,000	30,000
1944	21,472	14,641	14,641	6,831	6,831	6,831	-	104,761	13,101	196,000	14,000	30,000	30,000
1945	21,472	14,641	14,641	6,831	6,831	6,831	-	45,795	12,888	184,907	14,000	30,000	30,000
1946	21,472	14,641	14,641	6,831	6,831	6,831	-	75,561	12,888	196,000	14,000	30,000	30,000
1947	36,904	14,641	14,641	22,263	6,448	6,831	15,815	10,655	12,528	165,942	14,000	30,000	30,000
1948	29,333	7,370	14,641	21,963	6,148	6,831	15,815	-	11,203	126,554	14,000	30,000	30,000
1949	26,440	8,712	14,641	17,728	6,148	6,831	11,580	3,514	9,716	87,932	14,000	30,000	30,000
1950	31,442	12,963	14,641	18,479	6,148	6,831	12,331	13,837	8,487	61,613	14,000	30,000	30,000
1951	36,904	14,641	14,641	22,263	6,448	6,831	15,815	-	7,319	26,109	14,000	30,000	30,000
1952	21,472	14,641	14,641	6,831	6,831	6,831	-	246,309	9,873	196,000	14,000	30,000	30,000

Periods	Reach 4 Operations			Reach 5 Operations			Lake Cachuma Operations						
	CCWA			CCWA									
	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
1953	21,472	14,641	14,641	6,831	6,831	6,831	-	12,635	12,270	152,365	14,000	30,000	30,000
1954	21,472	14,641	14,641	6,831	6,831	6,831	-	42,047	11,181	139,231	14,000	30,000	30,000
1955	21,472	14,641	14,641	6,831	6,831	6,831	-	48,976	10,803	133,404	14,000	30,000	30,000
1956	21,472	14,641	14,641	6,831	6,831	6,831	-	65,238	10,863	143,779	14,000	30,000	30,000
1957	21,472	14,641	14,641	6,831	6,831	6,831	-	30,099	10,560	119,318	14,000	30,000	30,000
1958	21,472	14,641	14,641	6,831	6,831	6,831	-	265,046	11,588	196,000	14,000	30,000	30,000
1959	21,472	14,641	14,641	6,831	6,831	6,831	-	21,331	12,432	160,899	14,000	30,000	30,000
1960	21,472	14,641	14,641	6,831	6,831	6,831	-	3,797	10,786	109,910	14,000	30,000	30,000
1961	21,472	14,641	14,641	6,831	6,831	6,831	-	-	8,797	57,113	14,000	30,000	30,000
1962	21,472	14,641	14,641	6,831	6,831	6,831	-	152,344	9,646	155,811	14,000	30,000	30,000
1963	21,472	14,641	14,641	6,831	6,831	6,831	-	27,977	10,977	128,811	14,000	30,000	30,000
1964	21,472	14,641	14,641	6,831	6,831	6,831	-	11,857	9,632	87,036	14,000	30,000	30,000
1965	21,472	14,641	14,641	6,831	6,831	6,831	-	57,744	8,884	91,896	14,000	30,000	30,000
1966	21,472	14,641	14,641	6,831	6,831	6,831	-	106,812	9,928	144,780	14,000	30,000	30,000
1967	21,472	14,641	14,641	6,831	6,831	6,831	-	173,909	12,003	196,000	14,000	30,000	30,000
1968	21,472	14,641	14,641	6,831	6,831	6,831	-	3,231	12,094	143,137	14,000	30,000	30,000
1969	21,472	14,641	14,641	6,831	6,831	6,831	-	309,518	12,094	196,000	14,000	30,000	30,000
1970	21,472	14,641	14,641	6,831	6,831	6,831	-	19,776	12,403	159,373	14,000	30,000	30,000
1971	21,472	14,641	14,641	6,831	6,831	6,831	-	55,764	11,698	159,439	14,000	30,000	30,000
1972	21,472	14,641	14,641	6,831	6,831	6,831	-	7,261	10,778	111,922	14,000	30,000	30,000
1973	21,472	14,641	14,641	6,831	6,831	6,831	-	167,263	11,482	196,000	14,000	30,000	30,000
1974	21,472	14,641	14,641	6,831	6,831	6,831	-	75,349	13,101	196,000	14,000	30,000	30,000
1975	21,472	14,641	14,641	6,831	6,831	6,831	-	92,176	13,101	196,000	14,000	30,000	30,000
1976	26,654	14,641	14,641	12,013	6,831	6,831	5,182	3,868	12,205	148,845	14,000	30,000	30,000
1977	17,327	11,179	14,641	6,148	6,148	6,831	-	37,805	10,979	131,671	14,000	30,000	30,000
1978	21,472	14,641	14,641	6,831	6,831	6,831	-	308,669	11,875	196,000	14,000	30,000	30,000
1979	27,041	14,641	14,641	12,400	6,831	6,831	5,569	99,953	13,101	196,000	14,000	30,000	30,000
1980	21,472	14,641	14,641	6,831	6,831	6,831	-	152,203	13,101	196,000	14,000	30,000	30,000
1981	22,666	14,641	14,641	8,025	6,831	6,831	1,194	51,875	13,024	192,045	14,000	30,000	30,000
1982	21,472	14,641	14,641	6,831	6,831	6,831	-	58,238	12,969	193,314	14,000	30,000	30,000

	Reach 4 Operations			Reach 5 Operations			Lake Cachuma Operations						
	CCWA			CCWA									
Periods	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
1983	21,472	14,641	14,641	6,831	6,831	6,831	-	356,323	13,046	196,000	14,000	30,000	30,000
1984	21,472	14,641	14,641	6,831	6,831	6,831	-	28,826	12,571	168,255	14,000	30,000	30,000
1985	21,472	14,641	14,641	6,831	6,831	6,831	-	16,877	11,304	129,828	14,000	30,000	30,000
1986	21,472	14,641	14,641	6,831	6,831	6,831	-	112,114	11,631	186,311	14,000	30,000	30,000
1987	20,273	13,442	14,641	6,831	6,831	6,831	-	-	11,629	130,682	14,000	30,000	30,000
1988	19,770	13,322	14,641	6,448	6,448	6,831	-	72,521	10,883	148,320	14,000	30,000	30,000
1989	21,472	14,641	14,641	6,831	6,831	6,831	-	403	10,163	94,560	14,000	30,000	30,000
1990	14,709	8,561	14,641	6,148	6,148	6,831	-	-	8,111	42,449	14,000	30,000	30,000
1991	19,352	12,904	14,641	6,448	6,448	6,831	-	108,933	8,153	99,229	14,000	30,000	30,000
1992	15,713	9,565	14,641	6,148	6,148	6,831	-	167,121	11,154	196,000	14,000	30,000	30,000
1993	21,472	14,641	14,641	6,831	6,831	6,831	-	334,360	13,101	196,000	14,000	30,000	30,000
1994	21,472	14,641	14,641	6,831	6,831	6,831	-	15,575	12,324	155,251	14,000	30,000	30,000
1995	21,472	14,641	14,641	6,831	6,831	6,831	-	366,102	12,324	196,000	14,000	30,000	30,000
1996	21,472	14,641	14,641	6,831	6,831	6,831	-	41,187	12,802	180,385	14,000	30,000	30,000
1997	21,472	14,641	14,641	6,831	6,831	6,831	-	59,768	12,556	183,597	14,000	30,000	30,000
1998	21,472	14,641	14,641	6,831	6,831	6,831	-	465,884	12,855	196,000	14,000	30,000	30,000
1999	21,472	14,641	14,641	6,831	6,831	6,831	-	18,239	12,374	157,865	14,000	30,000	30,000
2000	21,472	14,641	14,641	6,831	6,831	6,831	-	51,869	11,569	154,165	14,000	30,000	30,000
2001	21,472	14,641	14,641	6,831	6,831	6,831	-	151,409	12,296	196,000	14,000	30,000	30,000
2002	21,472	14,641	14,641	6,831	6,831	6,831	-	6,421	12,154	146,267	14,000	30,000	30,000
2003	21,472	14,641	14,641	6,831	6,831	6,831	-	17,144	10,490	108,921	14,000	30,000	30,000
2004	21,472	14,641	14,641	6,831	6,831	6,831	-	18,695	9,110	74,506	14,000	30,000	30,000
2005	21,472	14,641	14,641	6,831	6,831	6,831	-	388,819	10,774	196,000	14,000	30,000	30,000
2006	21,606	14,641	14,641	6,965	6,831	6,831	134	100,283	13,101	196,000	14,000	30,000	30,000
2007	21,472	14,641	14,641	6,831	6,831	6,831	-	4,920	12,126	144,794	14,000	30,000	30,000
2008	21,472	14,641	14,641	6,831	6,831	6,831	-	108,331	12,126	196,000	14,000	30,000	30,000
2009	21,472	14,641	14,641	6,831	6,831	6,831	-	13,188	12,280	152,908	14,000	30,000	30,000
2010	21,472	14,641	14,641	6,831	6,831	6,831	-	75,948	11,834	173,022	14,000	30,000	30,000
2011	21,472	14,641	14,641	6,831	6,831	6,831	-	131,349	12,655	196,000	14,000	30,000	30,000
2012	35,676	13,413	14,641	22,263	6,336	6,831	15,927	6,429	12,451	161,905	14,000	30,000	30,000

Periods	Reach 4 Operations CCWA			Reach 5 Operations CCWA			Lake Cachuma Operations						
	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
2013	24,619	4,193	14,641	20,426	4,499	6,831	15,927	3,520	11,117	126,235	14,000	30,000	30,000
2014	21,952	3,733	14,641	18,219	3,641	6,831	14,578	3,942	9,773	90,982	14,000	30,000	30,000
2015	20,296	1,991	14,641	18,305	2,378	6,831	15,927	2,264	8,459	56,714	14,000	30,000	30,000
2016	28,682	6,719	14,641	21,963	6,036	6,831	15,927	4,694	7,226	26,109	14,000	30,000	30,000
2017	36,658	14,641	14,641	22,017	6,831	6,831	15,186	87,303	7,611	76,987	14,000	30,000	30,000
2018	17,925	11,477	14,641	6,448	6,448	6,831	-	3,373	7,657	28,703	14,000	30,000	30,000
2019	34,114	14,641	14,641	19,473	6,831	6,831	12,642	104,953	7,981	94,317	14,000	30,000	30,000
Sum	2,158,534	1,320,023	1,434,818	838,511	648,962	669,438	189,549	8,291,482	1,100,519	14,523,101	1,372,000	2,940,000	2,940,000
Average	22,026	13,470	14,641	8,556	6,622	6,831	1,934	84,607	11,230	148,195	14,000	30,000	30,000
Water Year Averages													
Wet	22,404	14,641	14,641	7,763	6,831	6,831	932	142,380	11,841	172,896	14,000	30,000	30,000
Above Normal	22,574	14,641	14,641	7,933	6,804	6,831	1,130	123,800	11,429	158,505	14,000	30,000	30,000
Below Normal	23,080	13,417	14,641	9,663	6,684	6,831	2,979	38,054	10,944	133,932	14,000	30,000	30,000
Dry	22,565	13,048	14,641	9,517	6,578	6,831	2,939	40,225	11,147	136,021	14,000	30,000	30,000
Critically Dry	18,807	10,736	14,641	8,071	6,037	6,831	2,034	50,188	10,254	123,049	14,000	30,000	30,000
Critical Period Averages													
1928-34	17,558	11,032	14,641	6,526	6,526	6,831	-	42,785	10,320	123,600	14,000	30,000	30,000
1987-92	18,548	12,073	14,641	6,476	6,476	6,831	-	58,163	10,016	118,540	14,000	30,000	30,000
2013-17	26,441	6,255	14,641	20,186	4,677	6,831	15,509	20,345	8,837	75,405	14,000	30,000	30,000
Driest 1-Year													
1977	17,327	11,179	14,641	6,148	6,148	6,831	-	37,805	10,979	131,671	14,000	30,000	30,000

	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
Periods	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
1922	2,752	-	-	-	10,124	-	-	-	-	7,616	-	993	2,105	-	275
1923	9,004	-	-	-	9,690	-	-	-	10,124	-	-	-	1,789	-	233
1924	-	11,756	-	-	1,400	3,171	-	-	3,034	-	2,868	-	-	-	-
1925	-	-	-	-	3,760	2,531	-	-	1,103	-	-	-	-	-	-
1926	-	-	-	-	5,785	1,056	-	-	3,576	-	-	-	-	-	-
1927	1,225	-	-	-	10,269	-	-	-	5,519	9,598	-	1,252	2,210	-	288
1928	9,458	-	-	-	9,835	-	-	-	10,914	-	-	-	1,894	-	247
1929	-	6,569	-	-	4,484	2,005	-	-	6,522	-	322	-	-	-	-
1930	-	1,678	-	-	-	1,771	-	-	4,021	-	3,622	-	-	-	-
1931	-	2,436	-	-	4,479	-	-	-	-	-	816	-	-	-	-
1932	-	-	-	-	3,616	2,637	-	-	496	-	2,232	-	-	-	-
1933	-	-	-	-	5,785	1,056	-	-	3,805	-	-	-	-	-	-
1934	-	-	-	-	2,055	3,326	-	-	1,753	-	5,109	-	-	-	-
1935	5,372	-	-	-	13,291	-	-	-	2,807	10,000	-	1,304	1,688	-	220
1936	-	-	-	5,193	7,665	-	-	-	13,304	2,636	-	344	314	-	41
1937	1,733	-	-	-	12,979	-	-	-	7,608	10,000	-	1,304	-	-	-
1938	16,206	-	-	1,912	19,729	-	-	-	13,078	7,808	-	961	-	-	-
1939	-	4,187	-	7,833	5,496	1,008	-	-	16,420	-	-	-	-	259	-
1940	4,455	-	-	-	8,979	-	-	-	4,541	-	-	-	-	-	-
1941	20,830	-	-	8,641	17,979	-	-	-	12,235	-	-	-	-	-	-
1942	13,097	-	-	16,456	13,729	-	-	-	15,575	-	-	-	-	-	-
1943	17,021	-	-	17,471	16,560	-	-	-	16,133	1,990	-	-	419	-	-
1944	-	4,642	-	-	5,351	1,372	-	-	8,384	-	-	-	-	-	-
1945	9,913	-	-	11,742	11,979	-	-	-	11,806	-	-	-	-	-	-
1946	5,820	-	-	5,894	9,100	-	-	-	12,328	-	-	-	629	-	-
1947	-	8,655	-	-	8,729	-	-	-	8,099	-	2,777	-	-	-	-
1948	-	-	-	-	6,729	-	-	-	8,932	-	7,500	-	-	-	-
1949	-	1,821	-	-	5,062	1,583	-	-	4,666	-	7,500	-	-	-	-
1950	-	-	-	-	7,232	3	-	-	4,570	-	7,500	-	-	-	-
1951	-	-	-	-	13,229	-	-	-	8,999	-	3,244	-	-	-	-
1952	17,597	-	-	-	17,979	-	-	-	13,229	3,233	-	422	-	-	-

	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
Periods	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
1953	-	-	-	15,113	9,729	-	-	-	17,979	5,820	-	759	-	-	-
1954	794	-	-	-	10,464	-	-	-	9,729	7,300	-	952	515	-	-
1955	-	3,278	-	-	5,785	1,056	-	-	9,121	-	-	-	-	-	-
1956	8,556	-	-	-	16,729	-	-	-	6,072	10,000	-	1,304	-	-	-
1957	-	-	-	-	7,232	-	-	-	11,261	1,271	-	166	-	3	-
1958	24,014	-	-	8,556	19,729	-	-	-	12,700	-	-	-	-	-	-
1959	-	1,003	-	19,456	6,249	270	-	-	18,632	-	-	-	-	-	-
1960	1,271	-	-	-	7,232	3	-	-	5,119	-	-	-	-	-	-
1961	-	4,826	-	-	4,628	1,899	-	-	5,456	-	2,090	-	-	-	-
1962	1,726	-	-	-	7,479	-	-	-	3,718	-	-	-	-	-	-
1963	1,681	-	-	1,726	10,726	-	-	-	10,220	5,958	-	-	3	-	-
1964	5,365	-	-	-	9,479	-	-	-	9,803	-	-	-	-	-	-
1965	91	-	-	7,046	7,729	-	-	-	10,402	2,090	-	273	-	-	-
1966	10,823	-	-	91	12,479	-	-	-	7,729	-	-	-	-	-	-
1967	22,195	-	-	10,823	18,729	-	-	-	12,479	-	-	-	-	-	-
1968	6,729	-	-	18,170	10,229	-	-	-	16,517	-	-	-	-	-	-
1969	24,014	-	-	10,754	19,729	-	-	-	12,441	-	-	-	-	-	-
1970	12,188	-	-	23,310	13,229	-	-	-	19,342	-	-	-	-	-	-
1971	816	-	-	12,892	7,087	108	-	-	13,508	-	-	-	-	-	-
1972	7,639	-	-	196	10,729	-	-	-	6,890	-	-	-	-	-	-
1973	10,823	-	-	7,459	12,479	-	-	-	10,487	-	-	-	-	-	-
1974	18,556	-	-	10,288	16,729	-	-	-	12,184	-	-	-	-	-	-
1975	10,529	-	-	19,891	12,479	-	-	-	17,463	294	-	-	-	-	-
1976	1,271	5,182	-	-	7,232	3	-	-	9,537	-	-	-	-	-	-
1977	-	6,618	-	-	868	3,726	-	-	2,838	-	7,500	-	-	913	-
1978	7,349	-	-	-	14,316	-	-	-	4,475	8,478	-	978	913	-	-
1979	9,458	5,569	-	-	11,729	-	-	-	13,338	-	-	-	-	-	-
1980	18,556	-	-	11,238	16,729	-	-	-	12,707	-	-	-	-	-	-
1981	-	4,472	-	-	5,785	1,056	-	-	7,932	-	-	-	-	-	-
1982	24,014	-	-	14,084	19,729	-	-	-	13,526	-	-	-	-	-	-

	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
Periods	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
1983	24,014	-	-	24,014	19,729	-	-	-	19,729	-	-	-	-	-	-
1984	12,188	-	-	24,014	13,229	-	-	-	19,729	-	-	-	-	-	-
1985	11,278	-	-	11,903	12,729	-	-	-	13,072	-	-	-	-	-	-
1986	12,642	-	-	11,080	13,479	-	-	-	12,886	-	-	-	-	-	-
1987	-	6,338	-	-	3,598	1,869	-	-	7,887	-	-	-	-	-	-
1988	-	6,787	-	-	1,332	3,853	-	-	-	-	7,500	-	-	-	-
1989	816	-	-	-	6,979	-	-	-	3,052	-	-	-	-	-	-
1990	-	816	-	-	1,379	3,400	-	-	2,621	-	7,500	-	-	-	-
1991	-	-	-	-	3,214	2,003	-	-	-	-	7,500	-	-	232	-
1992	-	-	-	-	2,038	2,773	-	-	-	-	7,500	-	-	286	-
1993	7,371	-	-	-	10,979	-	-	-	4,287	723	-	94	-	-	-
1994	-	7,371	-	-	4,484	2,005	-	-	5,267	-	-	-	-	-	-
1995	14,014	-	-	-	19,729	-	-	-	7,888	10,000	-	1,304	-	-	-
1996	7,646	-	-	13,031	16,229	-	-	-	19,765	10,000	-	1,304	-	-	-
1997	3,365	-	-	7,932	13,479	-	-	-	16,386	9,277	-	1,210	-	-	-
1998	24,014	-	-	4,062	19,729	-	-	-	13,863	-	-	-	-	-	-
1999	7,219	-	-	24,014	12,229	-	-	-	19,729	3,149	-	-	-	-	-
2000	12,188	-	-	6,744	12,711	-	-	-	12,229	-	-	-	518	-	-
2001	-	9,646	-	-	3,760	2,531	-	-	6,372	-	-	-	-	-	-
2002	-	1,913	-	-	6,219	740	-	-	4,455	-	-	-	-	-	-
2003	-	1,104	-	-	6,364	-	-	-	4,664	-	354	-	-	635	-
2004	-	-	-	-	6,508	479	-	-	4,773	-	1,003	-	-	50	-
2005	17,191	-	-	-	15,979	-	-	-	4,881	-	-	-	-	-	-
2006	19,309	-	-	17,191	18,275	-	-	-	22,646	2,297	-	177	204	-	-
2007	5,820	-	-	-	9,248	-	-	-	10,863	-	-	-	481	-	-
2008	-	5,552	-	-	5,062	1,583	-	-	4,317	-	-	-	-	-	-
2009	-	3,278	-	-	5,785	1,056	-	-	4,265	-	-	-	-	-	-
2010	1,271	-	-	-	7,232	3	-	-	5,785	-	-	-	-	-	-
2011	14,917	-	-	17,570	14,729	-	-	-	17,730	-	-	-	-	-	-
2012	-	-	-	-	10,979	-	-	-	10,371	-	6,110	-	-	-	-

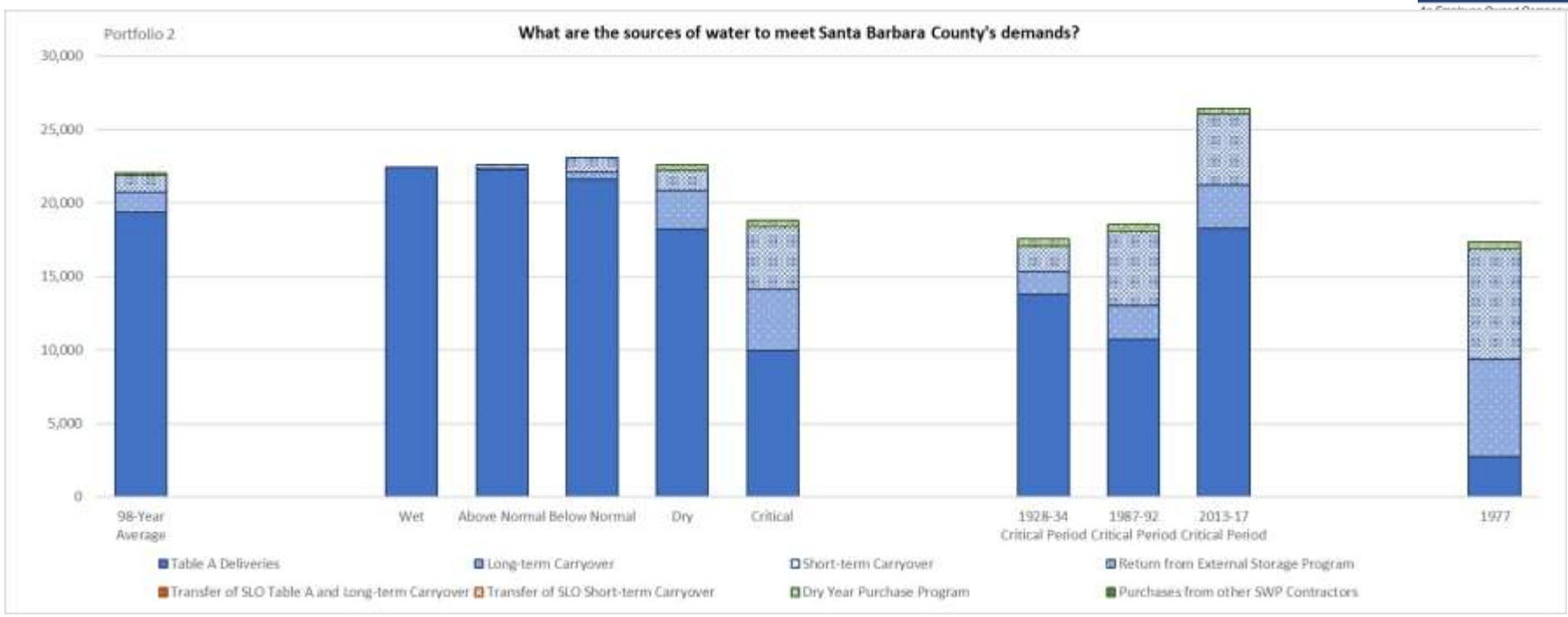
Periods	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
2013	-	-	-	-	3,681	202	-	-	5,641	-	7,500	-	-	-	-
2014	-	11,698	-	-	723	4,744	-	-	139	-	7,500	-	-	-	-
2015	-	3,219	-	-	941	1,212	-	-	-	-	7,500	-	-	-	-
2016	-	-	-	-	9,729	-	-	-	941	-	1,390	-	-	-	-
2017	2,005	-	-	-	15,979	-	-	-	17,532	-	-	-	-	-	-
2018	-	2,005	-	-	5,062	1,583	-	-	6,147	-	-	-	-	-	-
2019	-	-	-	-	13,479	-	-	-	13,311	-	-	-	-	-	-
Sum	560,209	132,419	-	427,790	953,564	59,676	-	-	880,409	129,538	114,437	15,101	13,682	2,378	1,304
Average	5,716	1,351	-	4,365	9,730	609	-	-	8,984	1,322	1,168	154	140	24	13
Water Year Averages															
Wet	12,516	-	-	10,729	15,292	4	-	-	14,325	2,651	-	290	91	-	9
Above Normal	6,802	79	-	2,238	11,333	-	-	-	8,359	1,955	257	246	477	46	38
Below Normal	3,649	450	-	4,662	8,810	209	-	-	9,698	165	1,000	22	131	19	17
Dry	1,352	2,665	-	-	6,666	814	-	-	6,421	870	1,347	113	94	-	10
Critically Dry	-	4,188	-	-	2,791	2,500	-	-	2,053	-	4,256	-	-	95	-
Critical Period Averages															
1928-34	1,351	1,526	-	-	4,322	1,542	-	-	3,930	-	1,729	-	271	-	35
1987-92	136	2,324	-	-	3,090	2,316	-	-	2,260	-	5,000	-	-	86	-
2013-17	401	2,983	-	-	6,211	1,232	-	-	4,851	-	4,778	-	-	-	-
Driest 1-Year															
1977	-	6,618	-	-	868	3,726	-	-	2,838	-	7,500	-	-	913	-

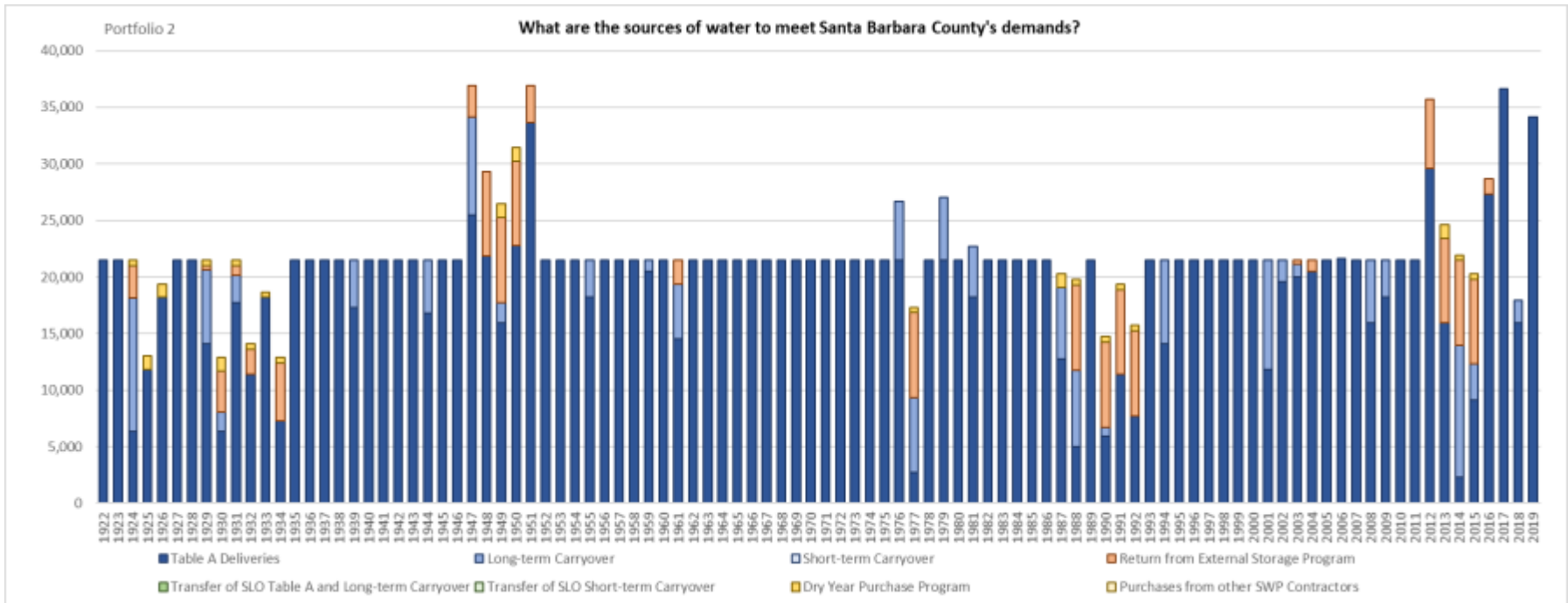
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCDPurchases from Others	SLOFCWCD Purchases from CCWA
1922	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	-	-	480	-	-	-
1925	-	-	-	-	-	-	1,199	-	-	-
1926	-	-	-	-	-	-	1,199	-	-	-
1927	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	480	-	-	-
1930	-	-	-	-	-	-	1,199	-	-	-
1931	-	-	-	-	-	-	480	-	-	-
1932	-	-	-	-	-	-	480	-	-	-
1933	-	-	-	-	-	-	480	-	-	-
1934	-	-	-	-	-	-	480	-	-	-
1935	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	1,199	-	-	-
1950	-	-	-	-	-	-	1,199	-	-	-
1951	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-

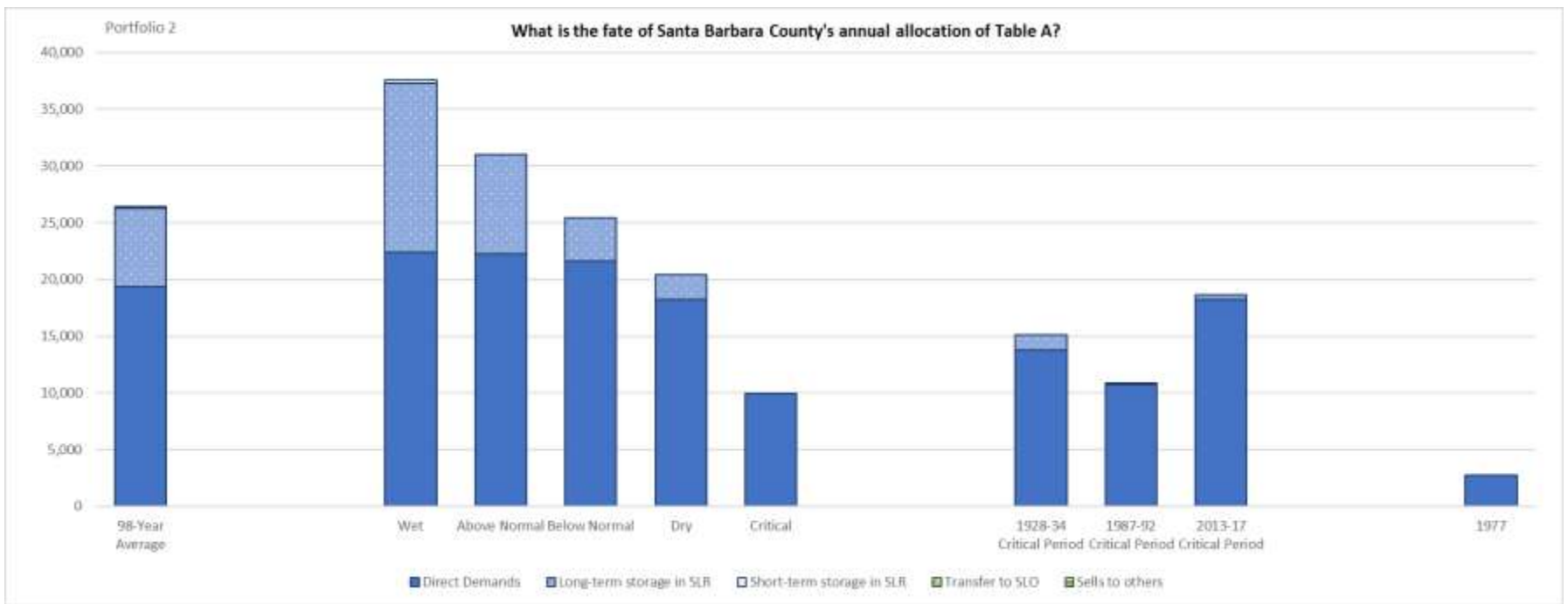
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCDPurchases from Others	SLOFCWCD Purchases from CCWA
1953	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-	-	-
1976	-	-	-	-	-	-	-	-	-	-
1977	-	-	-	-	-	-	480	-	-	-
1978	-	-	-	-	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	-	-	-	-	-	-	-	-	-	-
1982	-	-	-	-	-	-	-	-	-	-
	Sales to Others						Purchases from Others			

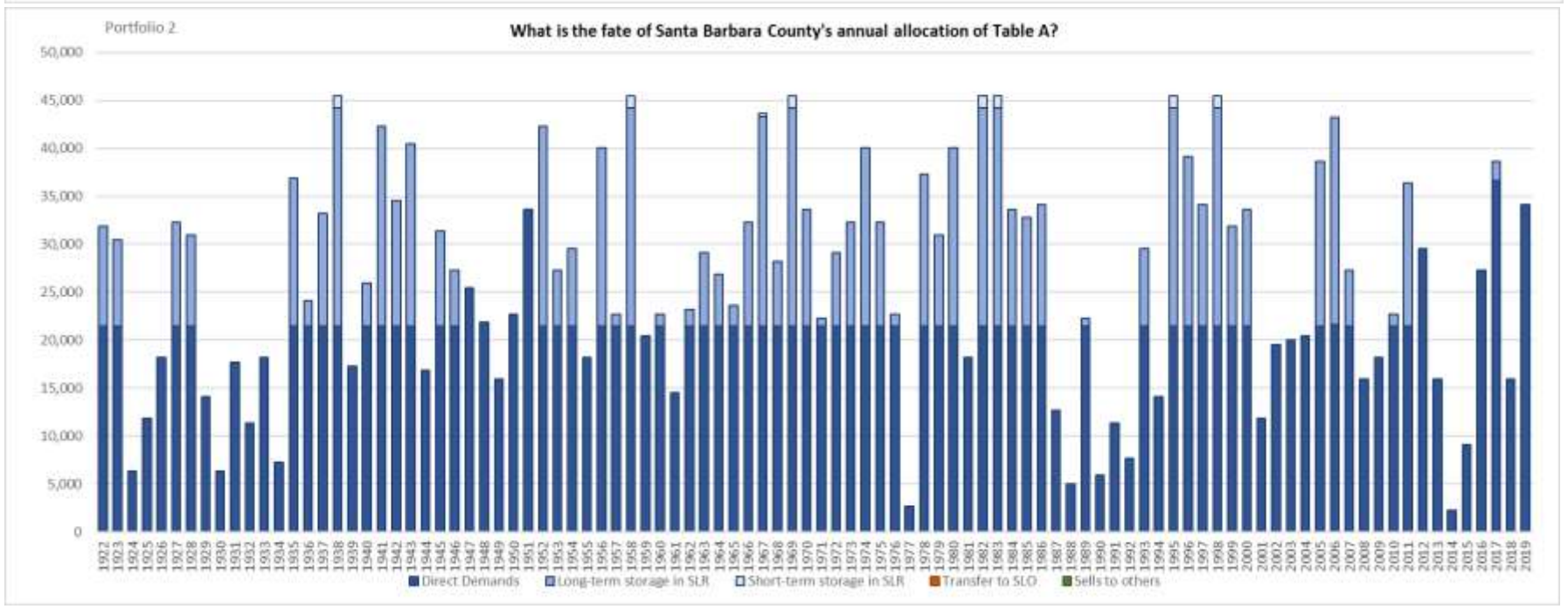
Periods	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCDPurchases from Others	SLOFCWCD Purchases from CCWA
1983	-	-	-	-	-	-	-	-	-	-
1984	-	-	-	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-	-	-	-
1986	-	-	-	-	-	-	-	-	-	-
1987	-	-	-	-	-	-	1,199	-	-	-
1988	-	-	-	-	-	-	480	-	-	-
1989	-	-	-	-	-	-	-	-	-	-
1990	-	-	-	-	-	-	480	-	-	-
1991	-	-	-	-	-	-	480	-	-	-
1992	-	-	-	-	-	-	480	-	-	-
1993	-	-	-	-	-	-	-	-	-	-
1994	-	-	-	-	-	-	-	-	-	-
1995	-	-	-	-	-	-	-	-	-	-
1996	-	-	-	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	-	-	-
1998	-	-	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-	-	-	-
2000	-	-	-	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-
	Sales to Others						Purchases from Others			

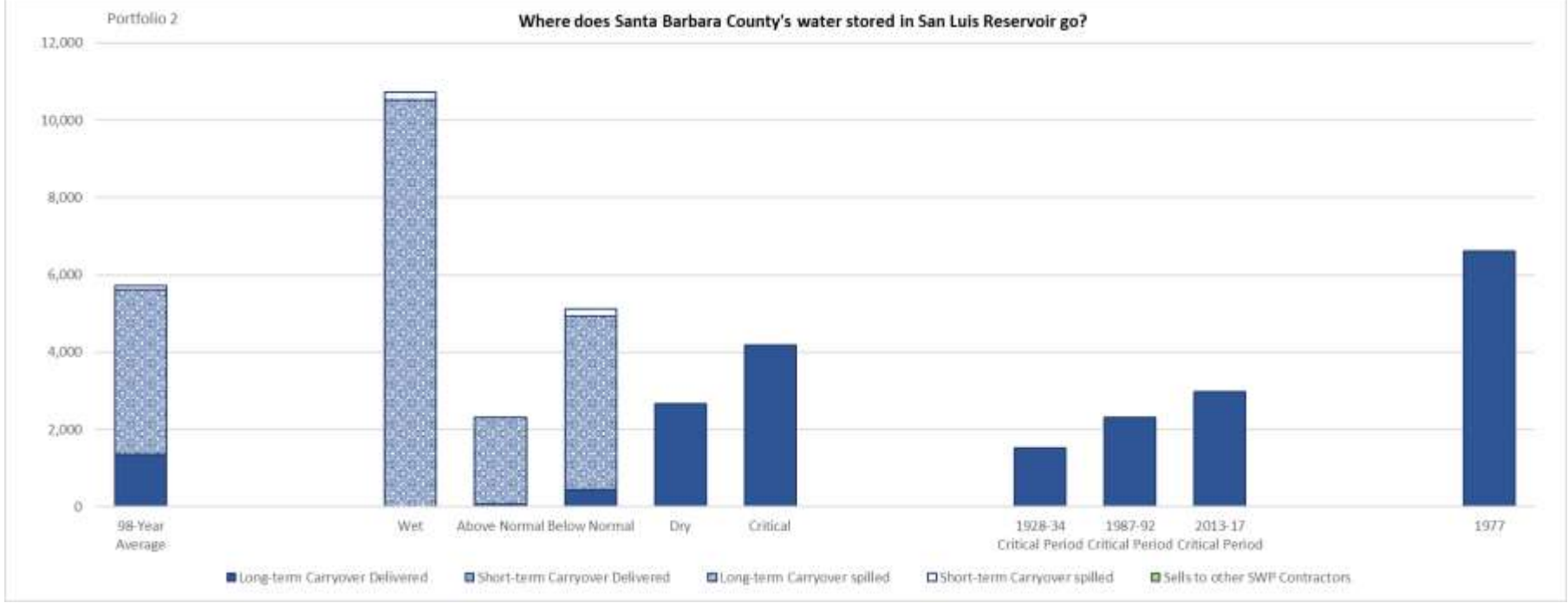
Periods	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCDPurchases from Others	SLOFCWCD Purchases from CCWA
2013	-	-	-	-	-	-	1,199	-	-	-
2014	-	-	-	-	-	-	480	-	-	-
2015	-	-	-	-	-	-	480	-	-	-
2016	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-
Sum	-	-	-	-	-	-	14,633	-	-	-
Average	-	-	-	-	-	-	149	-	-	-
Water Year Averages										
Wet	-	-	-	-	-	-	-	-	-	-
Above Normal	-	-	-	-	-	-	-	-	-	-
Below Normal	-	-	-	-	-	-	-	-	-	-
Dry	-	-	-	-	-	-	365	-	-	-
Critically Dry	-	-	-	-	-	-	416	-	-	-
Critical Period Averages										
1928-34	-	-	-	-	-	-	514	-	-	-
1987-92	-	-	-	-	-	-	520	-	-	-
2013-17	-	-	-	-	-	-	432	-	-	-
Driest 1-Year										
1977	-	-	-	-	-	-	480	-	-	-

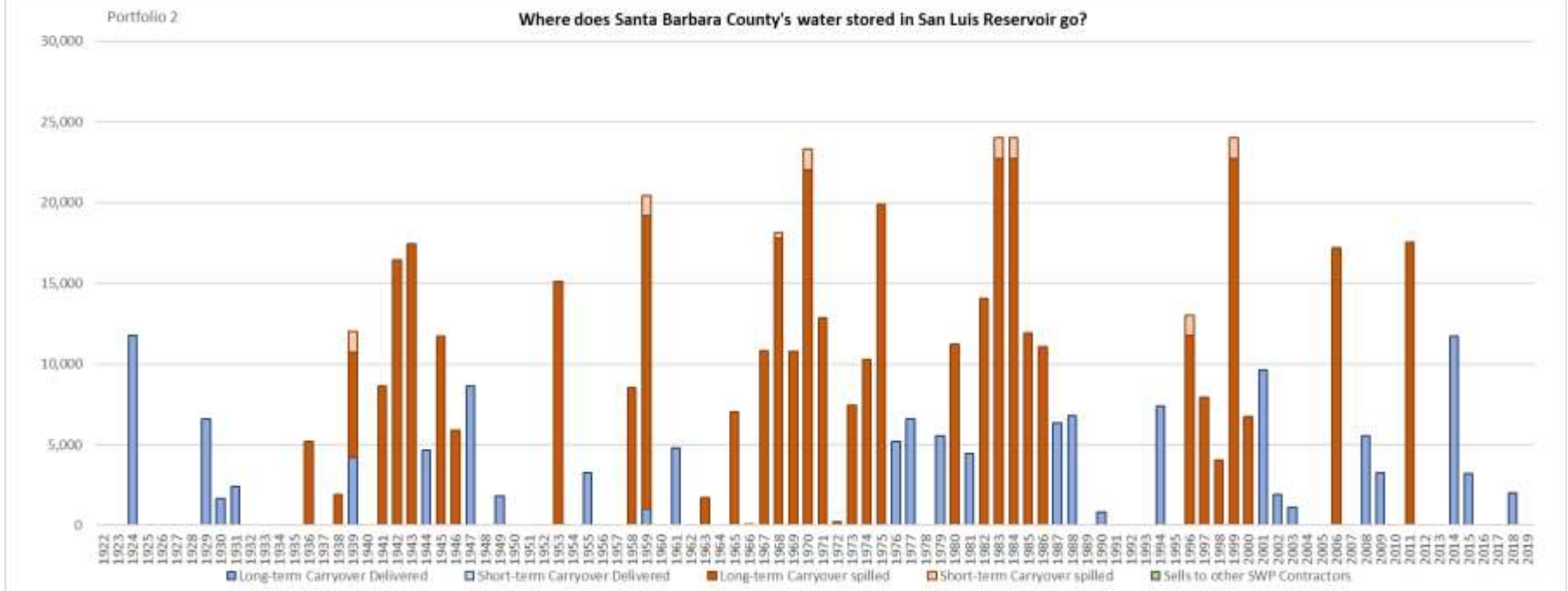

Portfolio 2
What are the sources of water to meet Santa Barbara County's demands?
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer of SLO Table A and Long-term Carryover
Transfer of SLO Short-term Carryover
Dry Year Purchase Program
Purchases from other SWP Contractors

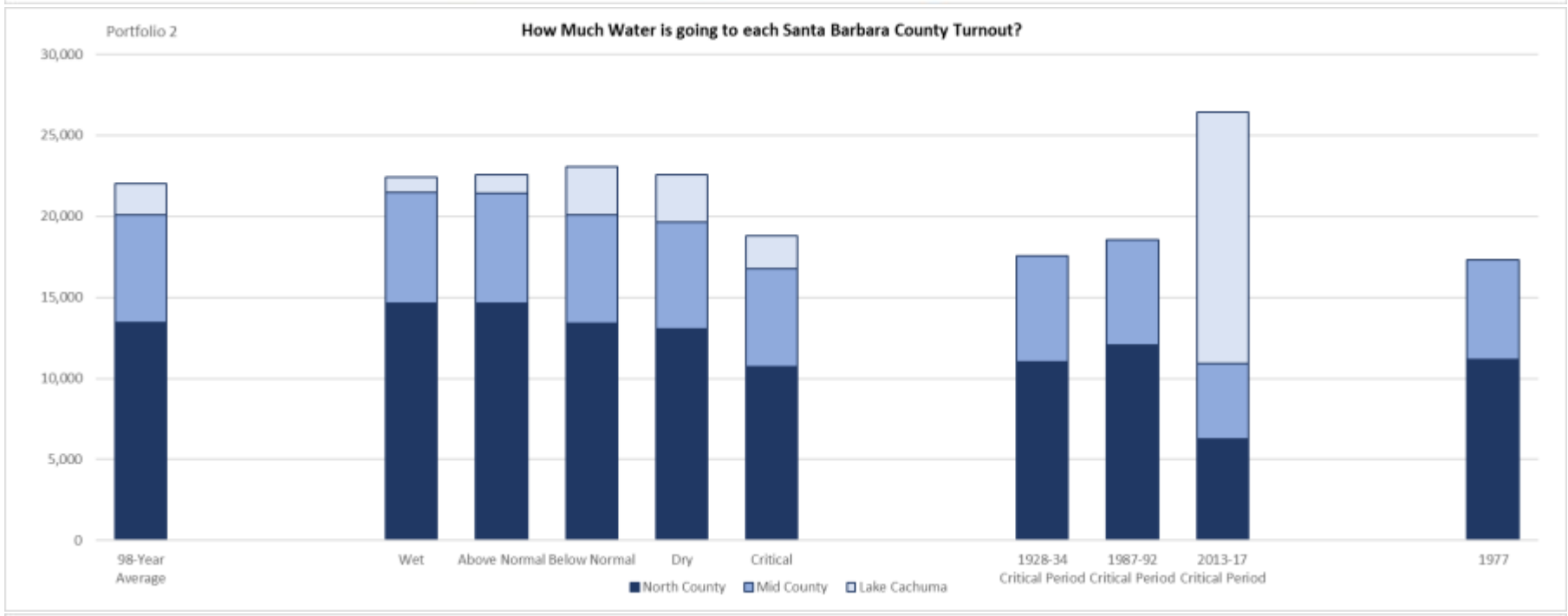

Portfolio 2
What are the sources of water to meet Santa Barbara County's demands?
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer of SLO Table A and Long-term Carryover
Transfer of SLO Short-term Carryover
Dry Year Purchase Program
Purchases from other SWP Contractors

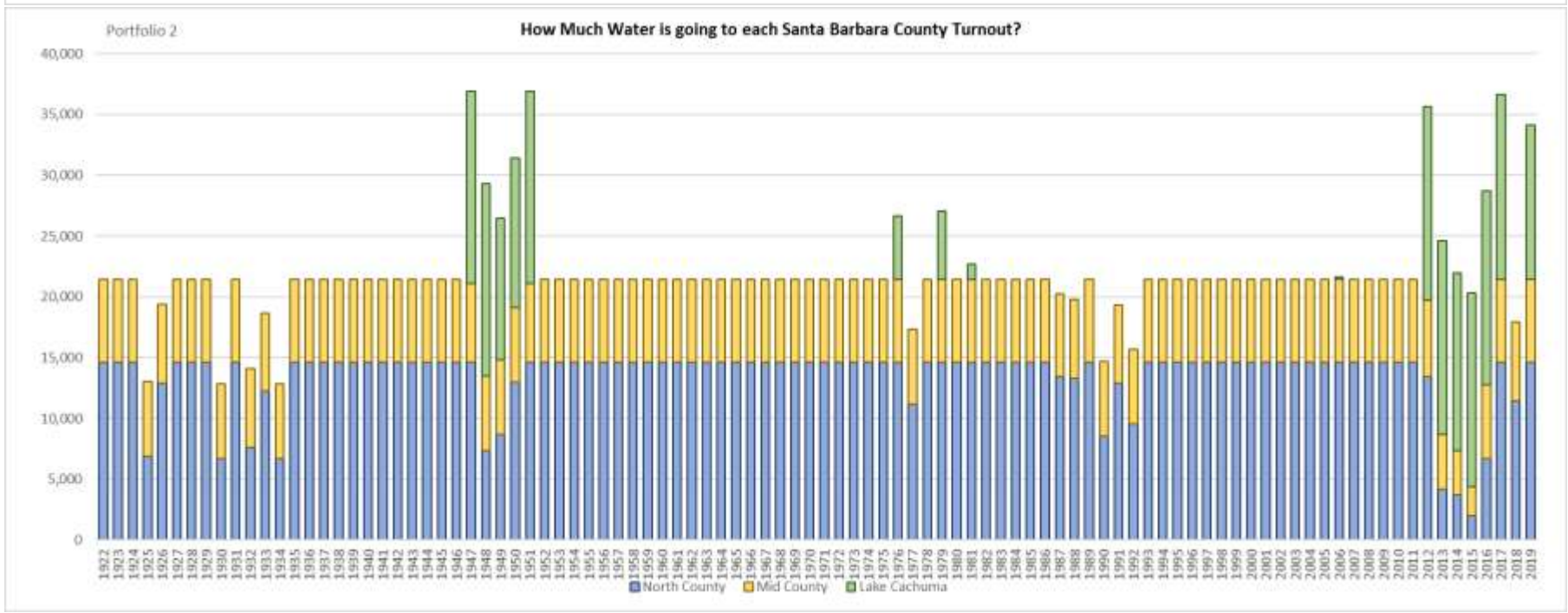

Portfolio 2
What is the fate of Santa Barbara County's annual allocation of Table A?
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Direct Demands
Long-term storage in SLR
Short-term storage in SLR
Transfer to SLO
Sells to others

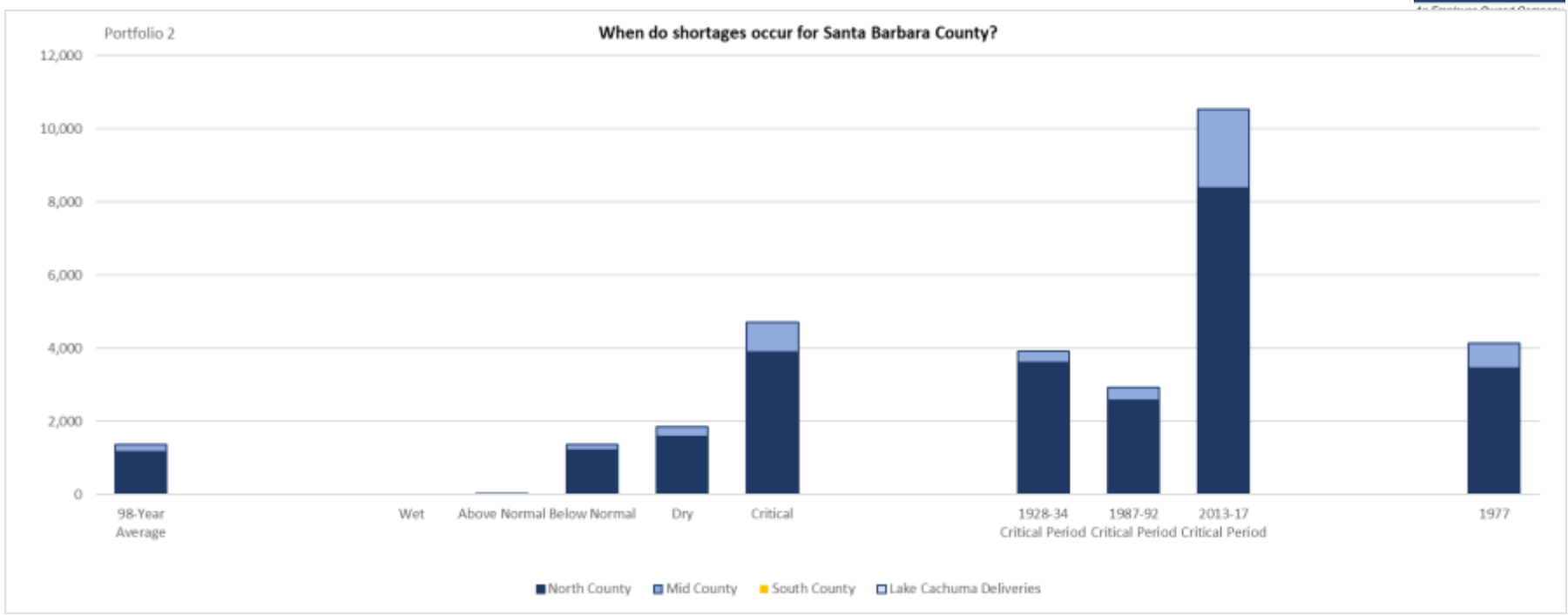

Portfolio 2
What is the fate of Santa Barbara County's annual allocation of Table A?
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Direct Demands
Long-term storage in SLR
Short-term storage in SLR
Transfer to SLO
Sells to others

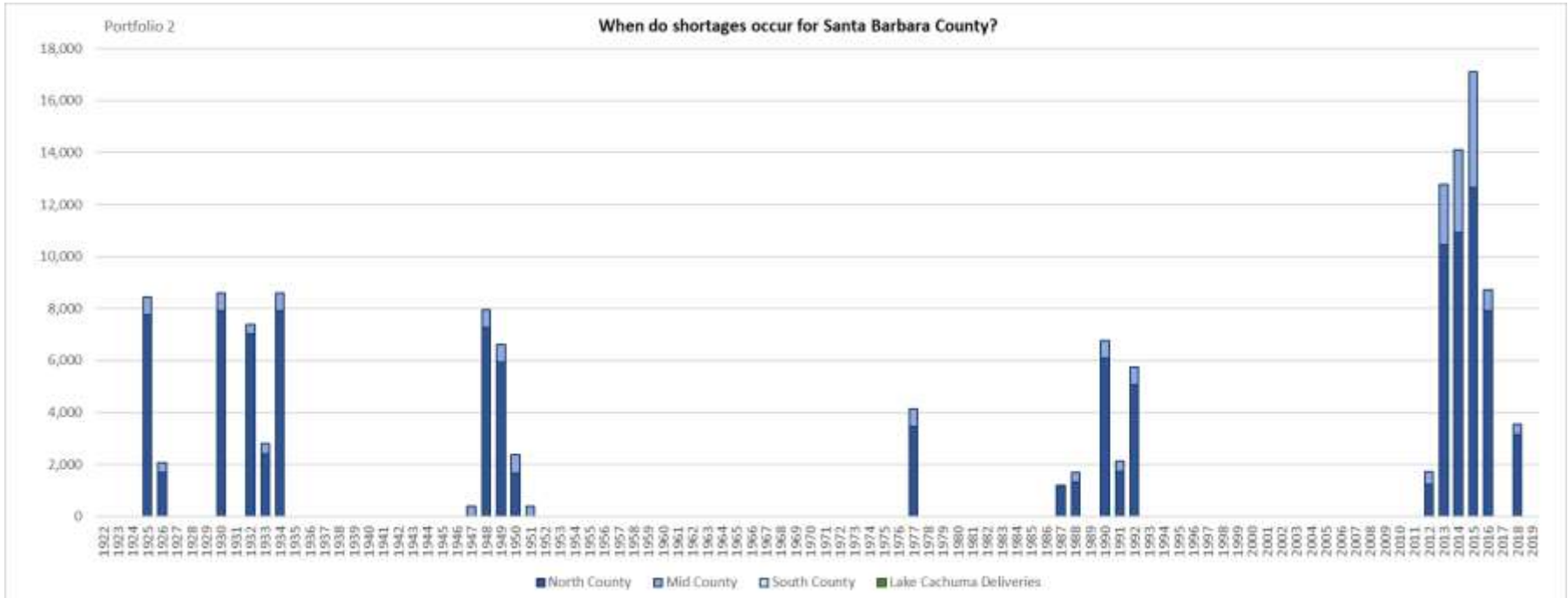

Portfolio 2
Where does Santa Barbara County's water stored in San Luis Reservoir go?
12,000
10,000
8,000
6,000
4,000
2,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Sells to other SWP Contractors

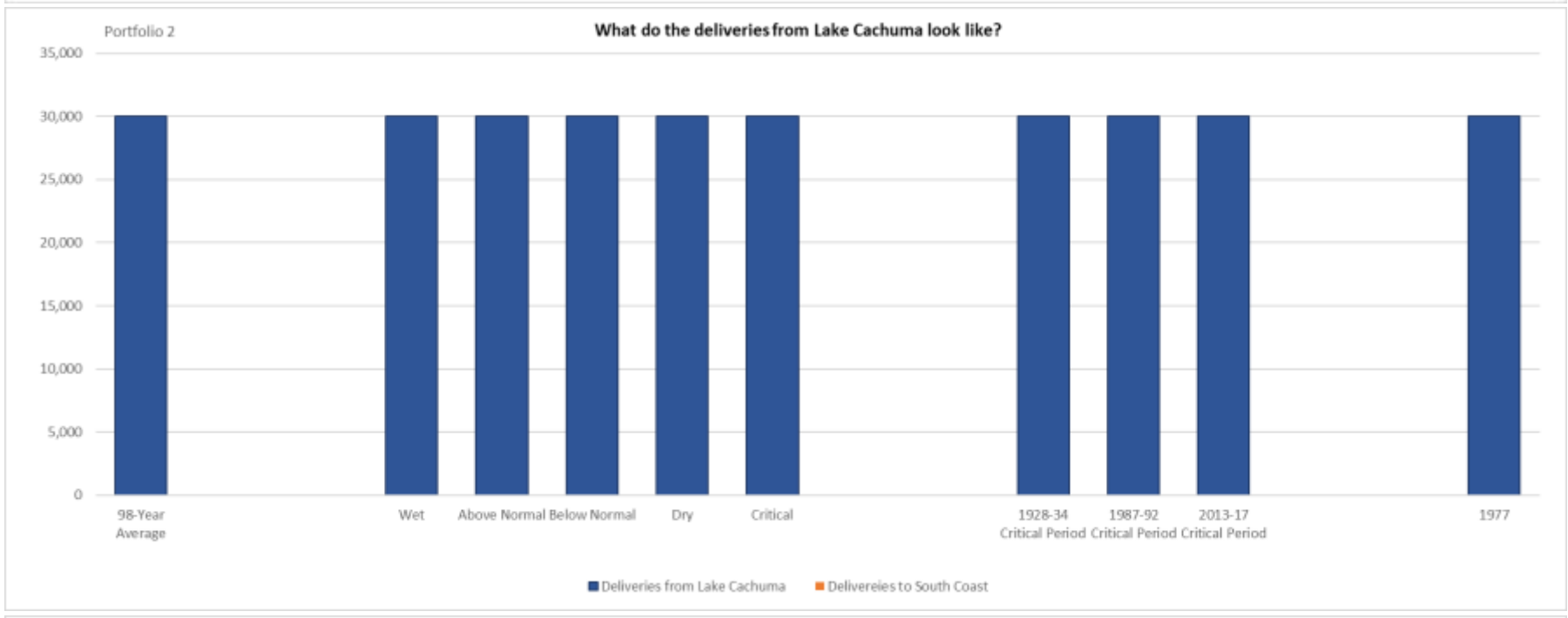

Portfolio 2
Where does Santa Barbara County's water stored in San Luis Reservoir go?
30,000
25,000
20,000
15,000
10,000
5,000
0
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Sells to other SWP Contractors

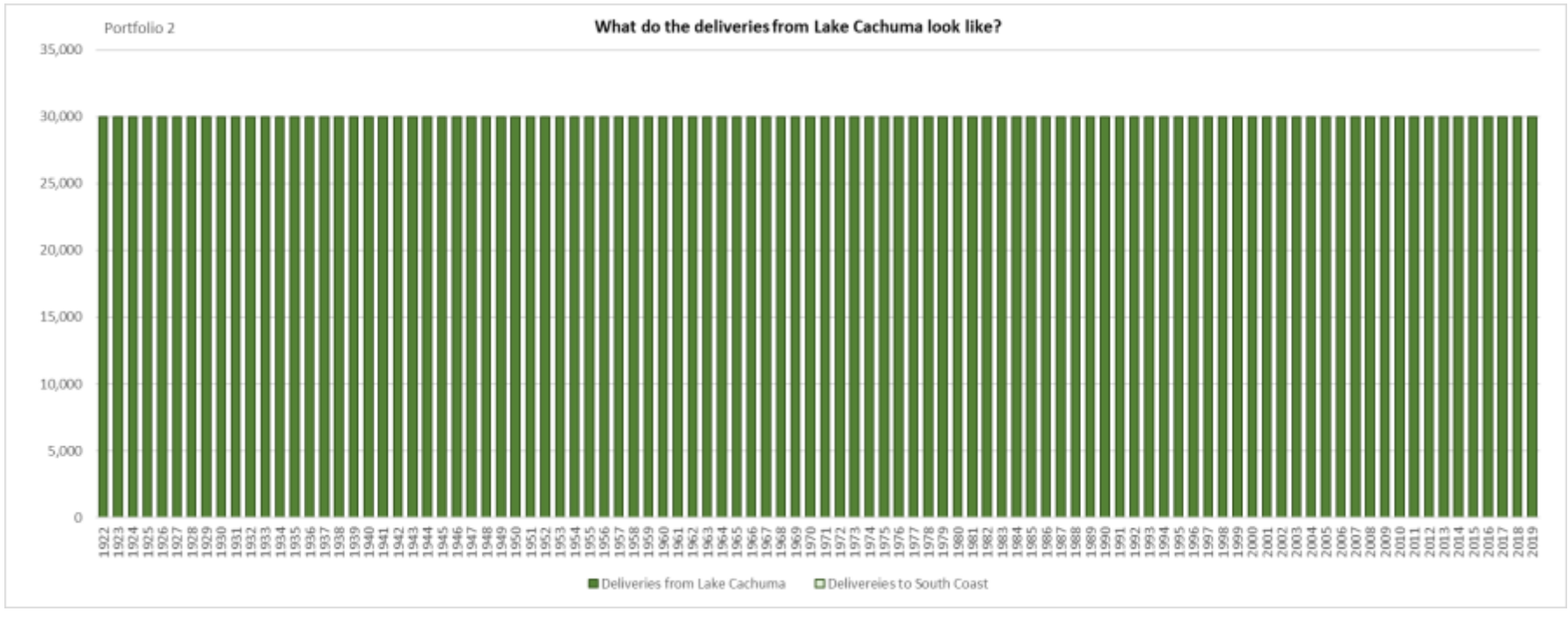

Portfolio 2
How Much Water is going to each Santa Barbara County Turnout?
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
North County
Mid County
Lake Cachuma

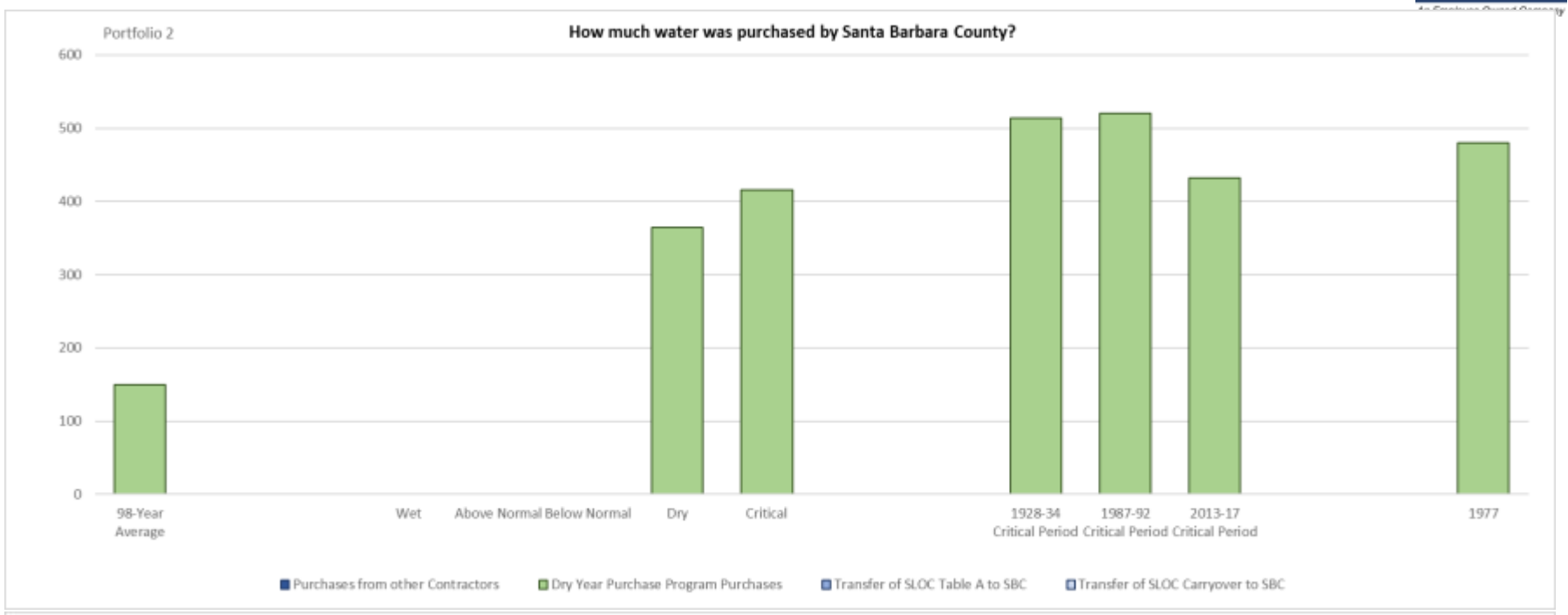

Portfolio 2
How Much Water is going to each Santa Barbara County Turnout?
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
North County
Mid County
Lake Cachuma

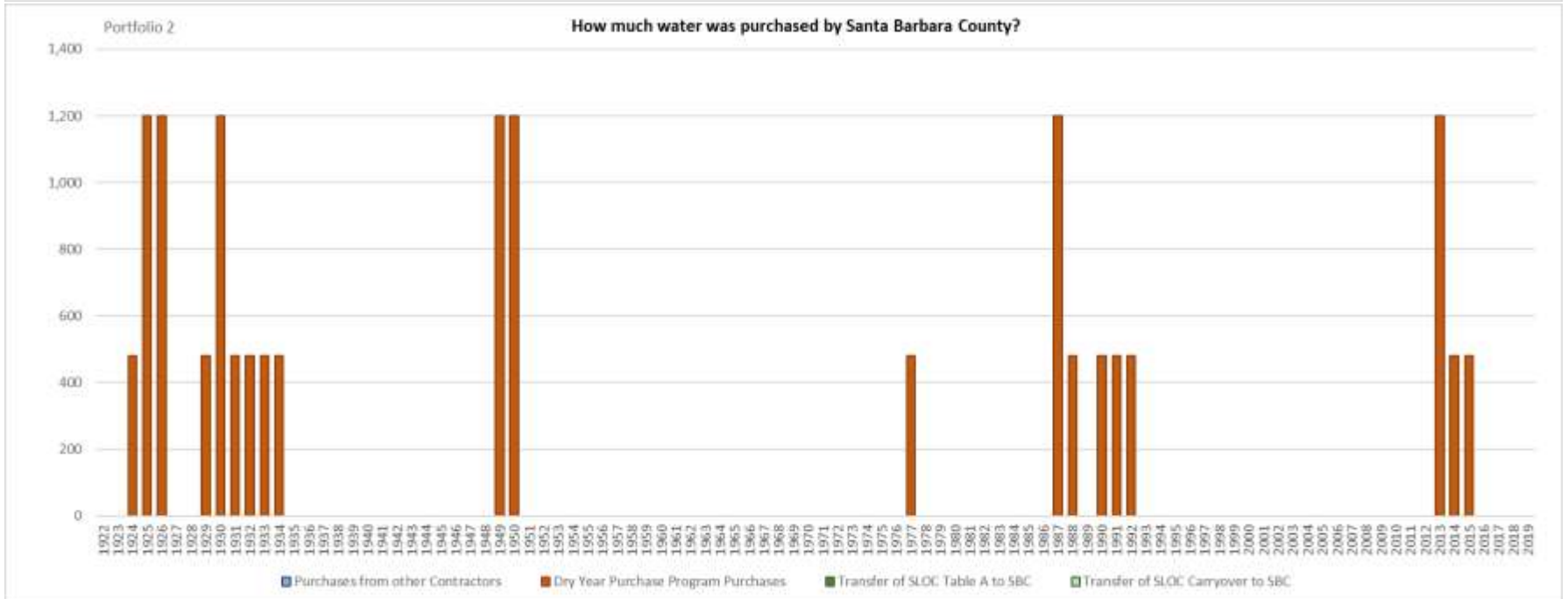

Portfolio 2
When do shortages occur for Santa Barbara County?
12,000
10,000
8,000
6,000
4,000
2,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
North County
Mid County
South County
Lake Cachuma Deliveries

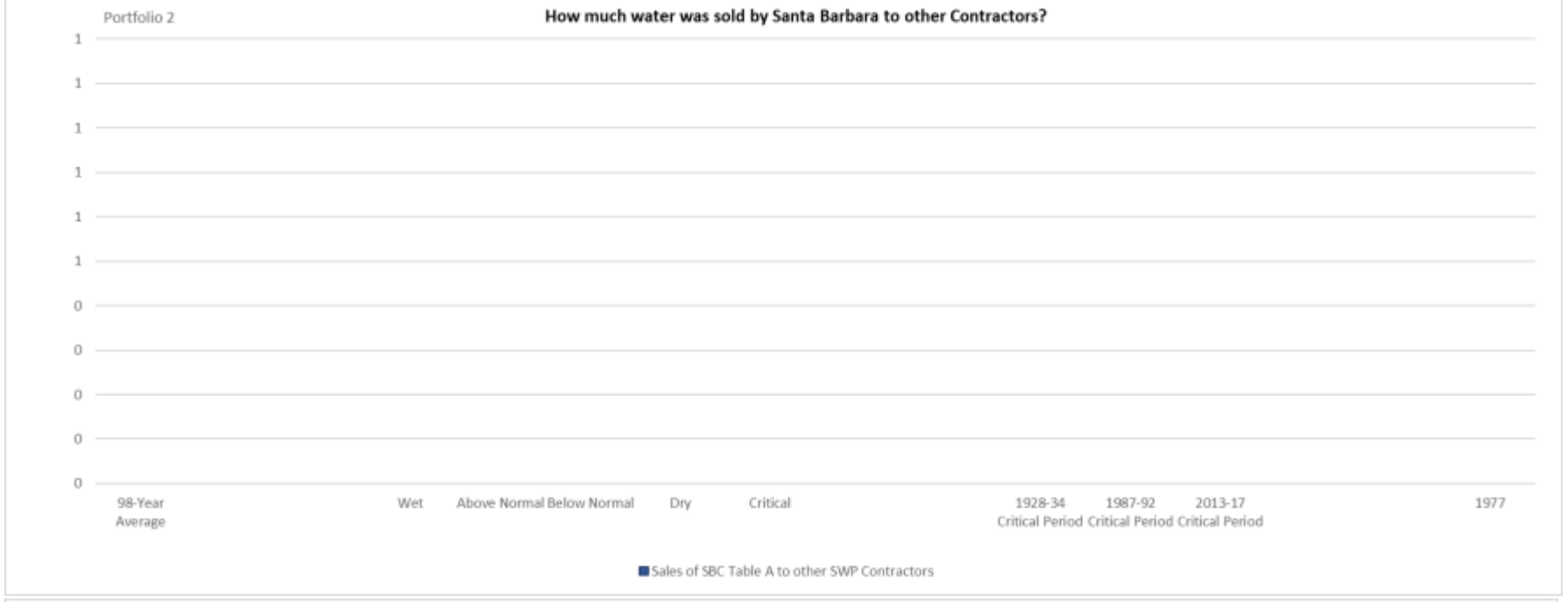

Portfolio 2
When do shortages occur for Santa Barbara County?
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
North County
Mid County
South County
Lake Cachuma Deliveries

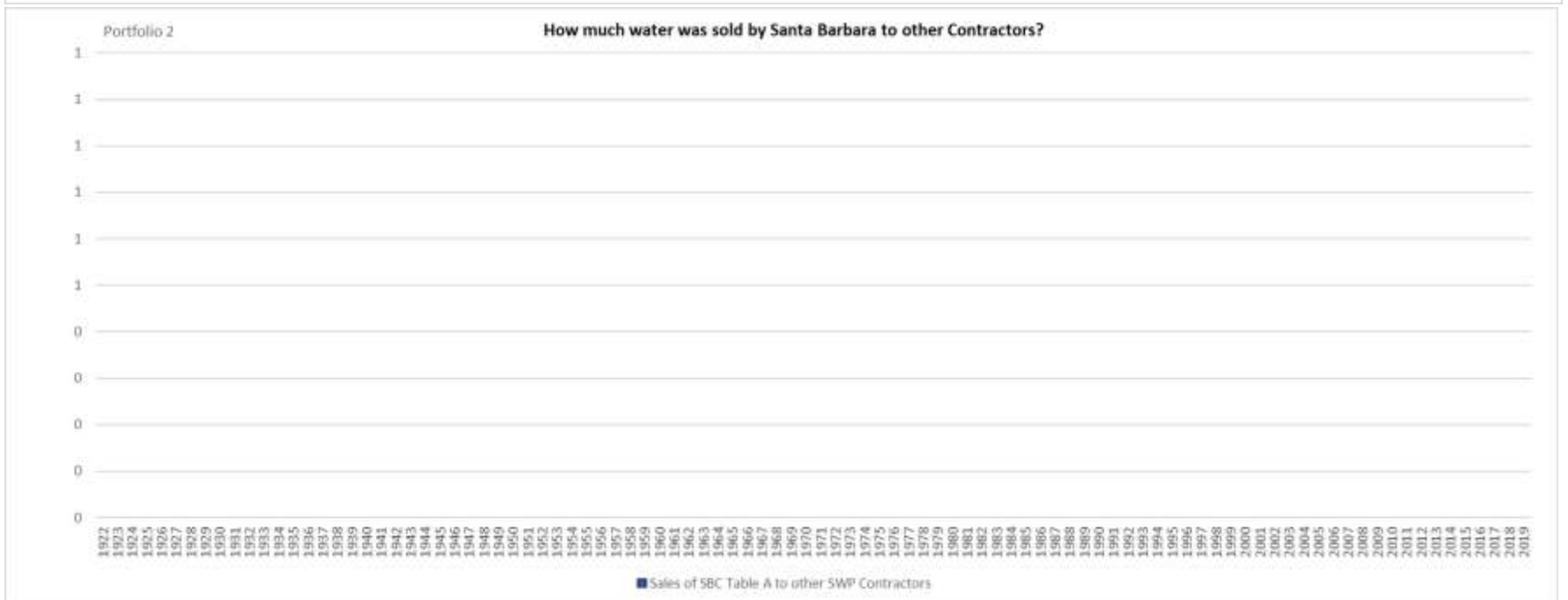

Portfolio 2
What do the deliveries from Lake Cachuma look like?
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Deliveries from Lake Cachuma
Delivereies to South Coast

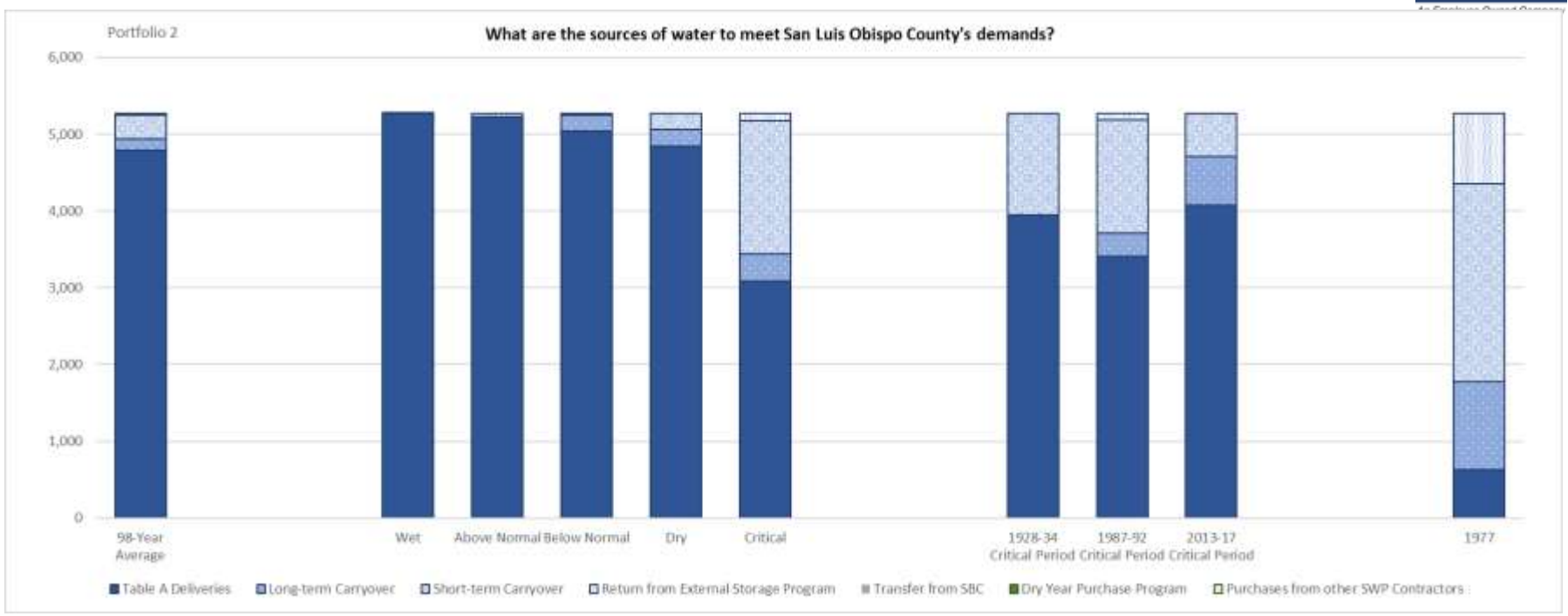

Portfolio 2
What do the deliveries from Lake Cachuma look like?
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Deliveries from Lake Cachuma
Delivereies to South Coast

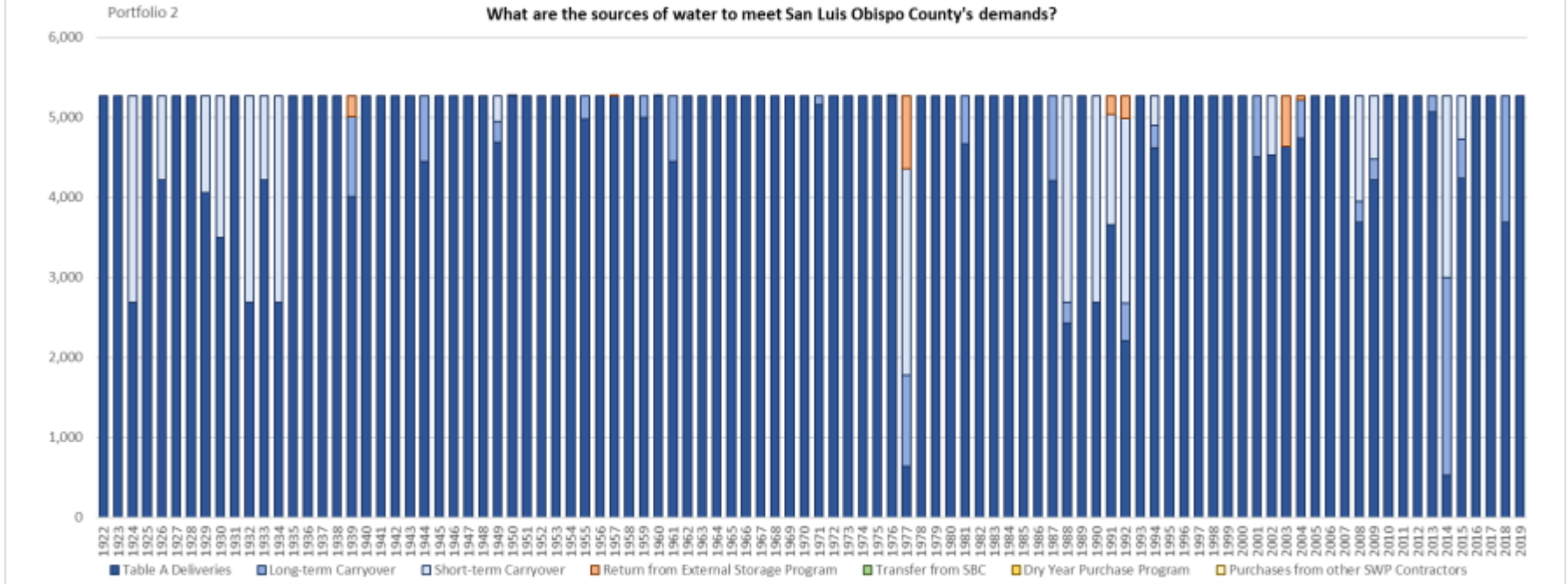

Portfolio 2
How much water was purchased by Santa Barbara County?
600
500
400
300
200
100
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Purchases from other Contractors
Dry Year Purchase Program Purchases
Transfer of SLOC Table A to SBC
Transfer of SLOC Carryover to SBC

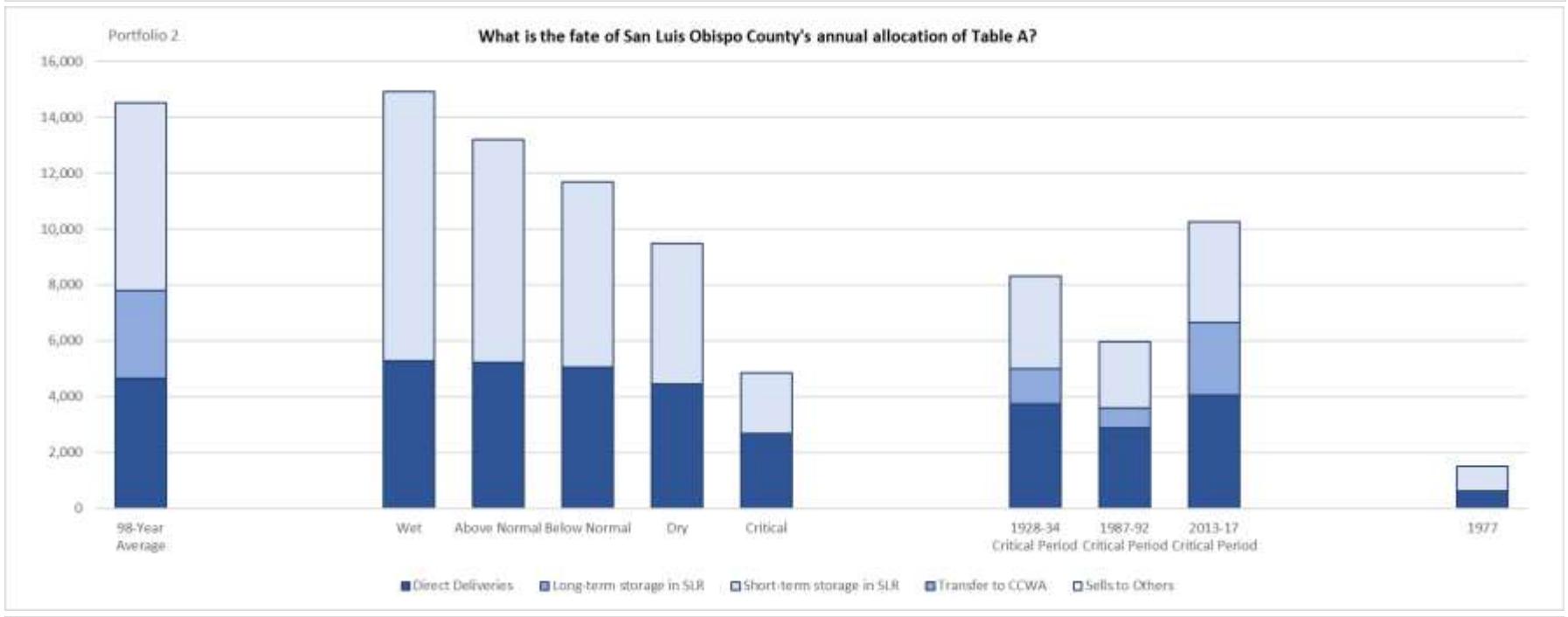

Portfolio 2
How much water was purchased by Santa Barbara County?
1,400
1,200
1,000
800
600
400
200
0
Purchases from other Contractors
Dry Year Purchase Program Purchases
Transfer of SLOC Table A to SBC
Transfer of SLOC Carryover to SBC

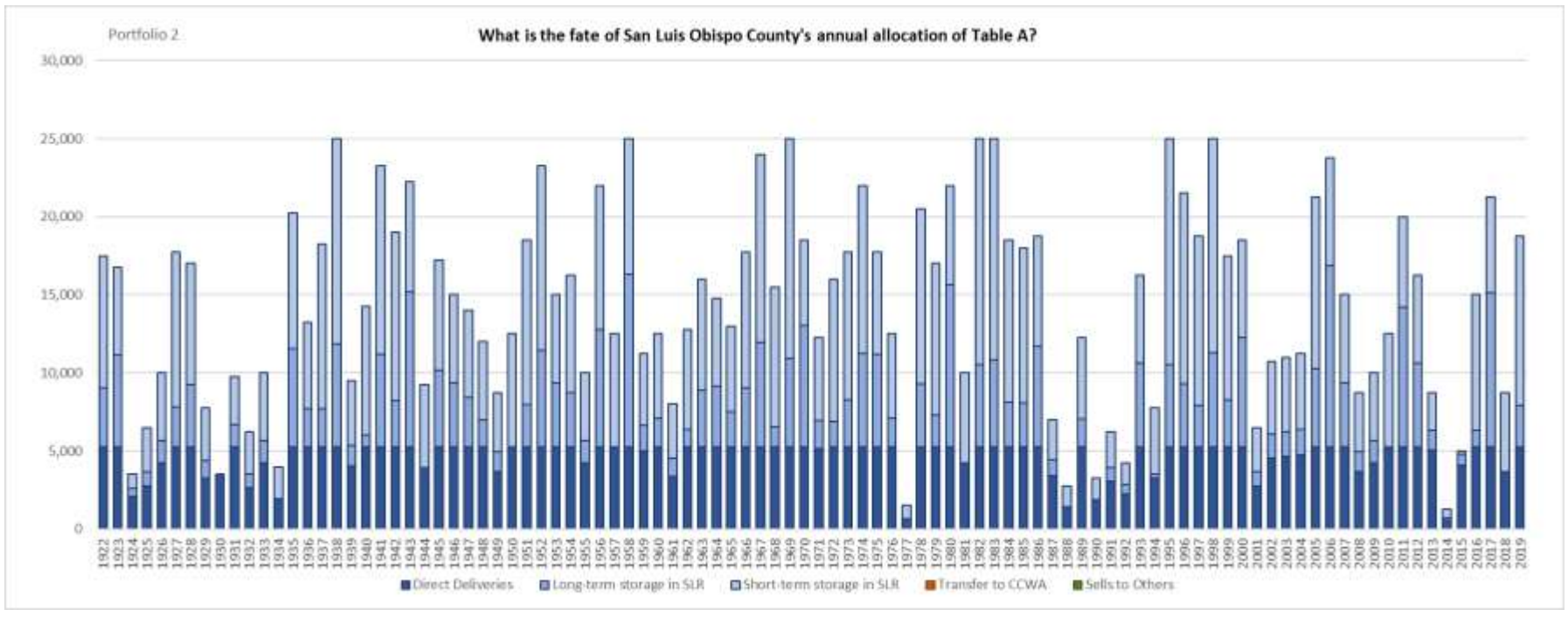

Portfolio 2
How much water was sold by Santa Barbara to other Contractors?
1
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Sales of SBC Table A to other SWP Contractors

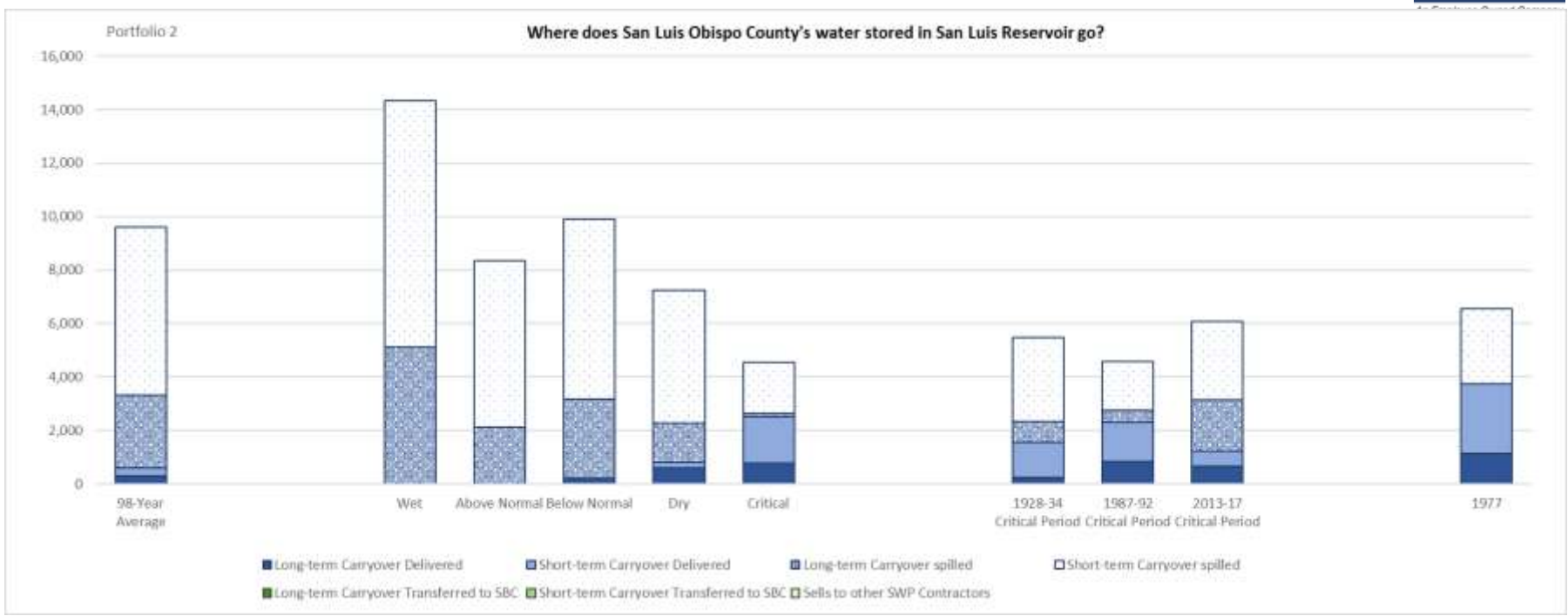

Portfolio 2
How much water was sold by Santa Barbara to other Contractors?
1
0
Sales of SBC Table A to other SWP Contractors

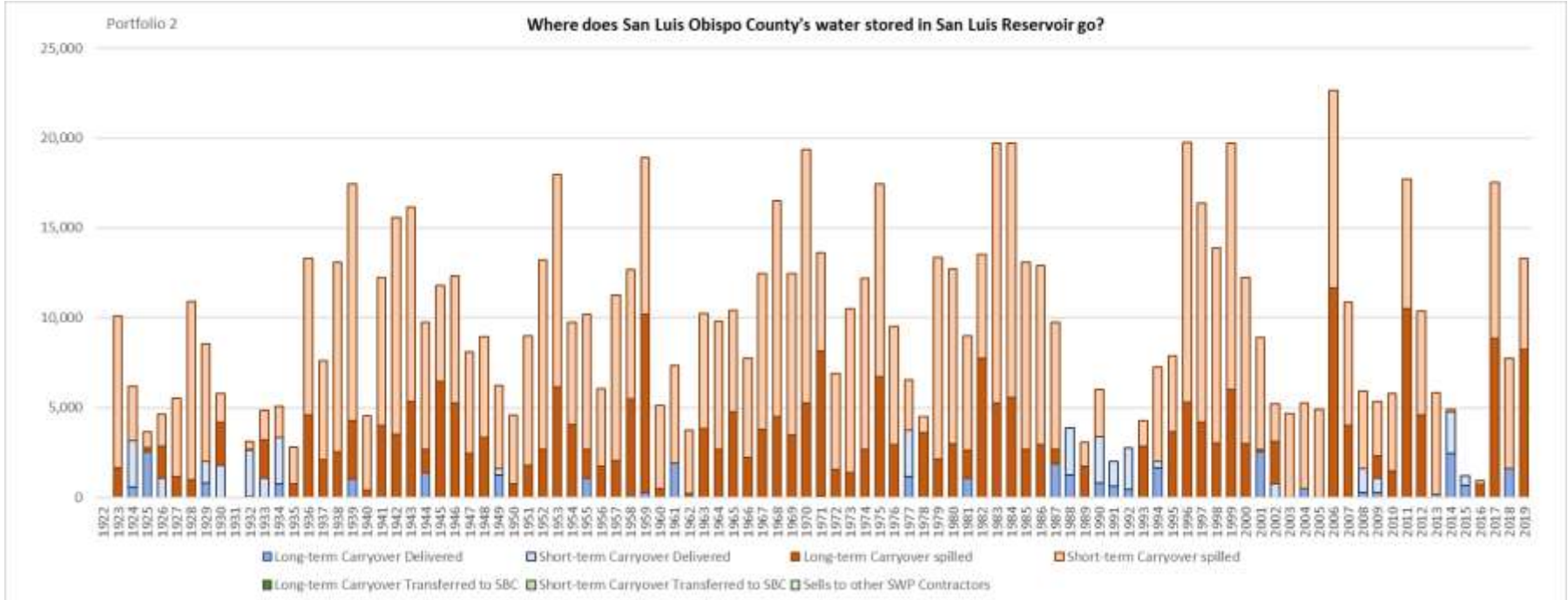

Portfolio 2
What are the sources of water to meet San Luis Obispo County's demands?
6,000
5,000
4,000
3,000
2,000
1,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer from SBC
Dry Year Purchase Program
Purchases from other SWP Contractors

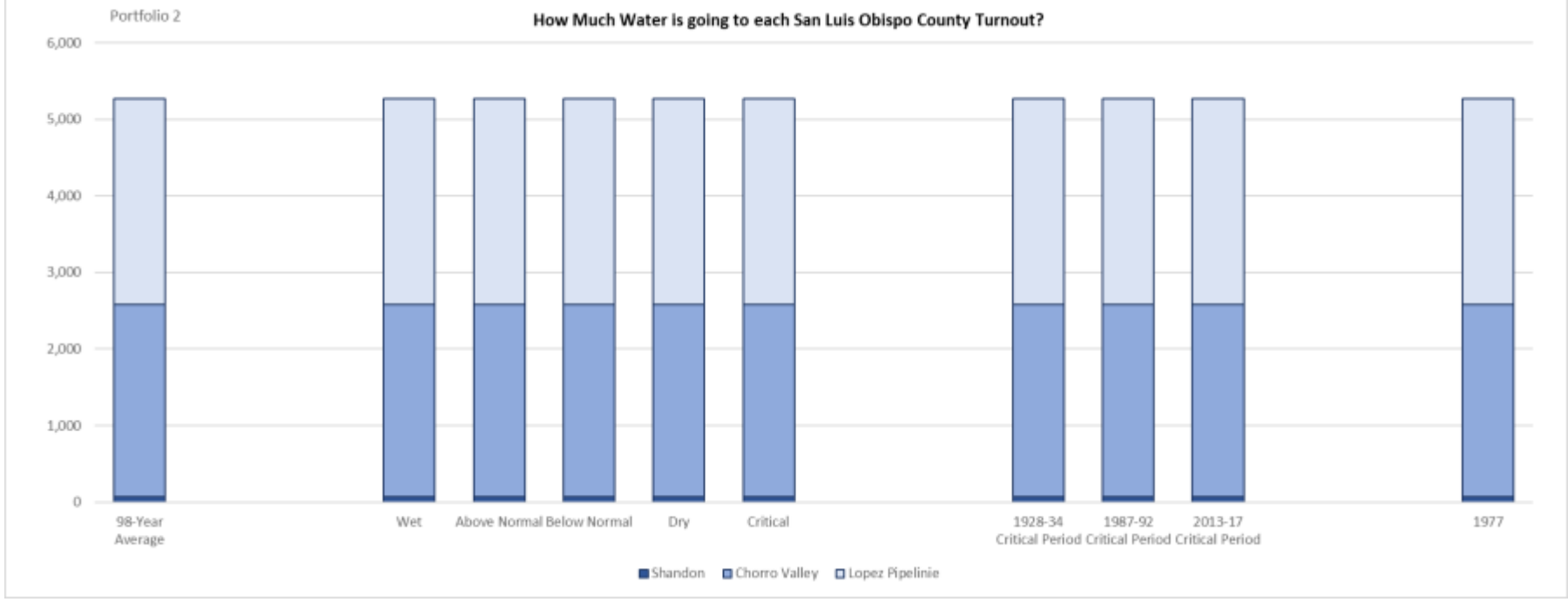

Portfolio 2
What are the sources of water to meet San Luis Obispo County's demands?
6,000
5,000
4,000
3,000
2,000
1,000
0
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer from SBC
Dry Year Purchase Program
Purchases from other SWP Contractors

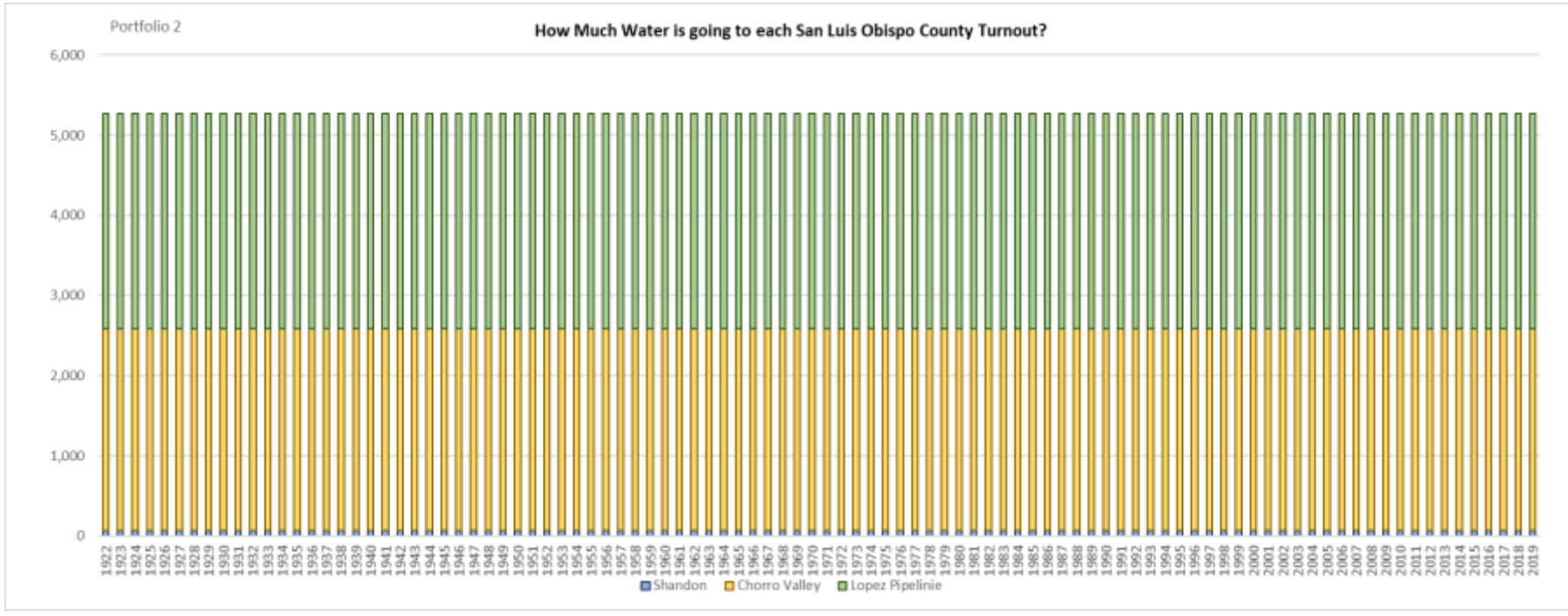

Portfolio 2
What is the fate of San Luis Obispo County's annual allocation of Table A?
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Direct Deliveries
Long-term storage in SLR
Short-term storage in SLR
Transfer to CCWA
Sells to Others

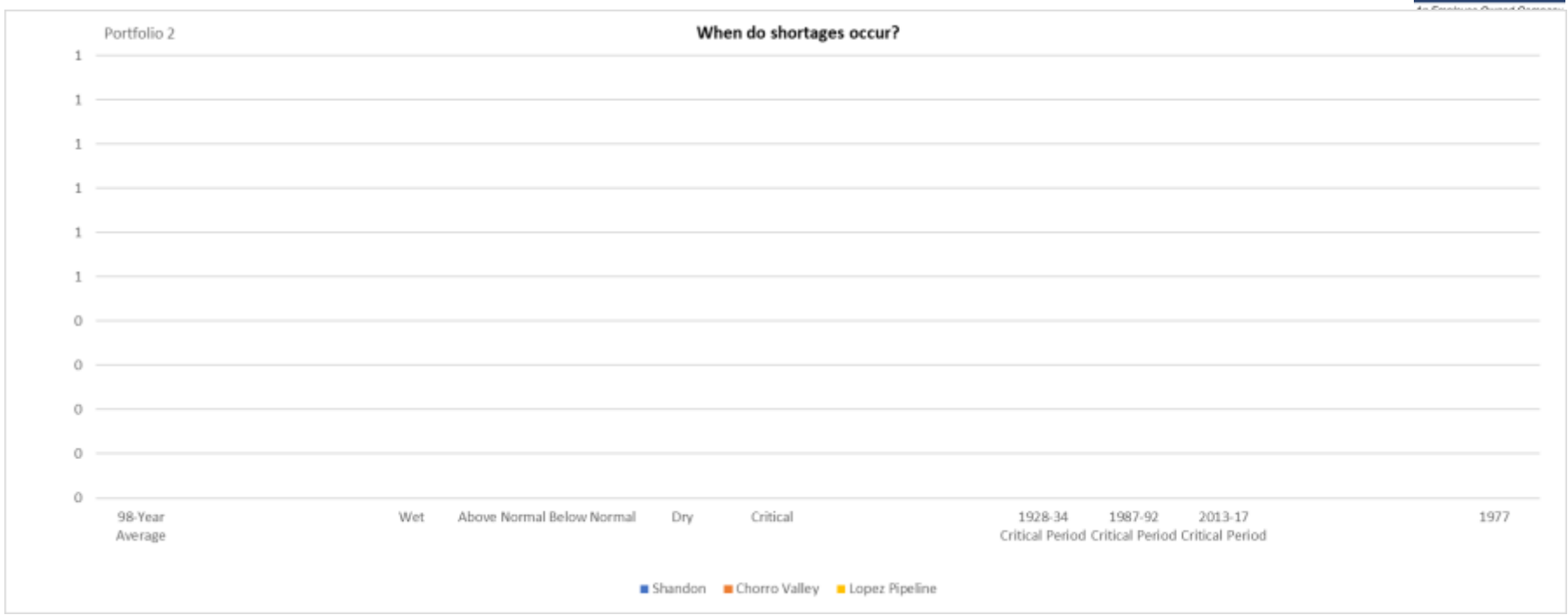

Portfolio 2
What is the fate of San Luis Obispo County's annual allocation of Table A?
30,000
25,000
20,000
15,000
10,000
5,000
0
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Direct Deliveries
Long-term storage in SLR
Short-term storage in SLR
Transfer to CCWA
Sells to Others


Portfolio 2
Where does San Luis Obispo County's water stored in San Luis Reservoir go?
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Long-term Carryover Transferred to SBC
Short-term Carryover Transferred to SBC
Sells to other SWP Contractors


Portfolio 2
Where does San Luis Obispo County's water stored in San Luis Reservoir go?
25,000
20,000
15,000
10,000
5,000
0
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Long-term Carryover Transferred to SBC
Short-term Carryover Transferred to SBC
Sells to other SWP Contractors


Portfolio 2
How Much Water is going to each San Luis Obispo County Turnout?
6,000
5,000
4,000
3,000
2,000
1,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Shandon
Chorro Valley
Lopez Pipelinie


Portfolio 2
How Much Water is going to each San Luis Obispo County Turnout?
6,000
5,000
4,000
3,000
2,000
1,000
0
Shandon
Chorro Valley
Lopez Pipelinie


Portfolio 2
When do shortages occur?
1
1
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0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Shandon
Chorro Valley
Lopez Pipeline


Portfolio 2
When do shortages occur?
1
1
1
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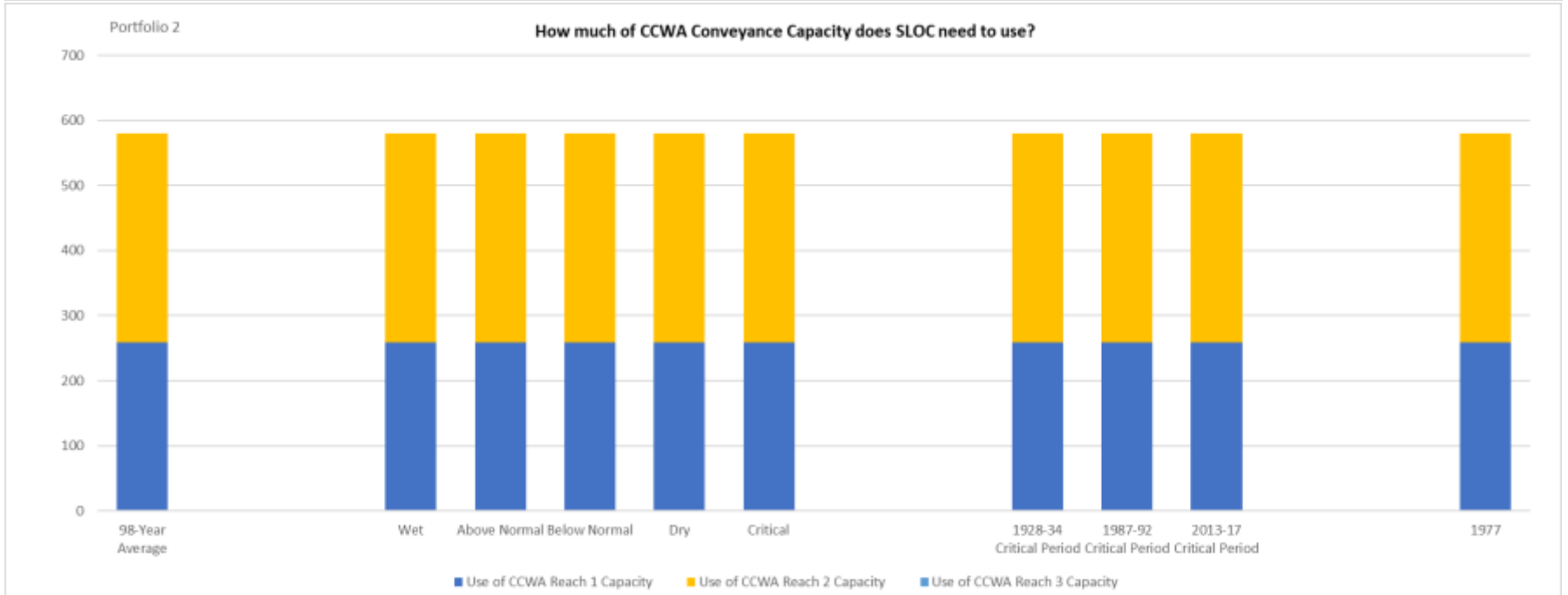
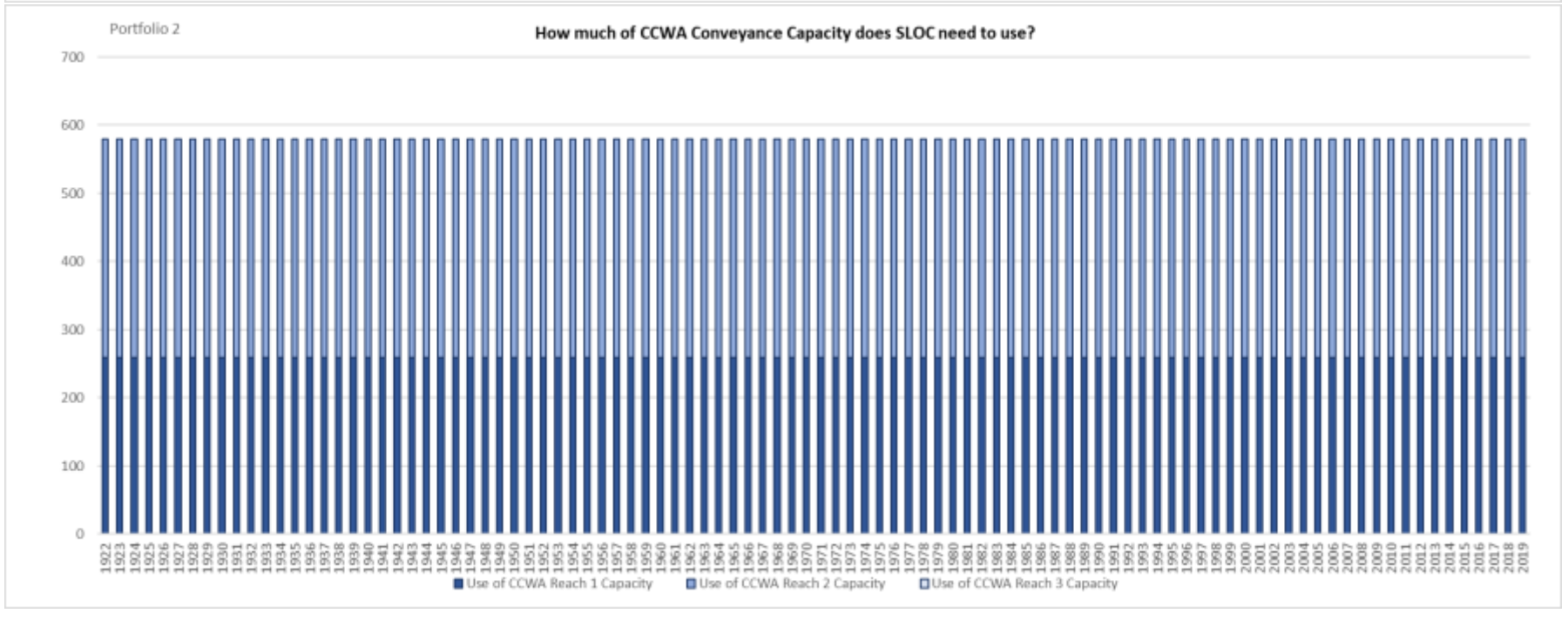
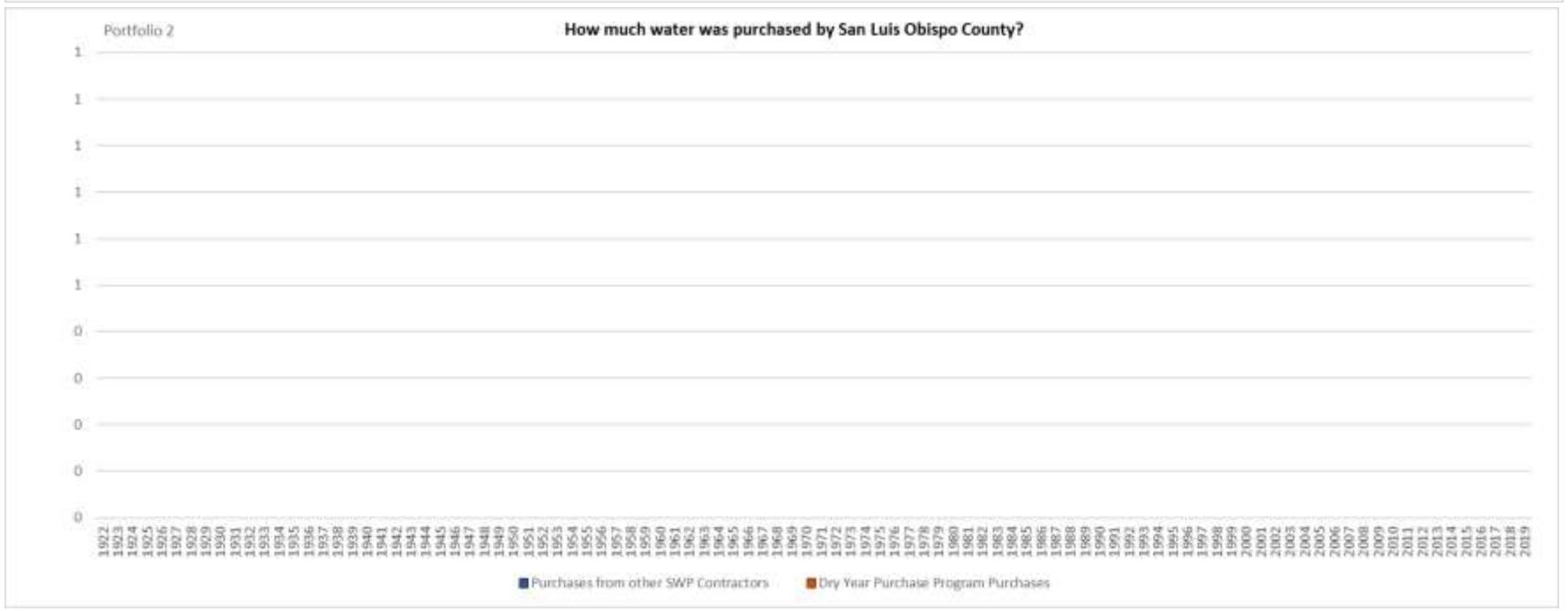
0
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Shandon
Chorro Valley
Lopez Pipeline


Portfolio 2
How much of CCWA Conveyance Capacity does SLOC need to use?
700
600
500
400
300
200
100
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Use of CCWA Reach 1 Capacity
Use of CCWA Reach 2 Capacity
Use of CCWA Reach 3 Capacity


Portfolio 2
How much of CCWA Conveyance Capacity does SLOC need to use?
700
600
500
400
300
200
100
0
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Use of CCWA Reach 1 Capacity
Use of CCWA Reach 2 Capacity
Use of CCWA Reach 3 Capacity


Portfolio 2
How much water was purchased by San Luis Obispo County?
1
1
1
1
1
1
0
0
0
0
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Purchases from other SWP Contractors
Dry Year Purchase Program Purchases


Portfolio 2
How much water was purchased by San Luis Obispo County?
1
1
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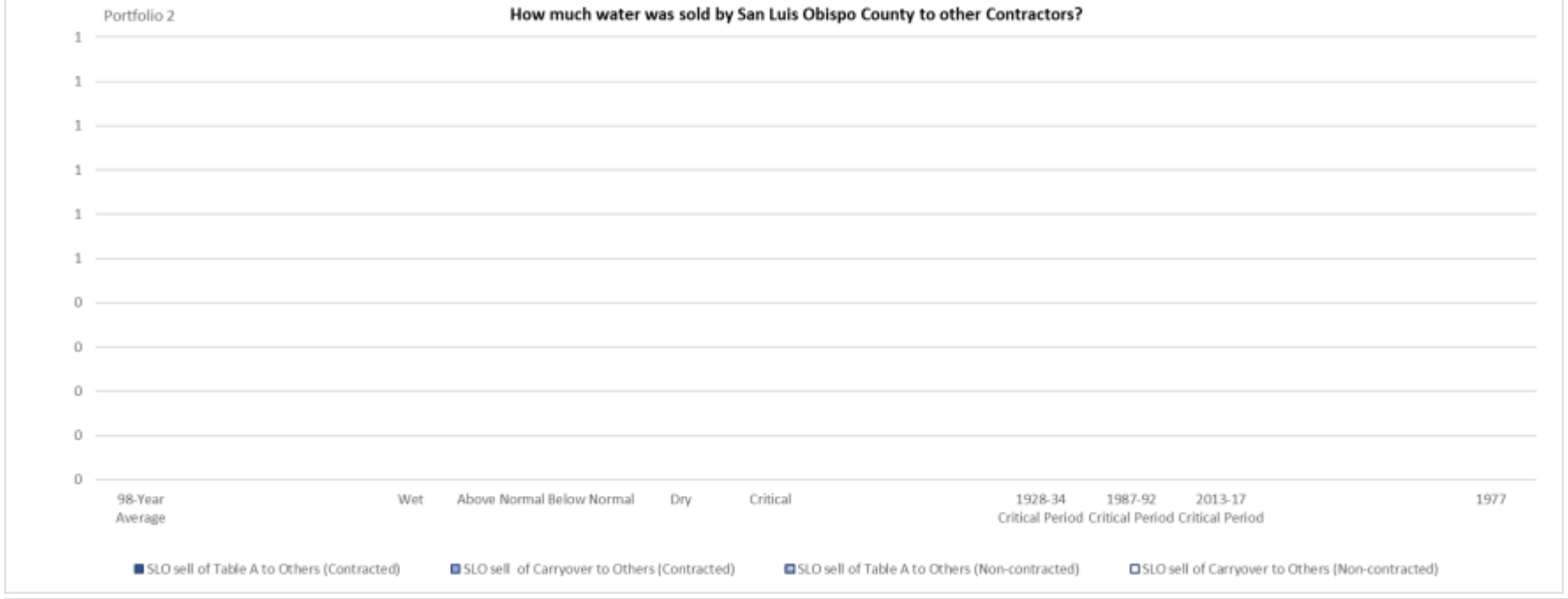
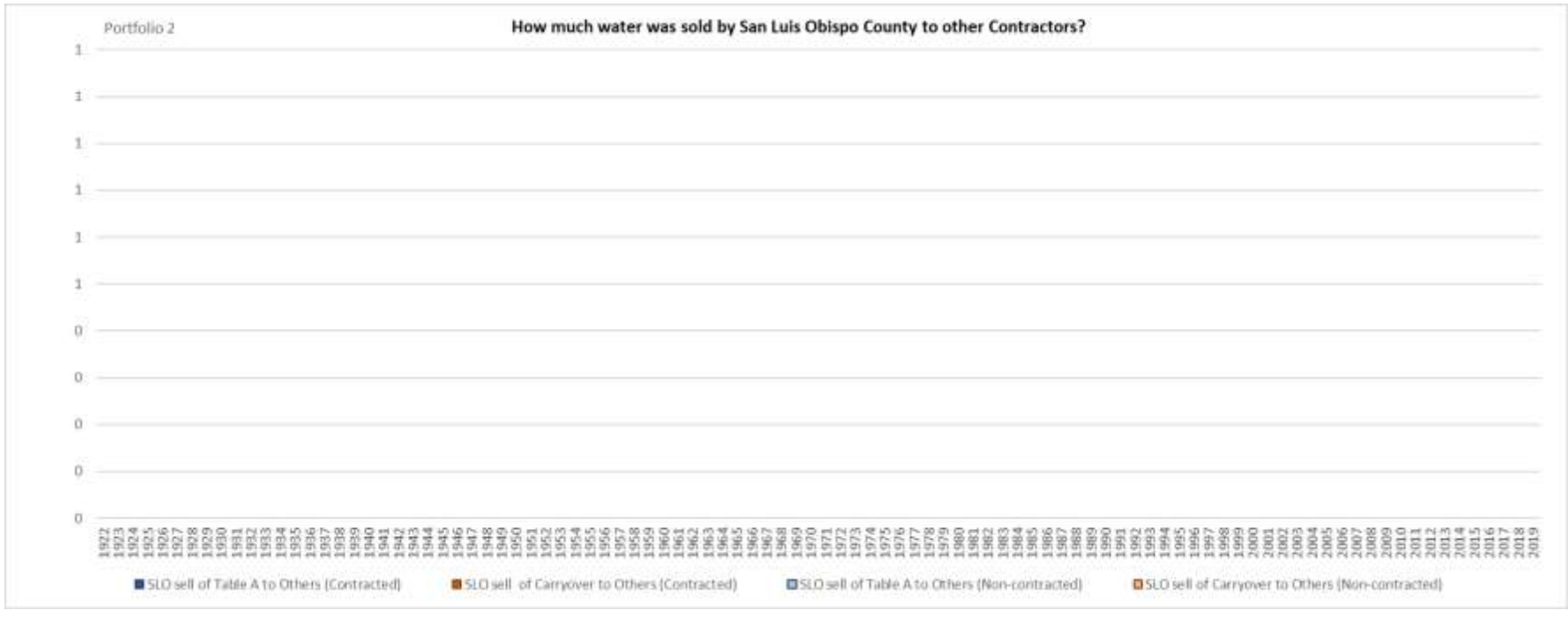
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Purchases from other SWP Contractors
Dry Year Purchase Program Purchases


Portfolio 2
How much water was sold by San Luis Obispo County to other Contractors?
1
1
1
1
1
1
0
0
0
0
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
SLO sell of Table A to Others (Contracted)
SLO sell of Carryover to Others (Contracted)
SLO sell of Table A to Others (Non-contracted)
SLO sell of Carryover to Others (Non-contracted)


Portfolio 2
How much water was sold by San Luis Obispo County to other Contractors?
1
1
1
1
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0
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1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
SLO sell of Table A to Others (Contracted)
SLO sell of Carryover to Others (Contracted)
SLO sell of Table A to Others (Non-contracted)
SLO sell of Carryover to Others (Non-contracted)

Portfolio 3 "Baseline with SLOFCWCD Additional Use"

Portfolio 3 is a slight variation of Portfolio 2 which provides for increased demands within SLOFCWCD 's service area for supplemental groundwater basin supply. Portfolio 3 includes an annual supply of 1,000 acre-feet for the San Luis Obispo Groundwater Basin, which was assumed in the Model as a constant demand in all years.

Summary of Portfolio 3 Analysis

Central Coast Water Authority (CCWA) — Sources of Water Delivered

Time Period	Table A	Carryover Long-Term	Carryover Short-Term	Return from Storage/Exchange Programs External	Return from Storage/Exchange Programs Internal	Transfers from SLOFCWD	Purchases Dry Year Purchase	Purchases SWP Contractors
98-Year Summary								
Total	1,897,045	133,199	-	114,437		-	14,633	-
Average	19,358	1,359	-	1,168		-	149	-
Water Year Averages								
Wet	22,404	-	-	-		-	-	-
Above Normal	22,238	79	-	257		-	-	-
Below Normal	21,630	450	-	1,000		-	-	-
Dry	18,187	2,699	-	1,347		-	365	-
Critically Dry	9,946	4,188	-	4,256		-	416	-
Critical Period Averages								
1928-1934	13,789	1,526	-	1,729		-	514	-
1987-1992	10,705	2,324	-	5,000		-	520	-
2013-2017	18,248	2,983	-	4,778		-	432	-
1977	2,729	6,618	-	7,500		-	480	-

CCWA — Fate of Annual Table A Allocation

Time Period	Direct Delivery	Storage in San Luis Reservoir Long-Term	Storage in San Luis Reservoir Short-Term	Transfers Sells to SLOFCWD	Transfers Sells to Others
98-Year Summary					
Total	1,897,045	680,488	9,259	-	-
Average	19,358	6,944	94	-	-
Water Year Averages					
Wet	22,404	14,859	309	-	-
Above Normal	22,238	8,757	-	-	-
Below Normal	21,630	3,814	-	-	-
Dry	18,187	2,222	-	-	-
Critically Dry	9,946	-	-	-	-
Critical Period Averages					
1928-1934	13,789	1,351	-	-	-
1987-1992	10,705	136	-	-	-
2013-2017	18,248	401	-	-	-
1977	2,729	-	-	-	-

CCWA — What Happens to water stored in San Luis Reservoir

Time Period	Carryover Delivered Long-Term	Carryover Delivered Short-Term	Carryover Spilled Long-Term	Carryover Spilled Short-Term	Carryover Sold to Others
98-Year Summary					
Total	133,199	-	417,635	9,259	-
Average	1,359	-	4,262	94	-
Water Year Averages					
Wet	-	-	10,327	212	-
Above Normal	79	-	2,238	-	-
Below Normal	450	-	4,781	182	-
Dry	2,699	-	-	-	-
Critically Dry	4,188	-	-	-	-
Critical Period Averages					
1928-1934	1,526	-	-	-	-
1987-1992	2,324	-	-	-	-
2013-2017	2,983	-	-	-	-
1977	6,618	-	-	-	-

CCWA — How much water is delivered to each turnout

Time Period	North County	Mid County	Lake Cachuma
98-Year Summary			
Total	1,320,040	648,942	190,332
Average	13,470	6,622	1,942
Water Year Averages			
Wet	14,641	6,831	932
Above Normal	14,641	6,804	1,130
Below Normal	13,417	6,684	2,979
Dry	13,049	6,578	2,972
Critically Dry	10,736	6,036	2,035
Critical Period Averages			
1928-1934	11,032	6,526	-
1987-1992	12,073	6,476	-
2013-2017	6,255	4,673	15,513
1977	11,179	6,148	-

CCWA — Delivery Shortages

Time Period	North County	Mid-County		Lake Cachuma
98-Year Summary				
Total	114,778	20,496		-
Average	1,171	209		-
Water Year Averages				
Wet	-	-		-
Above Normal	-	27		-
Below Normal	1,224	147		-
Dry	1,592	253		-
Critically Dry	3,905	795		-
Critical Period Averages				
1928-1934	3,609	305		-
1987-1992	2,569	355		-
2013-2017	8,386	2,158		-
1977	3,462	683		-

CCWA — Water Purchases

Time Period	Transfers from SLOFCWD Table A and Long-term Carryover	Transfers from SLOFCWD Short-term Carryover	Other Transfers Dry Year Purchase	Other Transfers SWP Contractors
98-Year Summary				
Total	-	-	14,633	-
Average	-	-	149	-
Water Year Averages				
Wet	-	-	-	-
Above Normal	-	-	-	-
Below Normal	-	-	-	-
Dry	-	-	365	-
Critically Dry	-	-	416	-
Critical Period Averages				
1928-1934	-	-	514	-
1987-1992	-	-	520	-
2013-2017	-	-	432	-
1977	-	-	480	-

CCWA — Sells to Others

Time Period	SLOFCWD	SWP Contractors
98-Year Summary		
Total	-	-
Average	-	-
Water Year Averages		
Wet	-	-
Above Normal	-	-
Below Normal	-	-
Dry	-	-
Critically Dry	-	-
Critical Period Averages		
1928-1934	-	-
1987-1992	-	-
2013-2017	-	-
1977	-	-

San Luis Obispo County Flood Control and Water Conservation District (SLOFCWD) — Sources of Water Delivered

Time Period	Table A	Carryover Long-Term	Carryover Short-Term	Return from Storage/Exchange Programs External	Return from Storage/Exchange Programs Internal	Transfers from CCWA	Purchases Dry Year Purchase	Purchases SWP Contractors
98-Year Summary								
Total	539,946	15,047	56,444	3,121		-	-	-
Average	5,510	154	576	32		-	-	-
Water Year Averages								
Wet	6,260	11	-	-		-	-	-
Above Normal	6,180	-	-	91		-	-	-
Below Normal	5,704	355	211	-		-	-	-
Dry	5,213	162	895	-		-	-	-
Critically Dry	3,630	353	2,165	124		-	-	-
Critical Period Averages								
1928-1934	4,589	-	1,682	-		-	-	-
1987-1992	4,557	141	1,486	88		-	-	-
2013-2017	4,615	547	1,109	-		-	-	-
1977	632	1,143	3,169	1,327		-	-	-

SLOFCWD — Fate of Annual Table A Allocation

Time Period	Direct Delivery	Storage in San Luis Reservoir Long-Term	Storage in San Luis Reservoir Short-Term	Transfers Sells to CCWA	Transfers Sells to Others
98-Year Summary					
Total	520,357	279,046	622,347	-	-
Average	5,310	2,847	6,350	-	-
Water Year Averages					
Wet	6,260	-	9,187	-	-
Above Normal	-	-	-	-	-
Below Normal	-	-	-	-	-
Dry	4,734	-	4,911	-	-
Critically Dry	3,060	-	1,988	-	-
Critical Period Averages					
1928-1934	4,132	1,047	3,142	-	-
1987-1992	3,489	607	1,862	-	-
2013-2017	4,239	2,211	3,800	-	-
1977	-	-	-	-	-

SLOFCWD — What Happens to water stored in San Luis Reservoir

Time Period	Carryover Delivered Long-Term	Carryover Delivered Short-Term	Carryover Spilled Long-Term	Carryover Spilled Short-Term	Carryover Sold to Others
98-Year Summary					
Total	34,636	56,444	228,353	555,056	-
Average	353	576	2,330	5,664	-
Water Year Averages					
Wet	11	-	4,437	8,885	-
Above Normal	-	-	-	-	-
Below Normal	-	-	-	-	-
Dry	642	895	1,306	3,935	-
Critically Dry	923	2,165	90	1,278	-
Critical Period Averages					
1928-1934	457	1,682	500	2,633	-
1987-1992	1,209	1,486	240	1,249	-
2013-2017	923	1,109	1,314	2,590	-
1977	-	-	-	-	-

SLOFCWD — How much water is delivered to each turnout

Time Period	Shandon	Chorro Valley	Lopez Pipeline
98-Year Summary			
Total	6,566	246,764	361,228
Average	67	2,518	3,686
Water Year Averages			
Wet	67	2,518	3,686
Above Normal	-	-	-
Below Normal	-	-	-
Dry	67	2,518	3,686
Critically Dry	67	2,518	3,686
Critical Period Averages			
1928-1934	67	2,518	3,686
1987-1992	67	2,518	3,686
2013-2017	67	2,518	3,686
1977	-	-	-

SLOFCWD — Delivery Shortages

Time Period	Shandon	Chorro Valley	Lopez Pipeline
98-Year Summary			
Total	-	-	-
Average	-	-	-
Water Year Averages			
Wet	-	-	-
Above Normal	-	-	-
Below Normal	-	-	-
Dry	-	-	-
Critically Dry	-	-	-
Critical Period Averages			
1928-1934	-	-	-
1987-1992	-	-	-
2013-2017	-	-	-
1977	-	-	-

SLOFCWD — Water Purchases

Time Period	Dry Year Purchase	SWP Contractors
98-Year Summary		
Total	-	-
Average	-	-
Water Year Averages		
Wet	-	-
Above Normal	-	-
Below Normal	-	-
Dry	-	-
Critically Dry	-	-
Critical Period Averages		
1928-1934	-	-
1987-1992	-	-
2013-2017	-	-
1977	-	-

SLOFCWD — Sells to Others

Time Period	CCWA	SWP Contractors
98-Year Summary		
Total	-	-
Average	-	-
Water Year Averages		
Wet	-	-
Above Normal	-	-
Below Normal	-	-
Dry	-	-
Critically Dry	-	-
Critical Period Averages		
1928-1934	-	-
1987-1992	-	-
2013-2017	-	-
1977	-	-

Periods	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
1922	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1923	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1924	6,368	11,756	-	2,868	20,992	-	-	480	-	480	3,102	-	3,169	-	6,271	-	-	-
1925	11,826	-	-	-	11,826	-	-	1,199	-	1,199	5,873	-	398	-	6,271	-	-	-
1926	18,194	-	-	-	18,194	-	-	1,199	-	1,199	5,364	-	907	-	6,271	-	-	-
1927	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1928	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1929	14,101	6,569	-	322	20,992	-	-	480	-	480	5,474	-	797	-	6,271	-	-	-
1930	6,368	1,678	-	3,622	11,668	-	-	1,199	-	1,199	3,500	-	2,771	-	6,271	-	-	-
1931	17,740	2,436	-	816	20,992	-	-	480	-	480	6,271	-	-	-	6,271	-	-	-
1932	11,372	-	-	2,232	13,604	-	-	480	-	480	3,102	-	3,169	-	6,271	-	-	-
1933	18,194	-	-	-	18,194	-	-	480	-	480	4,403	-	1,868	-	6,271	-	-	-
1934	7,278	-	-	5,109	12,387	-	-	480	-	480	3,102	-	3,169	-	6,271	-	-	-
1935	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1936	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1937	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1938	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1939	17,285	4,187	-	-	21,472	-	-	-	-	-	4,004	875	1,392	-	6,271	-	-	-
1940	21,472	-	-	-	21,472	-	-	-	-	-	6,006	-	-	265	6,271	-	-	-
1941	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1942	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1943	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1944	16,830	4,642	-	-	21,472	-	-	-	-	-	4,996	1,275	-	-	6,271	-	-	-
1945	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1946	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1947	25,472	8,655	-	2,777	36,904	-	-	-	-	-	5,901	51	319	-	6,271	-	-	-
1948	21,833	-	-	7,500	29,333	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1949	15,920	1,821	-	7,500	25,241	-	-	1,199	-	1,199	3,688	-	2,583	-	6,271	-	-	-
1950	22,743	-	-	7,500	30,243	-	-	1,199	-	1,199	5,268	422	581	-	6,271	-	-	-
1951	33,660	-	-	3,244	36,904	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1952	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-

Periods	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
1953	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1954	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1955	18,194	3,278	-	-	21,472	-	-	-	-	-	4,839	575	857	-	6,271	-	-	-
1956	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1957	21,472	-	-	-	21,472	-	-	-	-	-	5,268	-	-	1,003	6,271	-	-	-
1958	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1959	20,469	1,003	-	-	21,472	-	-	-	-	-	5,480	791	-	-	6,271	-	-	-
1960	21,472	-	-	-	21,472	-	-	-	-	-	5,268	-	1,003	-	6,271	-	-	-
1961	14,556	4,826	-	2,090	21,472	-	-	-	-	-	3,372	-	2,899	-	6,271	-	-	-
1962	21,472	-	-	-	21,472	-	-	-	-	-	5,374	435	462	-	6,271	-	-	-
1963	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1964	21,472	486	-	-	21,958	-	-	-	-	-	6,217	54	-	-	6,271	-	-	-
1965	21,472	-	-	-	21,472	-	-	-	-	-	5,936	335	-	-	6,271	-	-	-
1966	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1967	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1968	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1969	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1970	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1971	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1972	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1973	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1974	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1975	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1976	21,472	5,476	-	-	26,948	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1977	2,729	6,618	-	7,500	16,847	-	-	480	-	480	632	1,143	3,169	1,327	6,271	-	-	-
1978	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1979	21,472	5,569	-	-	27,041	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1980	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1981	18,194	4,472	-	-	22,666	-	-	-	-	-	4,215	1,186	870	-	6,271	-	-	-
1982	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-

	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
Periods	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
1983	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1984	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1985	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1986	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1987	12,736	6,338	-	-	19,074	-	-	1,199	-	1,199	5,880	172	219	-	6,271	-	-	-
1988	5,003	6,787	-	7,500	19,290	-	-	480	-	480	2,557	676	3,038	-	6,271	-	-	-
1989	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1990	5,913	816	-	7,500	14,229	-	-	480	-	480	3,102	-	3,169	-	6,271	-	-	-
1991	11,372	-	-	7,500	18,872	-	-	480	-	480	5,805	-	466	-	6,271	-	-	-
1992	7,733	-	-	7,500	15,233	-	-	480	-	480	3,724	-	2,021	526	6,271	-	-	-
1993	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1994	14,101	7,371	-	-	21,472	-	-	-	-	-	3,266	737	2,268	-	6,271	-	-	-
1995	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1996	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1997	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1998	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1999	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2000	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2001	11,826	9,646	-	-	21,472	-	-	-	-	-	3,102	-	3,169	-	6,271	-	-	-
2002	19,559	1,913	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2003	20,014	1,104	-	354	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2004	20,469	-	-	1,003	21,472	-	-	-	-	-	4,742	-	1,529	-	6,271	-	-	-
2005	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2006	21,606	-	-	-	21,606	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2007	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2008	15,920	5,552	-	-	21,472	-	-	-	-	-	3,688	-	2,583	-	6,271	-	-	-
2009	18,194	3,278	-	-	21,472	-	-	-	-	-	4,215	-	2,056	-	6,271	-	-	-
2010	21,472	-	-	-	21,472	-	-	-	-	-	5,271	1,000	-	-	6,271	-	-	-
2011	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2012	29,566	-	-	6,110	35,676	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-

Periods	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
2013	15,920	-	-	7,500	23,420	-	-	1,199	-	1,199	4,315	-	1,956	-	6,271	-	-	-
2014	2,274	11,698	-	7,500	21,472	-	-	480	-	480	1,917	1,185	3,169	-	6,271	-	-	-
2015	9,097	3,219	-	7,500	19,816	-	-	480	-	480	4,301	1,552	418	-	6,271	-	-	-
2016	27,292	-	-	1,390	28,682	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2017	36,658	-	-	-	36,658	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2018	15,920	2,005	-	-	17,925	-	-	-	-	-	3,688	2,583	-	-	6,271	-	-	-
2019	34,114	-	-	-	34,114	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sum	1,897,045	133,199	-	114,437	2,144,681	-	-	14,633	-	14,633	539,946	15,047	56,444	3,121	614,558	-	-	-
Average	19,358	1,359	-	1,168	21,885	-	-	149	-	149	5,510	154	576	32	6,271	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Year Averages	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wet	22,404	-	-	-	22,404	-	-	-	-	-	6,260	11	-	-	6,271	-	-	-
Above Normal	22,238	79	-	257	22,574	-	-	-	-	-	6,180	-	-	91	6,271	-	-	-
Below Normal	21,630	450	-	1,000	23,080	-	-	-	-	-	5,704	355	211	-	6,271	-	-	-
Dry	18,187	2,699	-	1,347	22,234	-	-	365	-	365	5,213	162	895	-	6,271	-	-	-
Critically Dry	9,946	4,188	-	4,256	18,391	-	-	416	-	416	3,630	353	2,165	124	6,271	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Period Averages	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928-34	13,789	1,526	-	1,729	17,044	-	-	514	-	514	4,589	-	1,682	-	6,271	-	-	-
1987-92	10,705	2,324	-	5,000	18,028	-	-	520	-	520	4,557	141	1,486	88	6,271	-	-	-
2013-17	18,248	2,983	-	4,778	26,010	-	-	432	-	432	4,615	547	1,109	-	6,271	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Driest 1-Year	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1977	2,729	6,618	-	7,500	16,847	-	-	480	-	480	632	1,143	3,169	1,327	6,271	-	-	-

	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
Periods	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
1922	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1923	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1924	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1925	13,025	-	5,595	676	67	67	13,025	-	5,466	738	2,518	2,518	13,025	-	3,686	-	3,686	3,686
1926	19,393	-	5,595	676	67	67	19,393	-	5,466	738	2,518	2,518	19,393	-	3,686	-	3,686	3,686
1927	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1928	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1929	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1930	12,867	-	5,595	676	67	67	12,867	-	5,466	738	2,518	2,518	12,867	-	3,686	-	3,686	3,686
1931	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1932	14,084	-	5,595	676	67	67	14,084	-	5,466	738	2,518	2,518	14,084	-	3,686	-	3,686	3,686
1933	18,674	-	5,595	676	67	67	18,674	-	5,466	738	2,518	2,518	18,674	-	3,686	-	3,686	3,686
1934	12,867	-	5,595	676	67	67	12,867	-	5,466	738	2,518	2,518	12,867	-	3,686	-	3,686	3,686
1935	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1936	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1937	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1938	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1939	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1940	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1941	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1942	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1943	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1944	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1945	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1946	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1947	36,904	-	5,595	676	67	67	36,904	-	5,466	738	2,518	2,518	36,658	246	3,686	-	3,686	3,686
1948	29,333	-	5,595	676	67	67	29,333	-	5,466	738	2,518	2,518	29,333	-	3,686	-	3,686	3,686
1949	26,440	-	5,595	676	67	67	26,440	-	5,466	738	2,518	2,518	26,440	-	3,686	-	3,686	3,686
1950	31,442	-	5,595	676	67	67	31,442	-	5,466	738	2,518	2,518	31,442	-	3,686	-	3,686	3,686
1951	36,904	-	5,595	676	67	67	36,904	-	5,466	738	2,518	2,518	36,658	246	3,686	-	3,686	3,686
1952	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686

	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
Periods	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
1953	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1954	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1955	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1956	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1957	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1958	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1959	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1960	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1961	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1962	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1963	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1964	21,958	-	5,595	676	67	67	21,958	-	5,466	738	2,518	2,518	21,958	-	3,686	-	3,686	3,686
1965	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1966	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1967	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1968	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1969	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1970	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1971	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1972	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1973	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1974	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1975	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1976	26,948	-	5,595	676	67	67	26,948	-	5,466	738	2,518	2,518	26,948	-	3,686	-	3,686	3,686
1977	17,327	-	5,595	676	67	67	17,327	-	5,466	738	2,518	2,518	17,327	-	3,686	-	3,686	3,686
1978	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1979	27,041	-	5,595	676	67	67	27,041	-	5,466	738	2,518	2,518	27,041	-	3,686	-	3,686	3,686
1980	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1981	22,666	-	5,595	676	67	67	22,666	-	5,466	738	2,518	2,518	22,666	-	3,686	-	3,686	3,686
1982	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686

	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
Periods	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
1983	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1984	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1985	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1986	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1987	20,273	-	5,595	676	67	67	20,273	-	5,466	738	2,518	2,518	20,273	-	3,686	-	3,686	3,686
1988	19,770	-	5,595	676	67	67	19,770	-	5,466	738	2,518	2,518	19,770	-	3,686	-	3,686	3,686
1989	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1990	14,709	-	5,595	676	67	67	14,709	-	5,466	738	2,518	2,518	14,709	-	3,686	-	3,686	3,686
1991	19,352	-	5,595	676	67	67	19,352	-	5,466	738	2,518	2,518	19,352	-	3,686	-	3,686	3,686
1992	15,713	-	5,595	676	67	67	15,713	-	5,466	738	2,518	2,518	15,713	-	3,686	-	3,686	3,686
1993	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1994	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1995	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1996	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1997	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1998	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1999	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2000	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2001	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2002	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2003	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2004	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2005	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2006	21,606	-	5,595	676	67	67	21,606	-	5,466	738	2,518	2,518	21,606	-	3,686	-	3,686	3,686
2007	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2008	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2009	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2010	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2011	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2012	35,676	-	5,595	676	67	67	35,676	-	5,466	738	2,518	2,518	35,676	-	3,686	-	3,686	3,686

Periods	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
2013	24,619	-	5,595	676	67	67	24,619	-	5,466	738	2,518	2,518	24,619	-	3,686	-	3,686	3,686
2014	21,952	-	5,595	676	67	67	21,952	-	5,466	738	2,518	2,518	21,952	-	3,686	-	3,686	3,686
2015	20,296	-	5,595	676	67	67	20,296	-	5,466	738	2,518	2,518	20,296	-	3,686	-	3,686	3,686
2016	28,682	-	5,595	676	67	67	28,682	-	5,466	738	2,518	2,518	28,682	-	3,686	-	3,686	3,686
2017	36,658	-	5,595	676	67	67	36,658	-	5,466	738	2,518	2,518	36,658	-	3,686	-	3,686	3,686
2018	17,925	-	5,595	676	67	67	17,925	-	5,466	738	2,518	2,518	17,925	-	3,686	-	3,686	3,686
2019	34,114	-	5,595	676	67	67	34,114	-	5,466	738	2,518	2,518	34,114	-	3,686	-	3,686	3,686
Sum	2,159,314	-	548,310	66,248	6,566	6,566	2,159,314	-	535,668	72,324	246,764	246,764	2,158,822	492	361,228	-	361,228	361,228
Average	22,034	-	5,595	676	67	67	22,034	-	5,466	738	2,518	2,518	22,029	5	3,686	-	3,686	3,686
Water Year Averages																		
Wet	22,404	-	5,595	676	67	67	22,404	-	5,466	738	2,518	2,518	22,404	-	3,686	-	3,686	3,686
Above Normal	22,574	-	5,595	676	67	67	22,574	-	5,466	738	2,518	2,518	22,557	18	3,686	-	3,686	3,686
Below Normal	23,080	-	5,595	676	67	67	23,080	-	5,466	738	2,518	2,518	23,080	-	3,686	-	3,686	3,686
Dry	22,599	-	5,595	676	67	67	22,599	-	5,466	738	2,518	2,518	22,588	11	3,686	-	3,686	3,686
Critically Dry	18,807	-	5,595	676	67	67	18,807	-	5,466	738	2,518	2,518	18,807	-	3,686	-	3,686	3,686
													-	-				
Critical Period Averages													-	-				
1928-34	17,558	-	5,595	676	67	67	17,558	-	5,466	738	2,518	2,518	17,558	-	3,686	-	3,686	3,686
1987-92	18,548	-	5,595	676	67	67	18,548	-	5,466	738	2,518	2,518	18,548	-	3,686	-	3,686	3,686
2013-17	26,441	-	5,595	676	67	67	26,441	-	5,466	738	2,518	2,518	26,441	-	3,686	-	3,686	3,686
Driest 1-Year																		
1977	17,327	-	5,595	676	67	67	17,327	-	5,466	738	2,518	2,518	17,327	-	3,686	-	3,686	3,686

	Reach 4 Operations			Reach 5 Operations			Lake Cachuma Operations						
	CCWA			CCWA									
Periods	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
1922	21,472	14,641	14,641	6,831	6,831	6,831	-	192,009	11,277	196,000	14,000	30,000	30,000
1923	21,472	14,641	14,641	6,831	6,831	6,831	-	54,915	13,060	193,855	14,000	30,000	30,000
1924	21,472	14,641	14,641	6,831	6,831	6,831	-	-	11,956	137,899	14,000	30,000	30,000
1925	13,025	6,877	14,641	6,148	6,148	6,831	-	19,917	10,241	103,575	14,000	30,000	30,000
1926	19,393	12,945	14,641	6,448	6,448	6,831	-	88,712	10,244	138,043	14,000	30,000	30,000
1927	21,472	14,641	14,641	6,831	6,831	6,831	-	96,630	11,677	178,996	14,000	30,000	30,000
1928	21,472	14,641	14,641	6,831	6,831	6,831	-	38,724	12,124	161,596	14,000	30,000	30,000
1929	21,472	14,641	14,641	6,831	6,831	6,831	-	35,543	11,416	141,723	14,000	30,000	30,000
1930	12,867	6,719	14,641	6,148	6,148	6,831	-	24,442	10,468	111,697	14,000	30,000	30,000
1931	21,472	14,641	14,641	6,831	6,831	6,831	-	19,422	9,255	77,864	14,000	30,000	30,000
1932	14,084	7,636	14,641	6,448	6,448	6,831	-	132,123	10,095	155,892	14,000	30,000	30,000
1933	18,674	12,226	14,641	6,448	6,448	6,831	-	12,988	10,783	114,097	14,000	30,000	30,000
1934	12,867	6,719	14,641	6,148	6,148	6,831	-	36,250	9,658	96,689	14,000	30,000	30,000
1935	21,472	14,641	14,641	6,831	6,831	6,831	-	106,812	10,325	149,176	14,000	30,000	30,000
1936	21,472	14,641	14,641	6,831	6,831	6,831	-	49,754	11,219	143,711	14,000	30,000	30,000
1937	21,472	14,641	14,641	6,831	6,831	6,831	-	152,344	12,108	196,000	14,000	30,000	30,000
1938	21,472	14,641	14,641	6,831	6,831	6,831	-	186,211	13,101	196,000	14,000	30,000	30,000
1939	21,472	14,641	14,641	6,831	6,831	6,831	-	41,411	12,808	180,603	14,000	30,000	30,000
1940	21,472	14,641	14,641	6,831	6,831	6,831	-	29,816	12,018	154,401	14,000	30,000	30,000
1941	21,472	14,641	14,641	6,831	6,831	6,831	-	368,484	12,311	196,000	14,000	30,000	30,000
1942	21,472	14,641	14,641	6,831	6,831	6,831	-	30,806	12,611	170,195	14,000	30,000	30,000
1943	21,472	14,641	14,641	6,831	6,831	6,831	-	161,889	12,611	196,000	14,000	30,000	30,000
1944	21,472	14,641	14,641	6,831	6,831	6,831	-	104,761	13,101	196,000	14,000	30,000	30,000
1945	21,472	14,641	14,641	6,831	6,831	6,831	-	45,795	12,890	184,905	14,000	30,000	30,000
1946	21,472	14,641	14,641	6,831	6,831	6,831	-	75,561	12,890	196,000	14,000	30,000	30,000
1947	36,904	14,641	14,641	22,263	6,448	6,831	15,815	10,655	12,530	165,940	14,000	30,000	30,000
1948	29,333	7,370	14,641	21,963	6,148	6,831	15,815	-	11,210	126,545	14,000	30,000	30,000
1949	26,440	9,911	14,641	16,529	6,148	6,831	10,381	3,514	9,705	86,735	14,000	30,000	30,000
1950	31,442	11,781	14,641	19,661	6,148	6,831	13,513	13,837	8,471	61,614	14,000	30,000	30,000
1951	36,904	14,641	14,641	22,263	6,448	6,831	15,815	-	7,320	26,109	14,000	30,000	30,000
1952	21,472	14,641	14,641	6,831	6,831	6,831	-	246,309	9,873	196,000	14,000	30,000	30,000

	Reach 4 Operations			Reach 5 Operations			Lake Cachuma Operations						
	CCWA			CCWA									
Periods	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
1953	21,472	14,641	14,641	6,831	6,831	6,831	-	12,635	12,272	152,363	14,000	30,000	30,000
1954	21,472	14,641	14,641	6,831	6,831	6,831	-	42,047	11,193	139,217	14,000	30,000	30,000
1955	21,472	14,641	14,641	6,831	6,831	6,831	-	48,976	10,832	133,361	14,000	30,000	30,000
1956	21,472	14,641	14,641	6,831	6,831	6,831	-	65,238	10,917	143,682	14,000	30,000	30,000
1957	21,472	14,641	14,641	6,831	6,831	6,831	-	30,099	10,647	119,134	14,000	30,000	30,000
1958	21,472	14,641	14,641	6,831	6,831	6,831	-	265,046	11,641	196,000	14,000	30,000	30,000
1959	21,472	14,641	14,641	6,831	6,831	6,831	-	21,331	12,434	160,897	14,000	30,000	30,000
1960	21,472	14,641	14,641	6,831	6,831	6,831	-	3,797	10,798	109,896	14,000	30,000	30,000
1961	21,472	14,641	14,641	6,831	6,831	6,831	-	-	8,825	57,071	14,000	30,000	30,000
1962	21,472	14,641	14,641	6,831	6,831	6,831	-	152,344	9,696	155,719	14,000	30,000	30,000
1963	21,472	14,641	14,641	6,831	6,831	6,831	-	27,977	11,056	128,640	14,000	30,000	30,000
1964	21,958	14,641	14,641	7,317	6,831	6,831	486	11,857	9,755	87,228	14,000	30,000	30,000
1965	21,472	14,641	14,641	6,831	6,831	6,831	-	57,744	9,057	91,915	14,000	30,000	30,000
1966	21,472	14,641	14,641	6,831	6,831	6,831	-	106,812	10,148	144,579	14,000	30,000	30,000
1967	21,472	14,641	14,641	6,831	6,831	6,831	-	173,909	12,125	196,000	14,000	30,000	30,000
1968	21,472	14,641	14,641	6,831	6,831	6,831	-	3,231	12,097	143,134	14,000	30,000	30,000
1969	21,472	14,641	14,641	6,831	6,831	6,831	-	309,518	12,097	196,000	14,000	30,000	30,000
1970	21,472	14,641	14,641	6,831	6,831	6,831	-	19,776	12,405	159,371	14,000	30,000	30,000
1971	21,472	14,641	14,641	6,831	6,831	6,831	-	55,764	11,710	159,425	14,000	30,000	30,000
1972	21,472	14,641	14,641	6,831	6,831	6,831	-	7,261	10,808	111,878	14,000	30,000	30,000
1973	21,472	14,641	14,641	6,831	6,831	6,831	-	167,263	11,503	196,000	14,000	30,000	30,000
1974	21,472	14,641	14,641	6,831	6,831	6,831	-	75,349	13,101	196,000	14,000	30,000	30,000
1975	21,472	14,641	14,641	6,831	6,831	6,831	-	92,176	13,101	196,000	14,000	30,000	30,000
1976	26,948	14,641	14,641	12,307	6,831	6,831	5,476	3,868	12,213	149,131	14,000	30,000	30,000
1977	17,327	11,179	14,641	6,148	6,148	6,831	-	37,805	11,001	131,935	14,000	30,000	30,000
1978	21,472	14,641	14,641	6,831	6,831	6,831	-	308,669	11,890	196,000	14,000	30,000	30,000
1979	27,041	14,641	14,641	12,400	6,831	6,831	5,569	99,953	13,101	196,000	14,000	30,000	30,000
1980	21,472	14,641	14,641	6,831	6,831	6,831	-	152,203	13,101	196,000	14,000	30,000	30,000
1981	22,666	14,641	14,641	8,025	6,831	6,831	1,194	51,875	13,026	192,043	14,000	30,000	30,000
1982	21,472	14,641	14,641	6,831	6,831	6,831	-	58,238	12,976	193,305	14,000	30,000	30,000

Periods	Reach 4 Operations			Reach 5 Operations			Lake Cachuma Operations						
	CCWA			CCWA									
	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
1983	21,472	14,641	14,641	6,831	6,831	6,831	-	356,323	13,051	196,000	14,000	30,000	30,000
1984	21,472	14,641	14,641	6,831	6,831	6,831	-	28,826	12,574	168,252	14,000	30,000	30,000
1985	21,472	14,641	14,641	6,831	6,831	6,831	-	16,877	11,316	129,813	14,000	30,000	30,000
1986	21,472	14,641	14,641	6,831	6,831	6,831	-	112,114	11,659	186,268	14,000	30,000	30,000
1987	20,273	13,442	14,641	6,831	6,831	6,831	-	-	11,673	130,595	14,000	30,000	30,000
1988	19,770	13,322	14,641	6,448	6,448	6,831	-	72,521	10,950	148,166	14,000	30,000	30,000
1989	21,472	14,641	14,641	6,831	6,831	6,831	-	403	10,260	94,309	14,000	30,000	30,000
1990	14,709	8,561	14,641	6,148	6,148	6,831	-	-	8,244	42,065	14,000	30,000	30,000
1991	19,352	12,904	14,641	6,448	6,448	6,831	-	108,933	8,327	98,671	14,000	30,000	30,000
1992	15,713	9,565	14,641	6,148	6,148	6,831	-	167,121	11,252	196,000	14,000	30,000	30,000
1993	21,472	14,641	14,641	6,831	6,831	6,831	-	334,360	13,101	196,000	14,000	30,000	30,000
1994	21,472	14,641	14,641	6,831	6,831	6,831	-	15,575	12,327	155,248	14,000	30,000	30,000
1995	21,472	14,641	14,641	6,831	6,831	6,831	-	366,102	12,327	196,000	14,000	30,000	30,000
1996	21,472	14,641	14,641	6,831	6,831	6,831	-	41,187	12,804	180,383	14,000	30,000	30,000
1997	21,472	14,641	14,641	6,831	6,831	6,831	-	59,768	12,568	183,583	14,000	30,000	30,000
1998	21,472	14,641	14,641	6,831	6,831	6,831	-	465,884	12,865	196,000	14,000	30,000	30,000
1999	21,472	14,641	14,641	6,831	6,831	6,831	-	18,239	12,376	157,863	14,000	30,000	30,000
2000	21,472	14,641	14,641	6,831	6,831	6,831	-	51,869	11,581	154,151	14,000	30,000	30,000
2001	21,472	14,641	14,641	6,831	6,831	6,831	-	151,409	12,306	196,000	14,000	30,000	30,000
2002	21,472	14,641	14,641	6,831	6,831	6,831	-	6,421	12,156	146,265	14,000	30,000	30,000
2003	21,472	14,641	14,641	6,831	6,831	6,831	-	17,144	10,501	108,908	14,000	30,000	30,000
2004	21,472	14,641	14,641	6,831	6,831	6,831	-	18,695	9,137	74,466	14,000	30,000	30,000
2005	21,472	14,641	14,641	6,831	6,831	6,831	-	388,819	10,792	196,000	14,000	30,000	30,000
2006	21,606	14,641	14,641	6,965	6,831	6,831	134	100,283	13,101	196,000	14,000	30,000	30,000
2007	21,472	14,641	14,641	6,831	6,831	6,831	-	4,920	12,128	144,792	14,000	30,000	30,000
2008	21,472	14,641	14,641	6,831	6,831	6,831	-	108,331	12,128	196,000	14,000	30,000	30,000
2009	21,472	14,641	14,641	6,831	6,831	6,831	-	13,188	12,282	152,906	14,000	30,000	30,000
2010	21,472	14,641	14,641	6,831	6,831	6,831	-	75,948	11,845	173,009	14,000	30,000	30,000
2011	21,472	14,641	14,641	6,831	6,831	6,831	-	131,349	12,664	196,000	14,000	30,000	30,000
2012	35,676	13,413	14,641	22,263	6,336	6,831	15,927	6,429	12,453	161,903	14,000	30,000	30,000

	Reach 4 Operations			Reach 5 Operations			Lake Cachuma Operations						
	CCWA			CCWA									
Periods	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
2013	24,619	4,193	14,641	20,426	4,499	6,831	15,927	3,520	11,127	126,223	14,000	30,000	30,000
2014	21,952	3,733	14,641	18,219	3,621	6,831	14,598	3,942	9,780	90,983	14,000	30,000	30,000
2015	20,296	1,991	14,641	18,305	2,378	6,831	15,927	2,264	8,459	56,715	14,000	30,000	30,000
2016	28,682	6,719	14,641	21,963	6,036	6,831	15,927	4,694	7,227	26,109	14,000	30,000	30,000
2017	36,658	14,641	14,641	22,017	6,831	6,831	15,186	87,303	7,612	76,986	14,000	30,000	30,000
2018	17,925	11,477	14,641	6,448	6,448	6,831	-	3,373	7,661	28,698	14,000	30,000	30,000
2019	34,114	14,641	14,641	19,473	6,831	6,831	12,642	104,953	7,990	94,303	14,000	30,000	30,000
Sum	2,159,314	1,320,040	1,434,818	839,274	648,942	669,438	190,332	8,291,482	1,105,486	14,509,417	1,372,000	2,940,000	2,940,000
Average	22,034	13,470	14,641	8,564	6,622	6,831	1,942	84,607	11,280	148,055	14,000	30,000	30,000
Water Year Averages													
Wet	22,404	14,641	14,641	7,763	6,831	6,831	932	142,380	11,861	172,884	14,000	30,000	30,000
Above Normal	22,574	14,641	14,641	7,933	6,804	6,831	1,130	123,800	11,453	158,465	14,000	30,000	30,000
Below Normal	23,080	13,417	14,641	9,663	6,684	6,831	2,979	38,054	11,001	133,739	14,000	30,000	30,000
Dry	22,599	13,049	14,641	9,550	6,578	6,831	2,972	40,225	11,203	135,852	14,000	30,000	30,000
Critically Dry	18,807	10,736	14,641	8,071	6,036	6,831	2,035	50,188	10,375	122,663	14,000	30,000	30,000
Critical Period Averages													
1928-34	17,558	11,032	14,641	6,526	6,526	6,831	-	42,785	10,543	122,794	14,000	30,000	30,000
1987-92	18,548	12,073	14,641	6,476	6,476	6,831	-	58,163	10,118	118,301	14,000	30,000	30,000
2013-17	26,441	6,255	14,641	20,186	4,673	6,831	15,513	20,345	8,841	75,403	14,000	30,000	30,000
Driest 1-Year													
1977	17,327	11,179	14,641	6,148	6,148	6,831	-	37,805	11,001	131,935	14,000	30,000	30,000

	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
Periods	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
1922	2,752	-	-	-	10,124	-	-	-	-	7,616	-	993	1,105	-	144
1923	9,004	-	-	-	9,690	-	-	-	10,124	-	-	-	789	-	103
1924	-	11,756	-	-	398	3,169	-	-	2,451	-	2,868	-	-	-	-
1925	-	-	-	-	3,760	3,531	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	5,785	2,056	-	-	2,262	-	-	-	-	-	-
1927	1,225	-	-	-	10,269	-	-	-	5,519	9,598	-	1,252	1,210	-	158
1928	9,458	-	-	-	9,835	-	-	-	10,914	-	-	-	894	-	117
1929	-	6,569	-	-	4,484	3,005	-	-	5,522	-	322	-	-	-	-
1930	-	1,678	-	-	-	2,771	-	-	3,021	-	3,622	-	-	-	-
1931	-	2,436	-	-	3,479	-	-	-	-	-	816	-	-	-	-
1932	-	-	-	-	3,212	3,233	-	-	-	-	2,232	-	-	-	-
1933	-	-	-	-	5,785	2,056	-	-	1,301	-	-	-	-	-	-
1934	-	-	-	-	1,638	3,909	-	-	1,170	-	5,109	-	-	-	-
1935	5,372	-	-	-	11,715	-	-	-	2,390	10,000	-	1,304	2,264	-	295
1936	-	-	-	5,193	6,979	-	-	-	11,770	2,636	-	344	-	-	-
1937	1,733	-	-	-	10,558	-	-	-	6,922	10,000	-	1,304	1,421	-	185
1938	18,930	-	-	1,912	16,308	-	-	-	10,615	5,084	-	605	2,421	-	302
1939	-	4,187	-	10,557	5,496	2,267	-	-	11,740	-	-	-	-	-	-
1940	1,732	-	-	-	8,244	-	-	-	4,541	2,723	-	355	-	265	-
1941	20,830	-	-	5,918	16,979	-	-	-	11,500	-	-	-	-	-	-
1942	13,097	-	-	16,456	12,729	-	-	-	14,575	-	-	-	-	-	-
1943	17,021	-	-	17,471	14,514	-	-	-	15,133	1,990	-	-	1,465	-	-
1944	-	4,642	-	-	5,351	2,372	-	-	7,839	-	-	-	-	-	-
1945	9,913	-	-	11,742	10,979	-	-	-	9,305	-	-	-	-	-	-
1946	5,820	-	-	5,894	8,729	-	-	-	10,906	-	-	-	-	-	-
1947	-	8,655	-	-	8,099	370	-	-	7,780	-	2,777	-	-	-	-
1948	-	-	-	-	5,729	-	-	-	8,678	-	7,500	-	-	-	-
1949	-	1,821	-	-	5,062	2,583	-	-	2,407	-	7,500	-	-	-	-
1950	-	-	-	-	7,232	1,003	-	-	3,992	-	7,500	-	-	-	-
1951	-	-	-	-	12,229	-	-	-	8,460	-	3,244	-	-	-	-
1952	16,700	-	-	-	16,979	-	-	-	12,229	4,130	-	539	-	-	-

	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
Periods	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
1953	-	-	-	14,216	8,729	-	-	-	16,912	5,820	-	759	-	-	-
1954	794	-	-	-	9,979	-	-	-	8,678	7,300	-	952	-	-	-
1955	-	3,278	-	-	5,785	2,056	-	-	7,754	-	-	-	-	-	-
1956	8,556	-	-	-	15,729	-	-	-	6,072	10,000	-	1,304	-	-	-
1957	-	-	-	-	7,232	-	-	-	10,261	1,271	-	166	-	1,003	-
1958	24,014	-	-	8,556	18,433	-	-	-	12,700	-	-	-	296	-	-
1959	-	1,003	-	19,456	5,770	791	-	-	16,818	-	-	-	-	-	-
1960	1,271	-	-	-	7,232	1,003	-	-	3,637	-	-	-	-	-	-
1961	-	4,826	-	-	4,628	2,899	-	-	3,632	-	2,090	-	-	-	-
1962	1,726	-	-	-	7,376	897	-	-	3,256	-	-	-	-	-	-
1963	2,167	-	-	1,726	9,699	-	-	-	10,506	5,472	-	-	30	-	-
1964	5,365	486	-	-	8,533	54	-	-	8,722	-	-	-	-	-	-
1965	2,181	-	-	7,046	7,064	335	-	-	9,121	-	-	-	-	-	-
1966	8,733	-	-	2,181	11,479	-	-	-	7,064	2,090	-	273	-	-	-
1967	22,195	-	-	8,733	17,729	-	-	-	11,479	-	-	-	-	-	-
1968	6,729	-	-	18,170	9,229	-	-	-	15,517	-	-	-	-	-	-
1969	24,014	-	-	10,754	18,729	-	-	-	11,441	-	-	-	-	-	-
1970	12,188	-	-	23,310	12,229	-	-	-	18,342	-	-	-	-	-	-
1971	816	-	-	12,892	5,979	-	-	-	12,616	-	-	-	-	-	-
1972	7,639	-	-	196	9,729	-	-	-	5,782	-	-	-	-	-	-
1973	10,823	-	-	7,459	11,479	-	-	-	9,487	-	-	-	-	-	-
1974	18,556	-	-	10,288	15,729	-	-	-	11,184	-	-	-	-	-	-
1975	10,823	-	-	19,891	11,479	-	-	-	16,463	-	-	-	-	-	-
1976	1,271	5,476	-	-	6,229	-	-	-	8,569	-	-	-	-	-	-
1977	-	6,618	-	-	868	4,312	-	-	1,252	-	7,500	-	-	1,327	-
1978	7,349	-	-	-	12,272	-	-	-	4,443	8,478	-	978	1,957	-	-
1979	9,458	5,569	-	-	10,729	-	-	-	11,294	-	-	-	-	-	-
1980	18,556	-	-	11,238	15,729	-	-	-	11,611	-	-	-	-	-	-
1981	-	4,472	-	-	5,785	2,056	-	-	7,379	-	-	-	-	-	-
1982	24,014	-	-	14,084	18,729	-	-	-	12,175	-	-	-	-	-	-

Periods	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
1983	24,014	-	-	24,014	18,729	-	-	-	18,729	-	-	-	-	-	-
1984	12,188	-	-	24,014	12,229	-	-	-	18,729	-	-	-	-	-	-
1985	11,278	-	-	11,903	11,729	-	-	-	12,072	-	-	-	-	-	-
1986	12,642	-	-	11,080	12,432	-	-	-	11,886	-	-	-	47	-	-
1987	-	6,338	-	-	4,050	3,321	-	-	5,540	-	-	-	-	-	-
1988	-	6,787	-	-	915	4,436	-	-	-	-	7,500	-	-	-	-
1989	816	-	-	-	5,979	-	-	-	2,352	-	-	-	-	-	-
1990	-	816	-	-	466	3,487	-	-	1,038	-	7,500	-	-	-	-
1991	-	-	-	-	2,878	2,899	-	-	-	-	7,500	-	-	-	-
1992	-	-	-	-	526	2,021	-	-	-	-	7,500	-	-	526	-
1993	7,371	-	-	-	9,979	-	-	-	1,415	723	-	94	-	-	-
1994	-	7,371	-	-	4,484	3,005	-	-	4,730	-	-	-	-	-	-
1995	14,014	-	-	-	18,729	-	-	-	6,888	10,000	-	1,304	-	-	-
1996	7,646	-	-	13,031	15,229	-	-	-	18,765	10,000	-	1,304	-	-	-
1997	3,365	-	-	7,932	12,479	-	-	-	15,386	9,277	-	1,210	-	-	-
1998	24,014	-	-	4,062	18,729	-	-	-	12,863	-	-	-	-	-	-
1999	7,219	-	-	24,014	11,229	-	-	-	18,729	3,149	-	-	-	-	-
2000	12,188	-	-	6,744	11,703	-	-	-	11,229	-	-	-	526	-	-
2001	-	9,646	-	-	3,760	3,531	-	-	4,606	-	-	-	-	-	-
2002	-	1,913	-	-	6,219	1,740	-	-	3,213	-	-	-	-	-	-
2003	-	1,104	-	-	4,729	-	-	-	4,664	-	354	-	-	-	-
2004	-	-	-	-	6,508	1,529	-	-	1,609	-	1,003	-	-	-	-
2005	17,191	-	-	-	14,979	-	-	-	4,881	-	-	-	-	-	-
2006	19,309	-	-	17,191	17,479	-	-	-	21,380	2,297	-	177	-	-	-
2007	5,820	-	-	-	8,729	-	-	-	10,552	-	-	-	-	-	-
2008	-	5,552	-	-	5,062	2,583	-	-	3,058	-	-	-	-	-	-
2009	-	3,278	-	-	5,785	2,056	-	-	3,006	-	-	-	-	-	-
2010	1,271	-	-	-	7,232	1,003	-	-	5,782	-	-	-	-	-	-
2011	14,917	-	-	17,570	13,729	-	-	-	16,992	-	-	-	-	-	-
2012	-	-	-	-	9,979	-	-	-	9,105	-	6,110	-	-	-	-

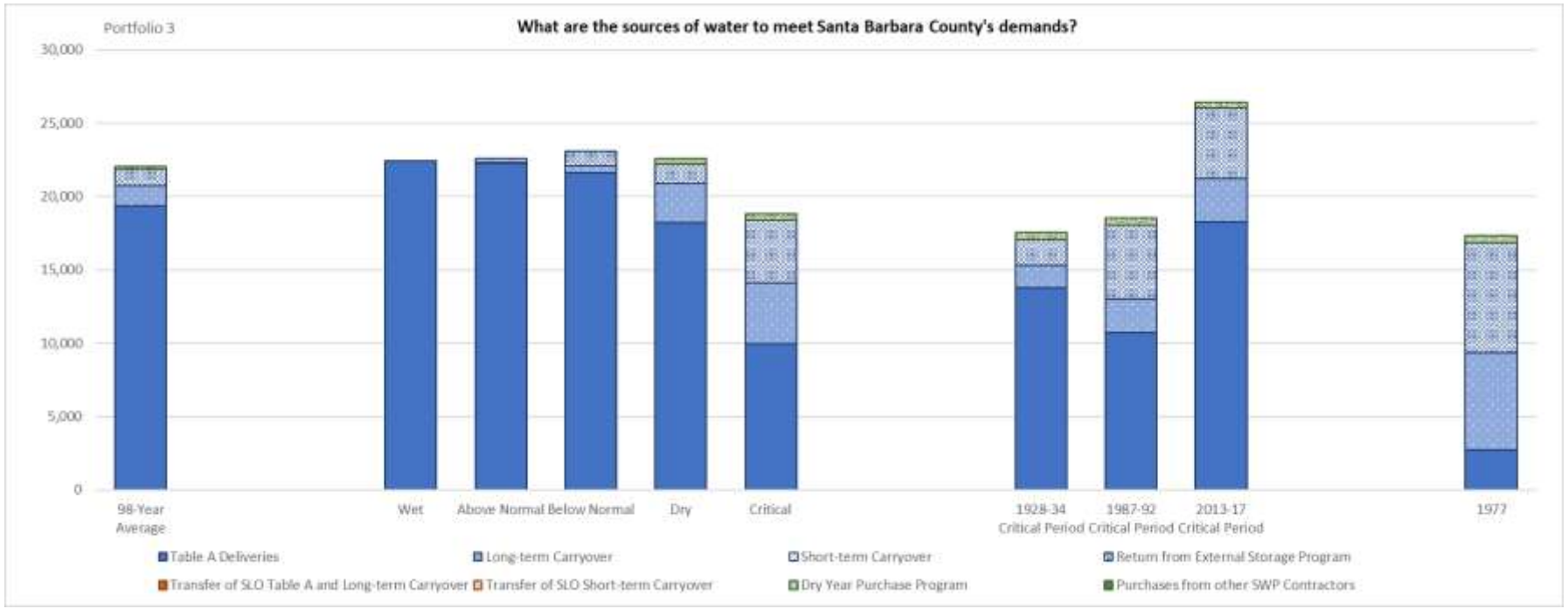
	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
Periods	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
2013	-	-	-	-	4,435	1,956	-	-	3,685	-	7,500	-	-	-	-
2014	-	11,698	-	-	599	5,620	-	-	-	-	7,500	-	-	-	-
2015	-	3,219	-	-	1,311	2,582	-	-	-	-	7,500	-	-	-	-
2016	-	-	-	-	8,729	-	-	-	880	-	1,390	-	-	-	-
2017	2,005	-	-	-	14,979	-	-	-	14,954	-	-	-	-	-	-
2018	-	2,005	-	-	5,062	2,583	-	-	6,147	-	-	-	-	-	-
2019	-	-	-	-	12,479	-	-	-	11,311	-	-	-	-	-	-
Sum	560,093	133,199	-	426,894	886,968	91,080	-	-	783,409	129,654	114,437	15,217	14,425	3,121	1,304
Average	5,715	1,359	-	4,356	9,051	929	-	-	7,994	1,323	1,168	155	147	32	13
Water Year Averages															
Wet	12,673	-	-	10,539	14,211	11	-	-	13,323	2,495	-	273	179	-	15
Above Normal	6,608	79	-	2,238	10,528	-	-	-	7,644	2,150	257	271	328	91	20
Below Normal	3,518	450	-	4,962	8,231	567	-	-	8,478	295	1,000	39	49	-	6
Dry	1,352	2,699	-	-	6,323	1,537	-	-	5,241	870	1,347	113	160	-	21
Critically Dry	-	4,188	-	-	2,407	3,088	-	-	1,368	-	4,256	-	-	124	-
Critical Period Averages															
1928-34	1,351	1,526	-	-	4,062	2,139	-	-	3,133	-	1,729	-	128	-	17
1987-92	136	2,324	-	-	2,469	2,694	-	-	1,488	-	5,000	-	-	88	-
2013-17	401	2,983	-	-	6,011	2,032	-	-	3,904	-	4,778	-	-	-	-
Driest 1-Year															
1977	-	6,618	-	-	868	4,312	-	-	1,252	-	7,500	-	-	1,327	-

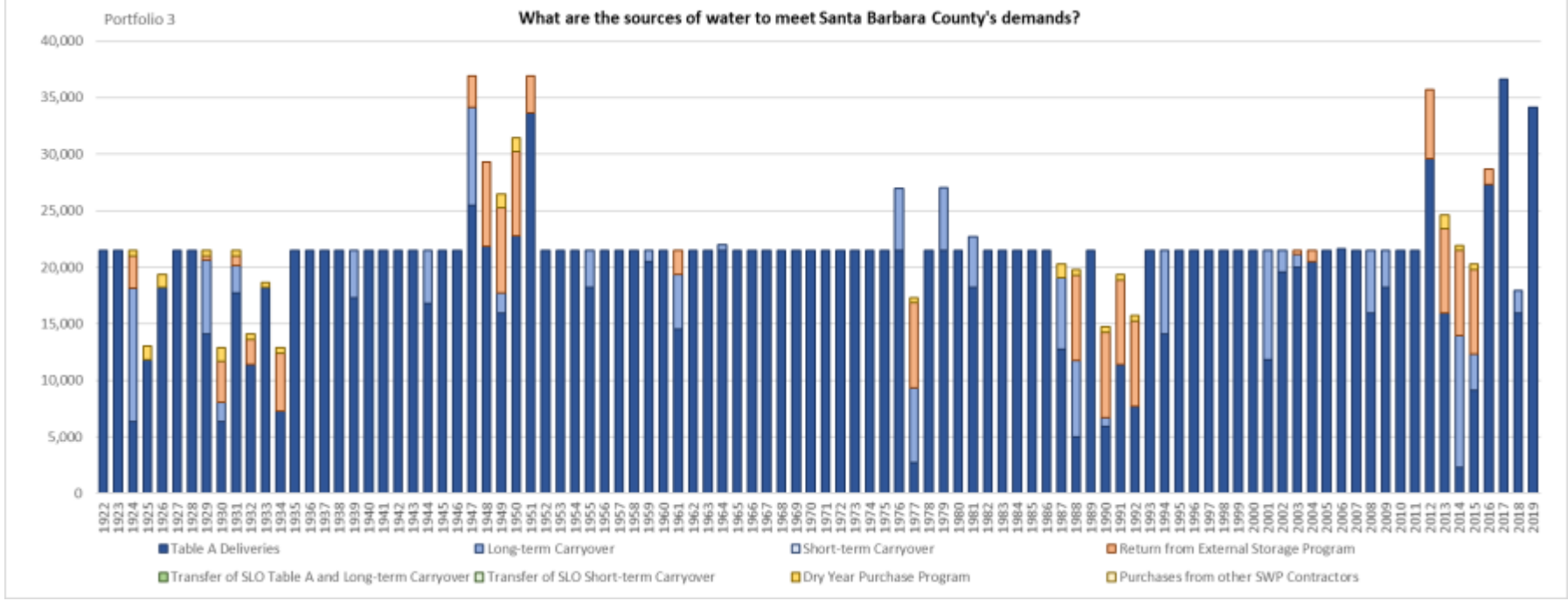
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCDPurchases from Others	SLOFCWCD Purchases from CCWA
1922	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	-	-	480	-	-	-
1925	-	-	-	-	-	-	1,199	-	-	-
1926	-	-	-	-	-	-	1,199	-	-	-
1927	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	480	-	-	-
1930	-	-	-	-	-	-	1,199	-	-	-
1931	-	-	-	-	-	-	480	-	-	-
1932	-	-	-	-	-	-	480	-	-	-
1933	-	-	-	-	-	-	480	-	-	-
1934	-	-	-	-	-	-	480	-	-	-
1935	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	1,199	-	-	-
1950	-	-	-	-	-	-	1,199	-	-	-
1951	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-

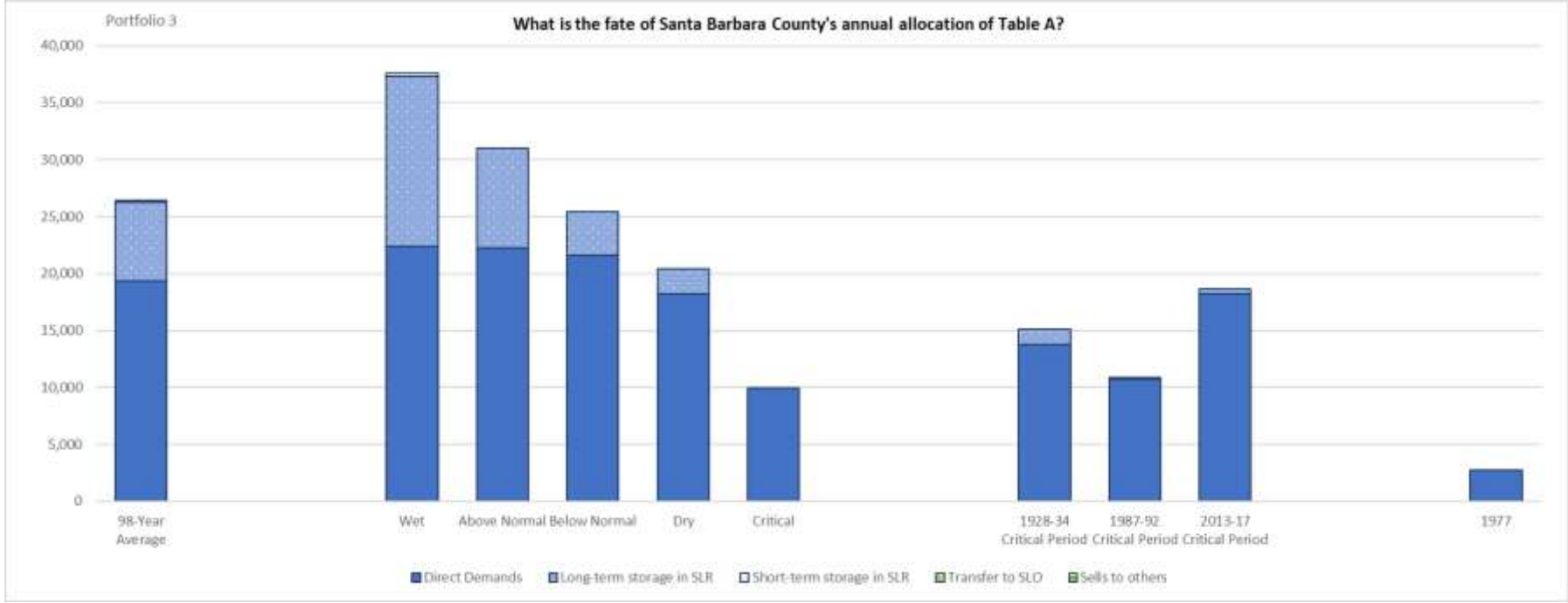
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCDPurchases from Others	SLOFCWCD Purchases from CCWA
1953	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-	-	-
1976	-	-	-	-	-	-	-	-	-	-
1977	-	-	-	-	-	-	480	-	-	-
1978	-	-	-	-	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	-	-	-	-	-	-	-	-	-	-
1982	-	-	-	-	-	-	-	-	-	-

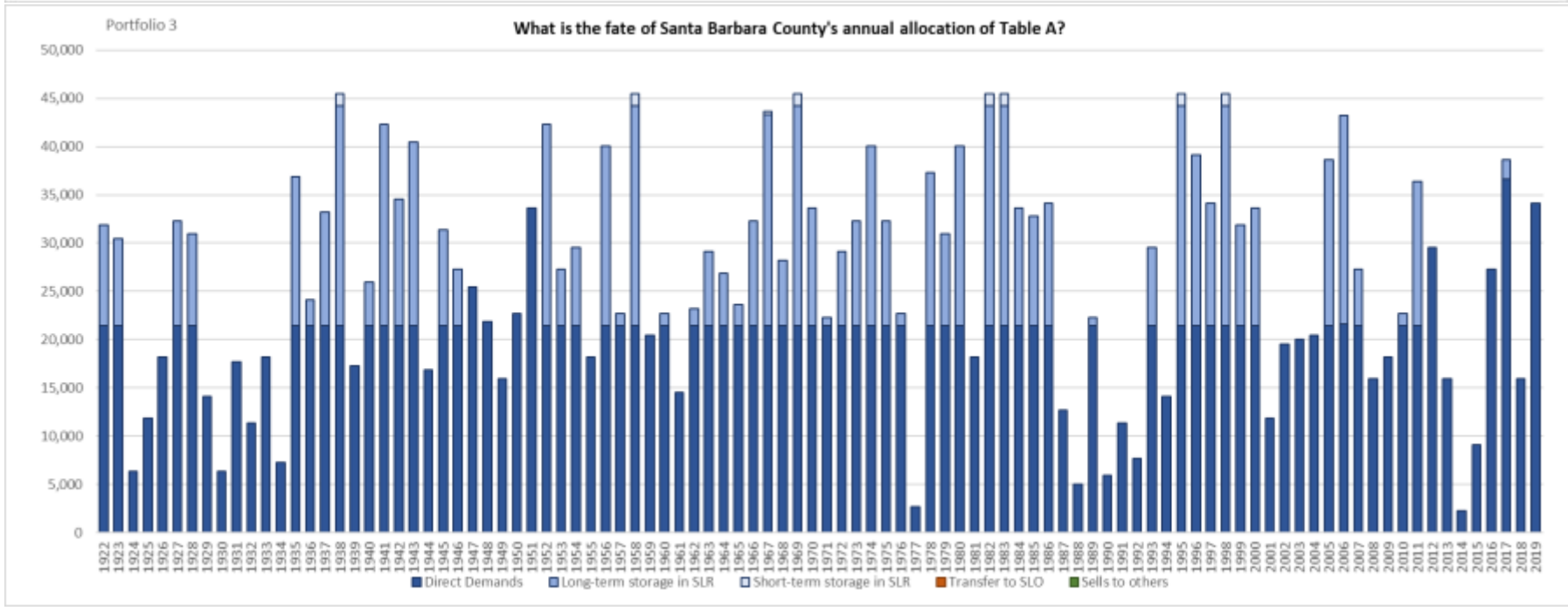
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCDPurchases from Others	SLOFCWCD Purchases from CCWA
1983	-	-	-	-	-	-	-	-	-	-
1984	-	-	-	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-	-	-	-
1986	-	-	-	-	-	-	-	-	-	-
1987	-	-	-	-	-	-	1,199	-	-	-
1988	-	-	-	-	-	-	480	-	-	-
1989	-	-	-	-	-	-	-	-	-	-
1990	-	-	-	-	-	-	480	-	-	-
1991	-	-	-	-	-	-	480	-	-	-
1992	-	-	-	-	-	-	480	-	-	-
1993	-	-	-	-	-	-	-	-	-	-
1994	-	-	-	-	-	-	-	-	-	-
1995	-	-	-	-	-	-	-	-	-	-
1996	-	-	-	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	-	-	-
1998	-	-	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-	-	-	-
2000	-	-	-	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-

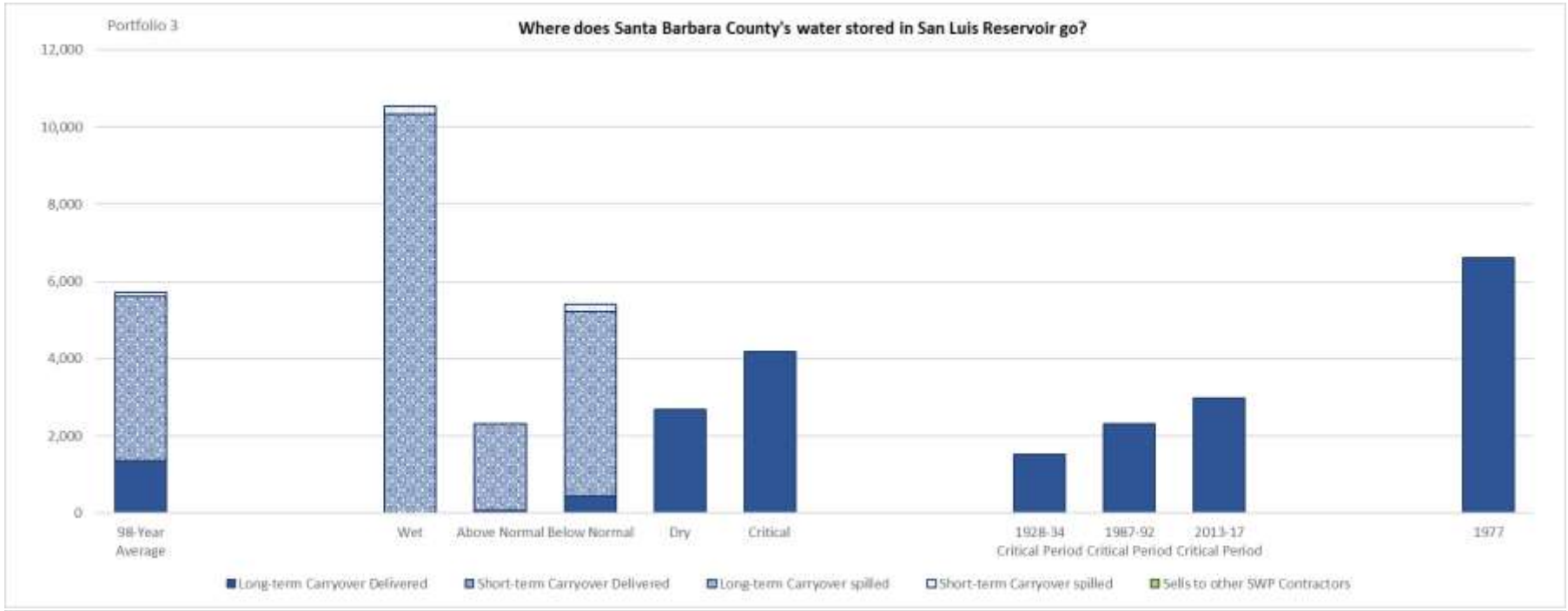
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCDPurchases from Others	SLOFCWCD Purchases from CCWA
2013	-	-	-	-	-	-	1,199	-	-	-
2014	-	-	-	-	-	-	480	-	-	-
2015	-	-	-	-	-	-	480	-	-	-
2016	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-
Sum	-	-	-	-	-	-	14,633	-	-	-
Average	-	-	-	-	-	-	149	-	-	-
Water Year Averages										
Wet	-	-	-	-	-	-	-	-	-	-
Above Normal	-	-	-	-	-	-	-	-	-	-
Below Normal	-	-	-	-	-	-	-	-	-	-
Dry	-	-	-	-	-	-	365	-	-	-
Critically Dry	-	-	-	-	-	-	416	-	-	-
Critical Period Averages										
1928-34	-	-	-	-	-	-	514	-	-	-
1987-92	-	-	-	-	-	-	520	-	-	-
2013-17	-	-	-	-	-	-	432	-	-	-
Driest 1-Year										
1977	-	-	-	-	-	-	480	-	-	-

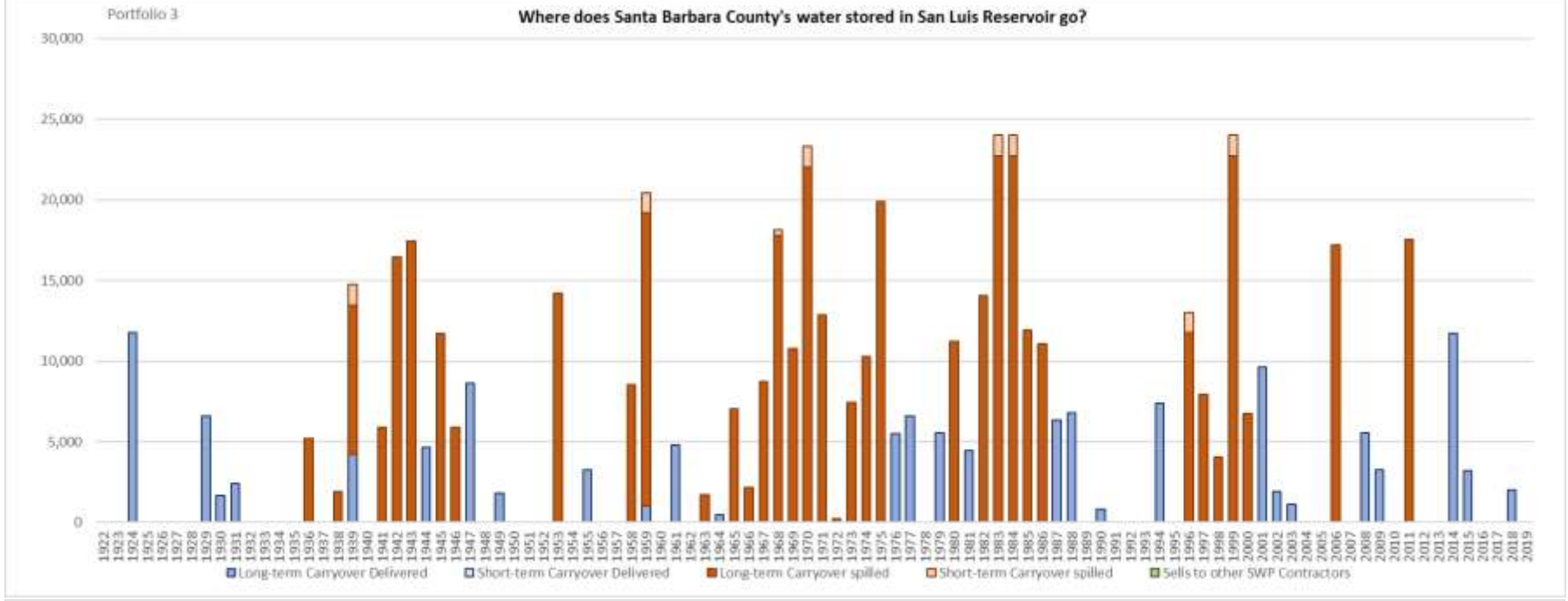

Portfolio 3
What are the sources of water to meet Santa Barbara County's demands?
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer of SLO Table A and Long-term Carryover
Transfer of SLO Short-term Carryover
Dry Year Purchase Program
Purchases from other SWP Contractors

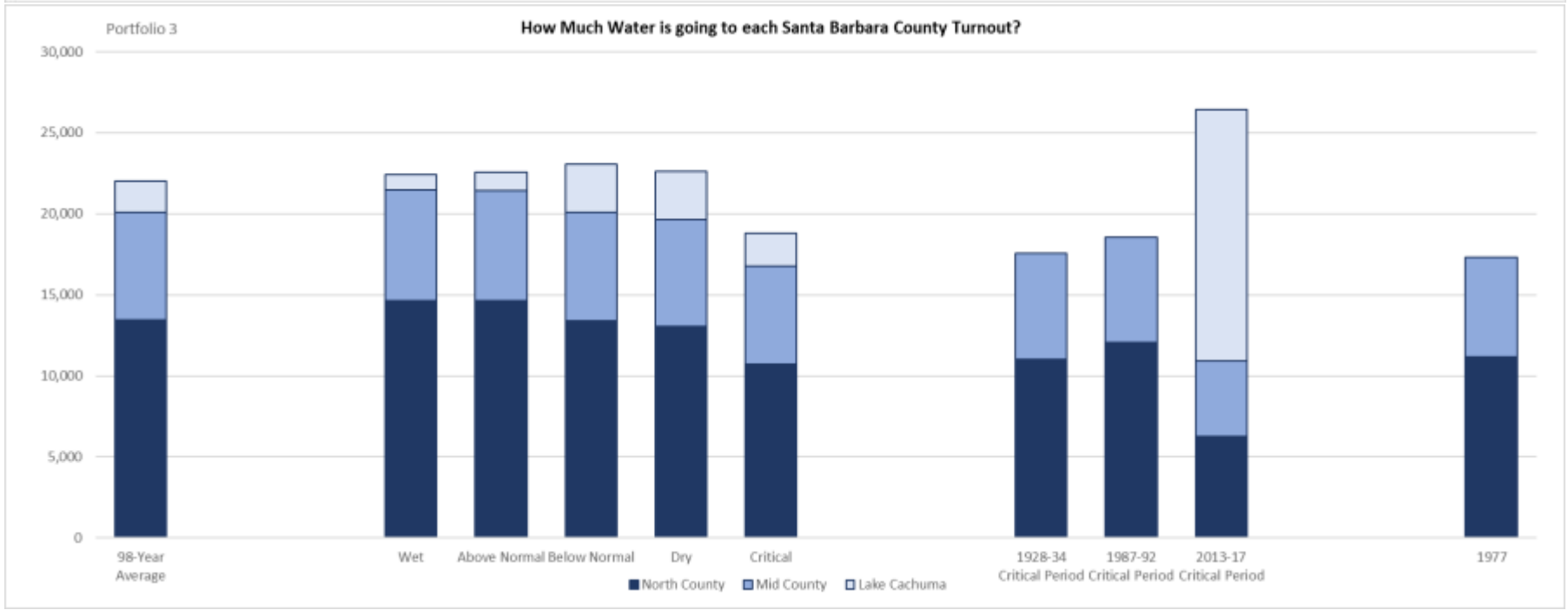

Portfolio 3
What are the sources of water to meet Santa Barbara County's demands?
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer of SLO Table A and Long-term Carryover
Transfer of SLO Short-term Carryover
Dry Year Purchase Program
Purchases from other SWP Contractors

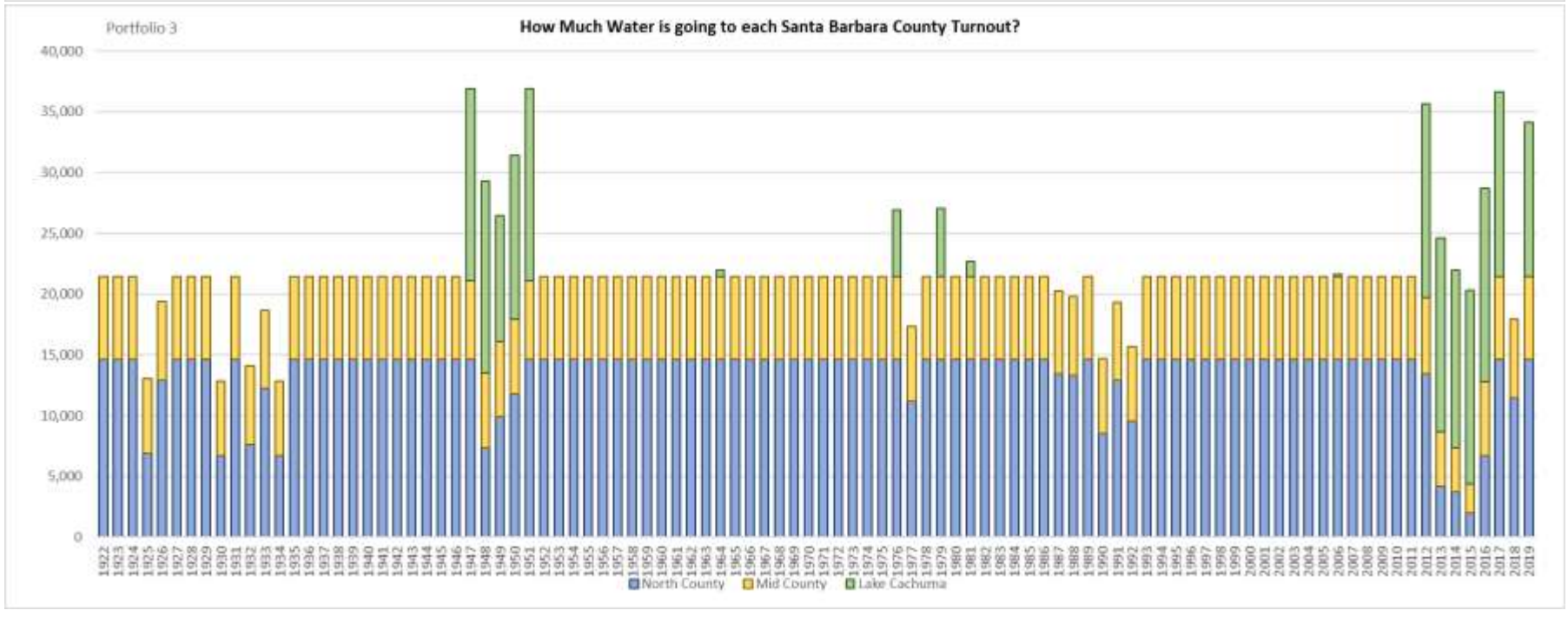

Portfolio 3
What is the fate of Santa Barbara County's annual allocation of Table A?
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Direct Demands
Long-term storage in SLR
Short-term storage in SLR
Transfer to SLO
Sells to others

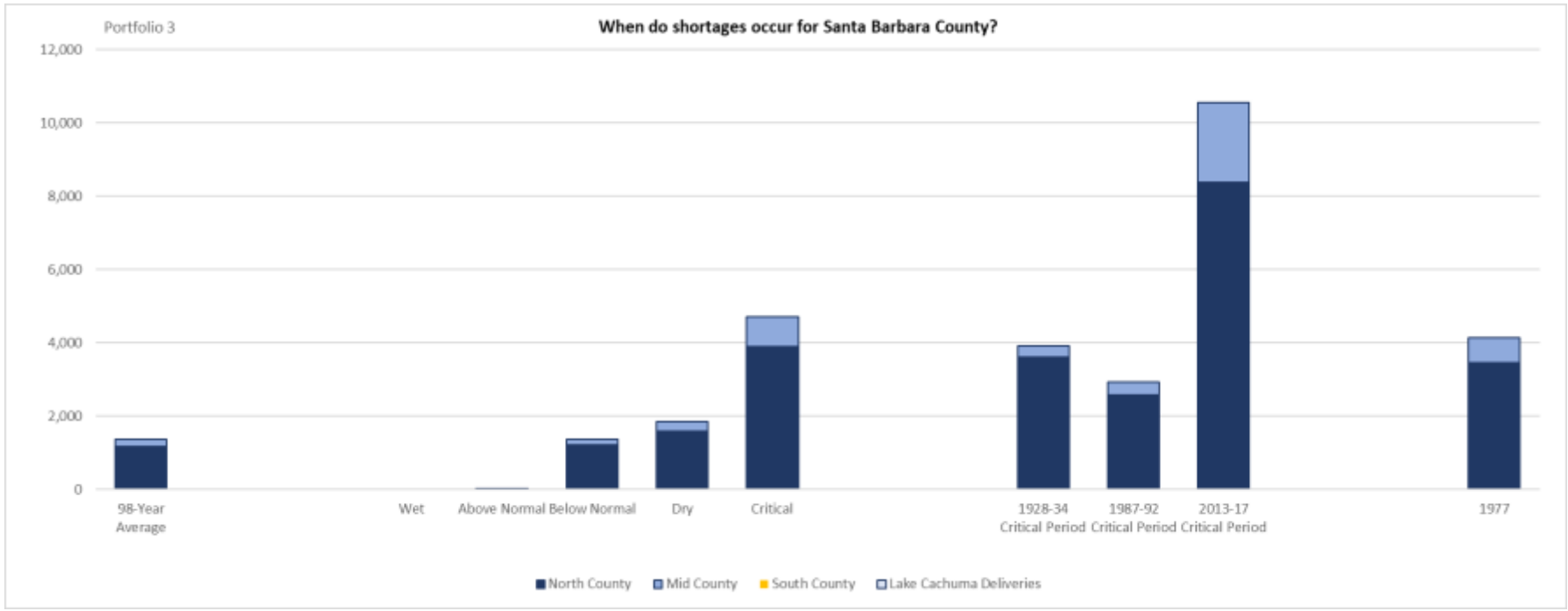

Portfolio 3
What is the fate of Santa Barbara County's annual allocation of Table A?
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Direct Demands
Long-term storage in SLR
Short-term storage in SLR
Transfer to SLO
Sells to others

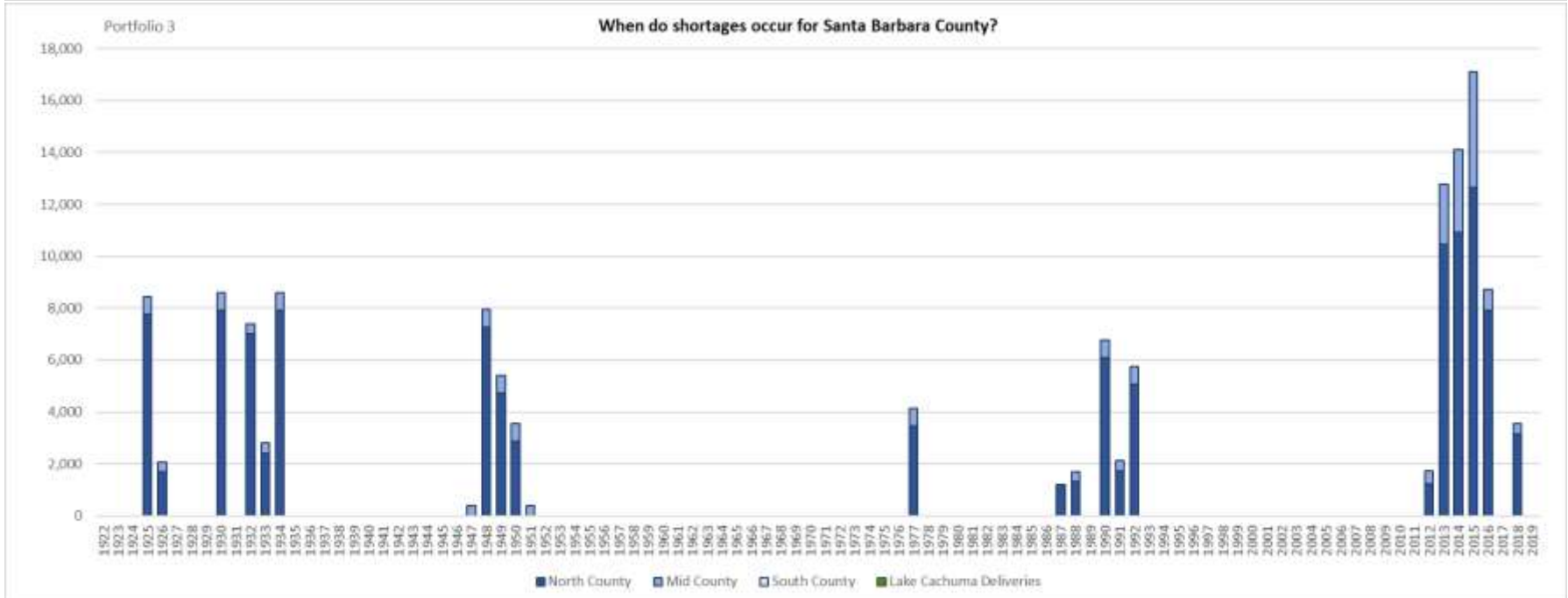

Portfolio 3
Where does Santa Barbara County's water stored in San Luis Reservoir go?
12,000
10,000
8,000
6,000
4,000
2,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Sells to other SWP Contractors

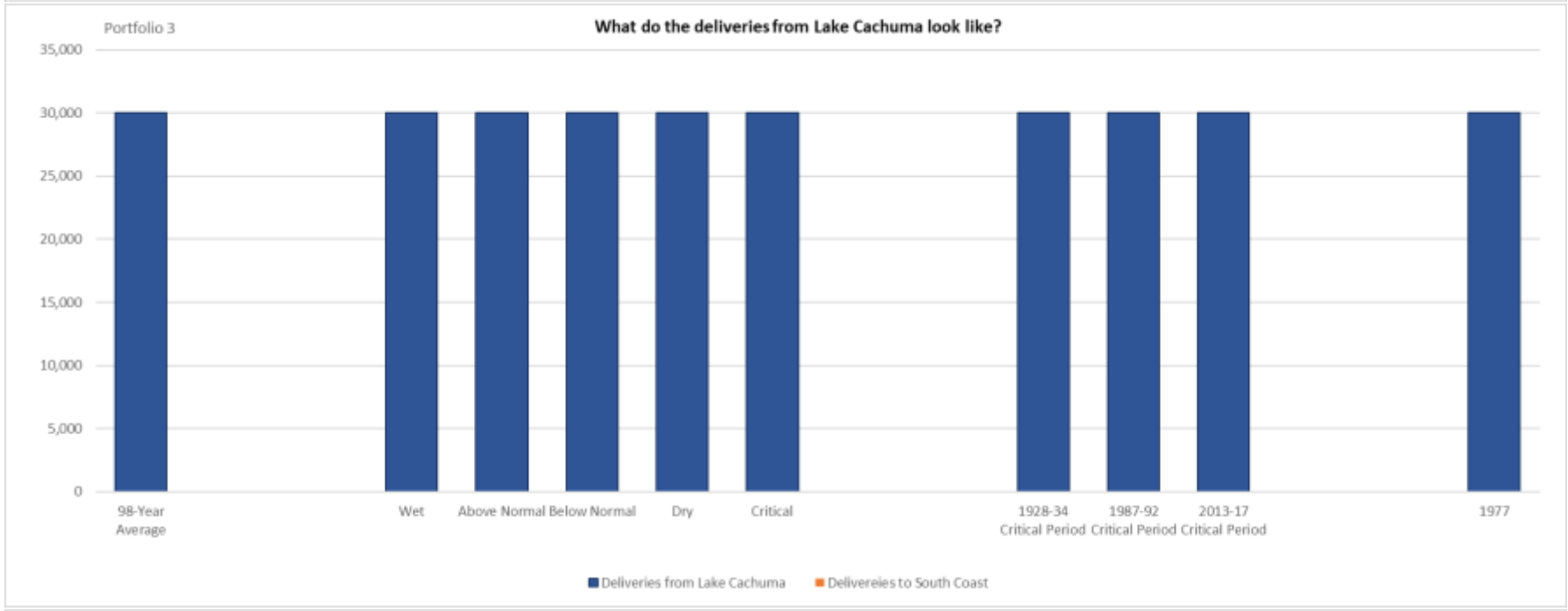

Portfolio 3
Where does Santa Barbara County's water stored in San Luis Reservoir go?
30,000
25,000
20,000
15,000
10,000
5,000
0
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Sells to other SWP Contractors

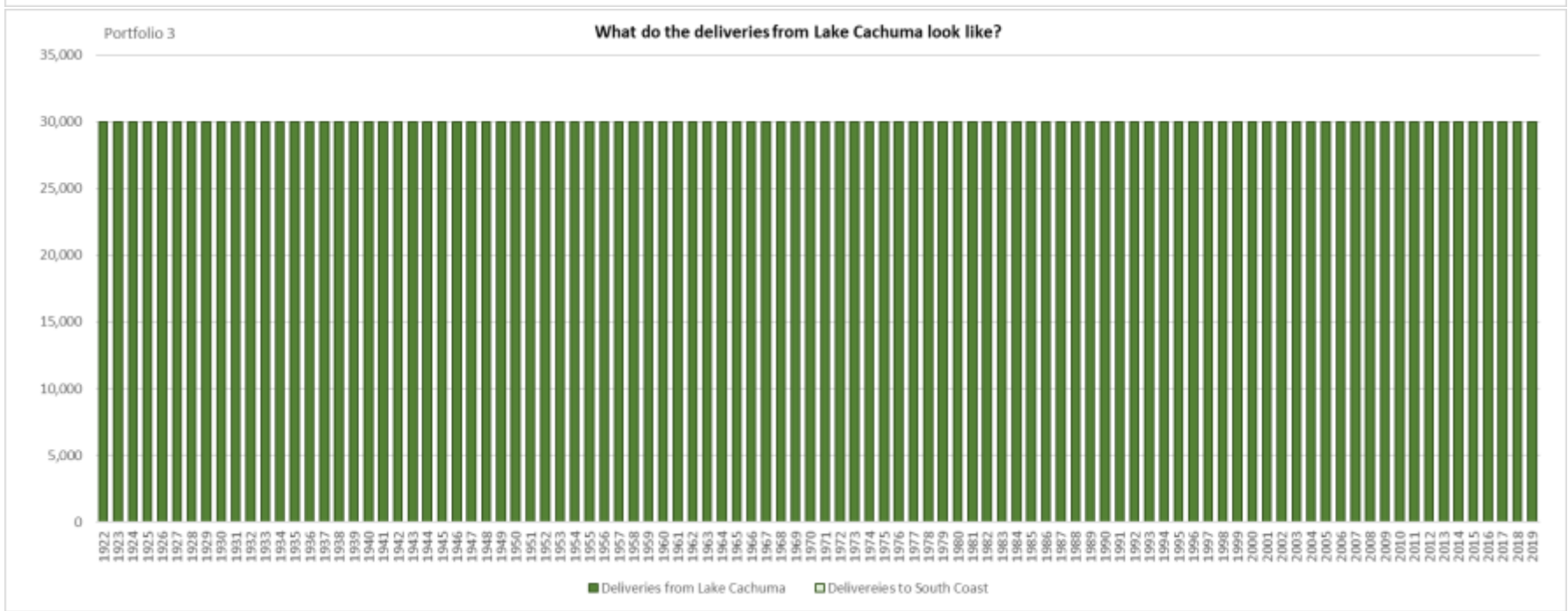

Portfolio 3
How Much Water is going to each Santa Barbara County Turnout?
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
North County
Mid County
Lake Cachuma

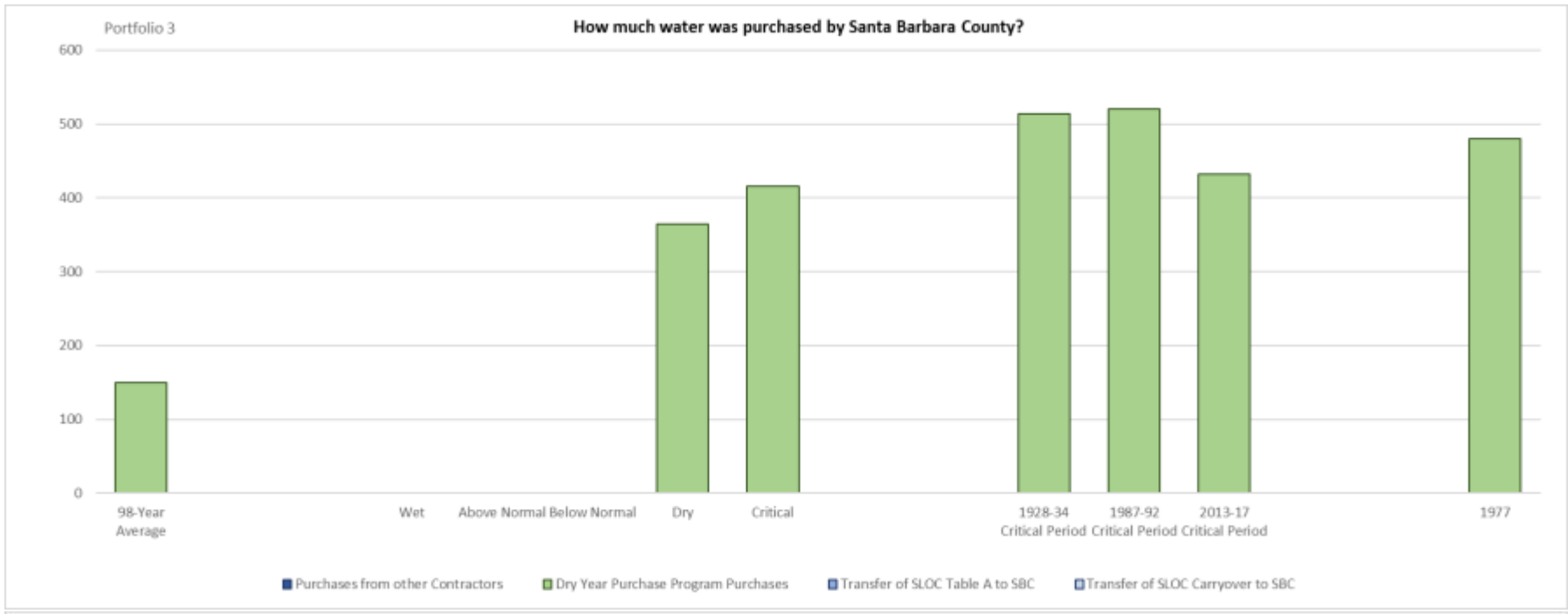

Portfolio 3
How Much Water is going to each Santa Barbara County Turnout?
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
North County
Mid County
Lake Cachuma

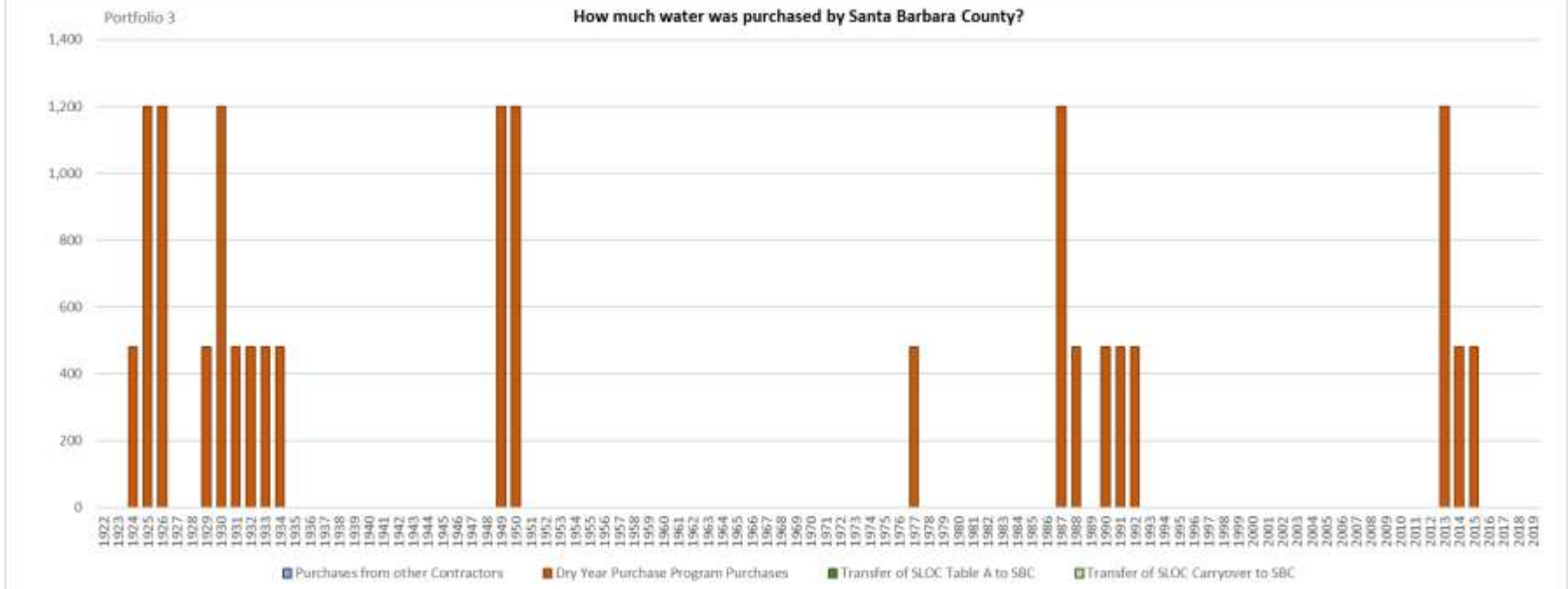

Portfolio 3
When do shortages occur for Santa Barbara County?
12,000
10,000
8,000
6,000
4,000
2,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
North County
Mid County
South County
Lake Cachuma Deliveries

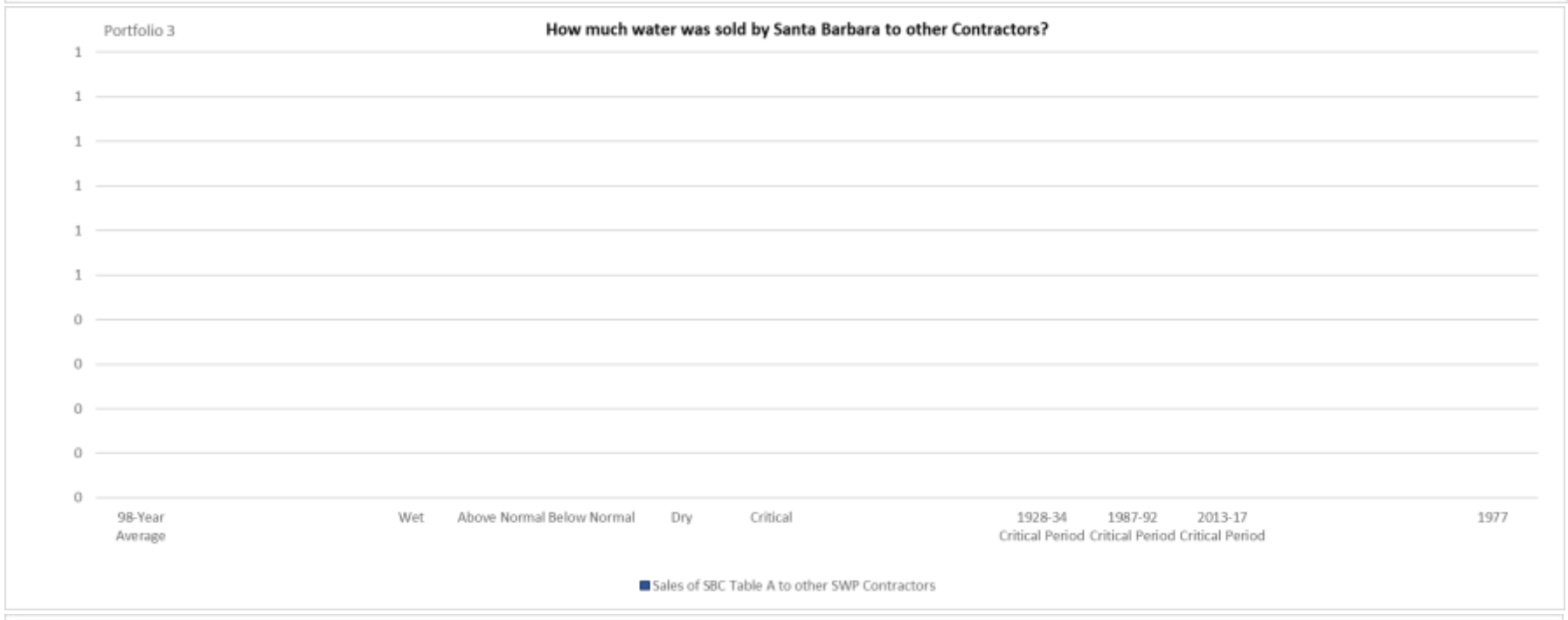

Portfolio 3
When do shortages occur for Santa Barbara County?
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
North County
Mid County
South County
Lake Cachuma Deliveries

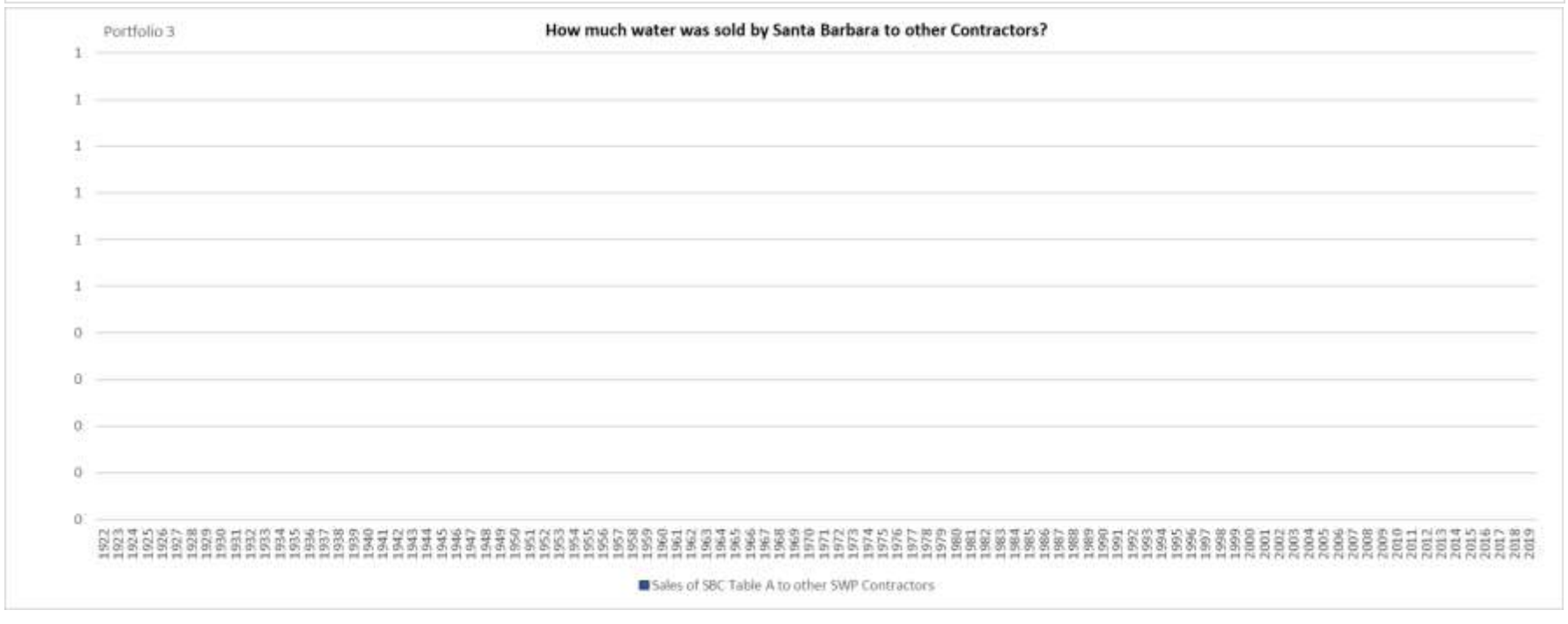

Portfolio 3
What do the deliveries from Lake Cachuma look like?
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Deliveries from Lake Cachuma
Delivereies to South Coast

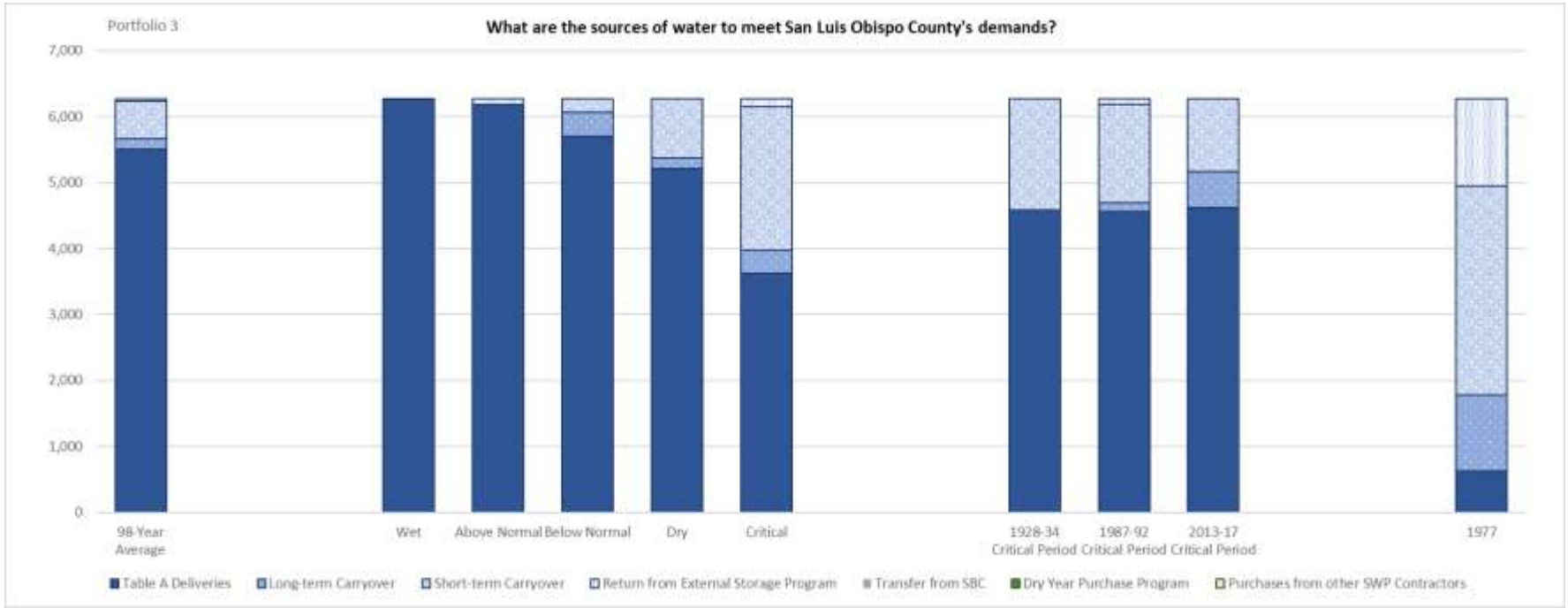

Portfolio 3
What do the deliveries from Lake Cachuma look like?
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Deliveries from Lake Cachuma
Delivereies to South Coast

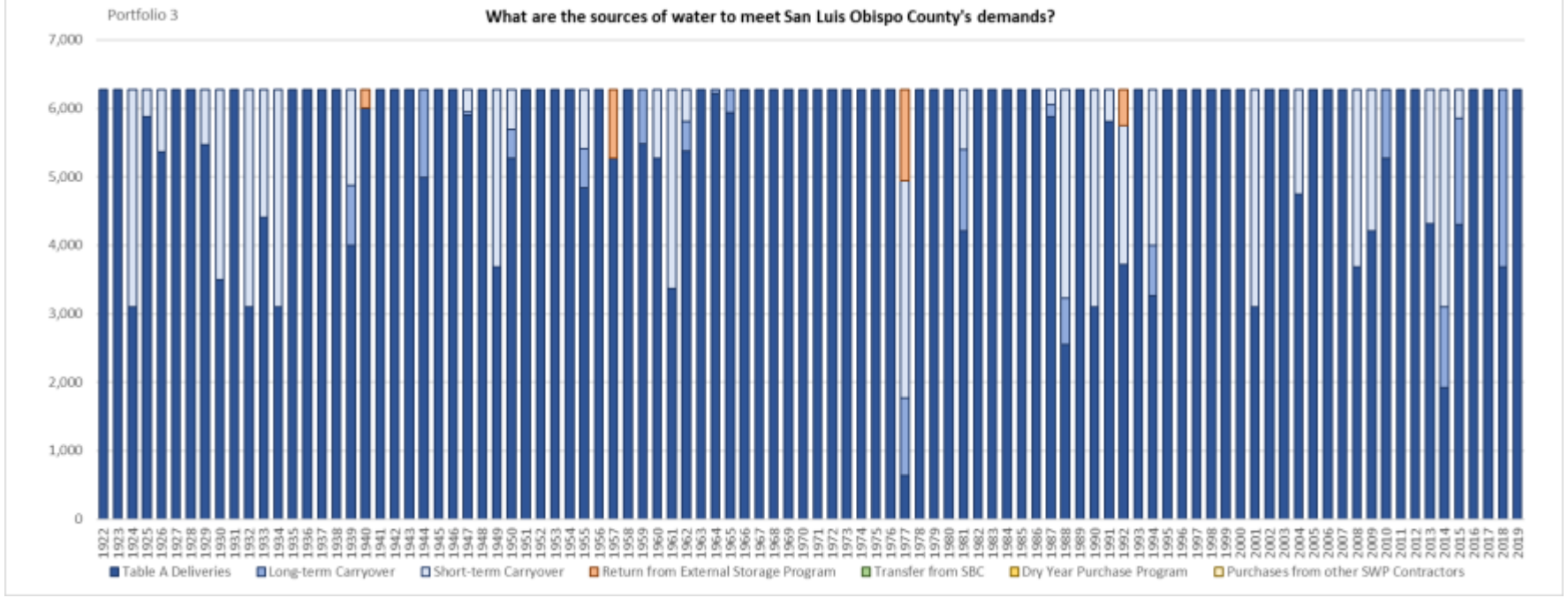

Portfolio 3
How much water was purchased by Santa Barbara County?
600
500
400
300
200
100
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Purchases from other Contractors
Dry Year Purchase Program Purchases
Transfer of SLOC Table A to SBC
Transfer of SLOC Carryover to SBC

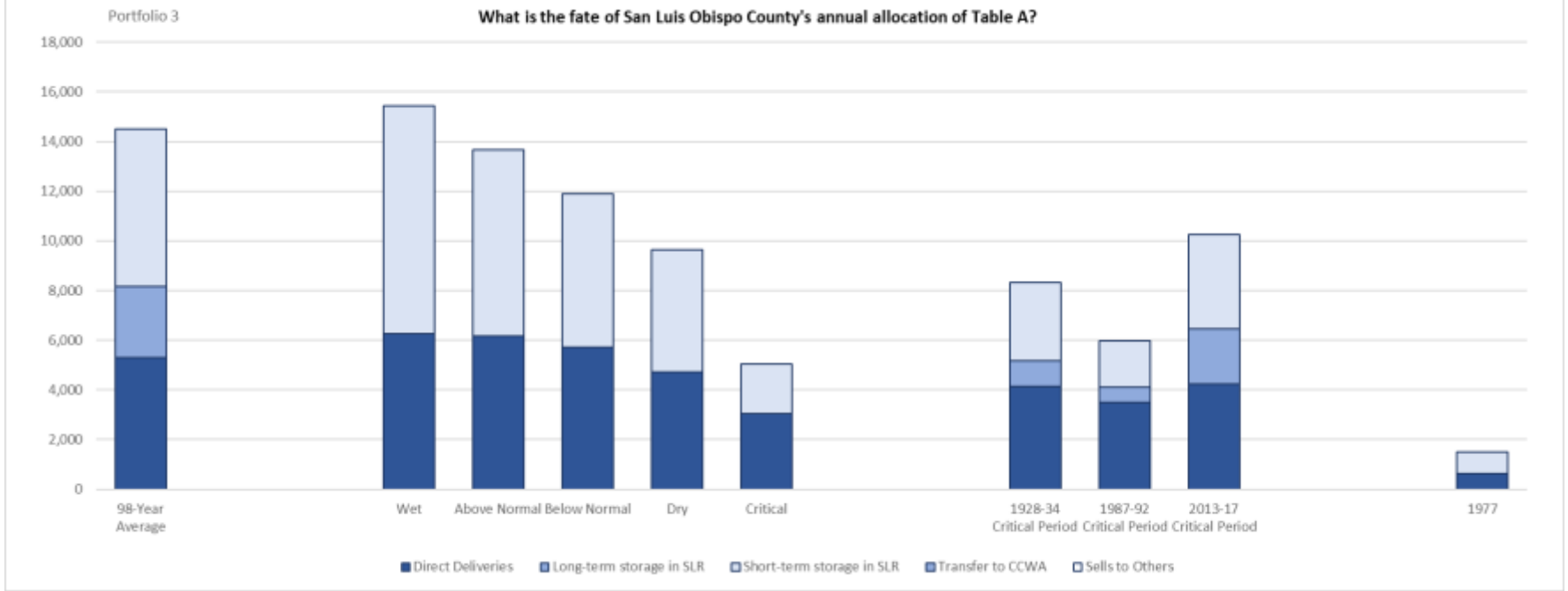

Portfolio 3
How much water was purchased by Santa Barbara County?
1,400
1,200
1,000
800
600
400
200
0
Purchases from other Contractors
Dry Year Purchase Program Purchases
Transfer of SLOC Table A to SBC
Transfer of SLOC Carryover to SBC

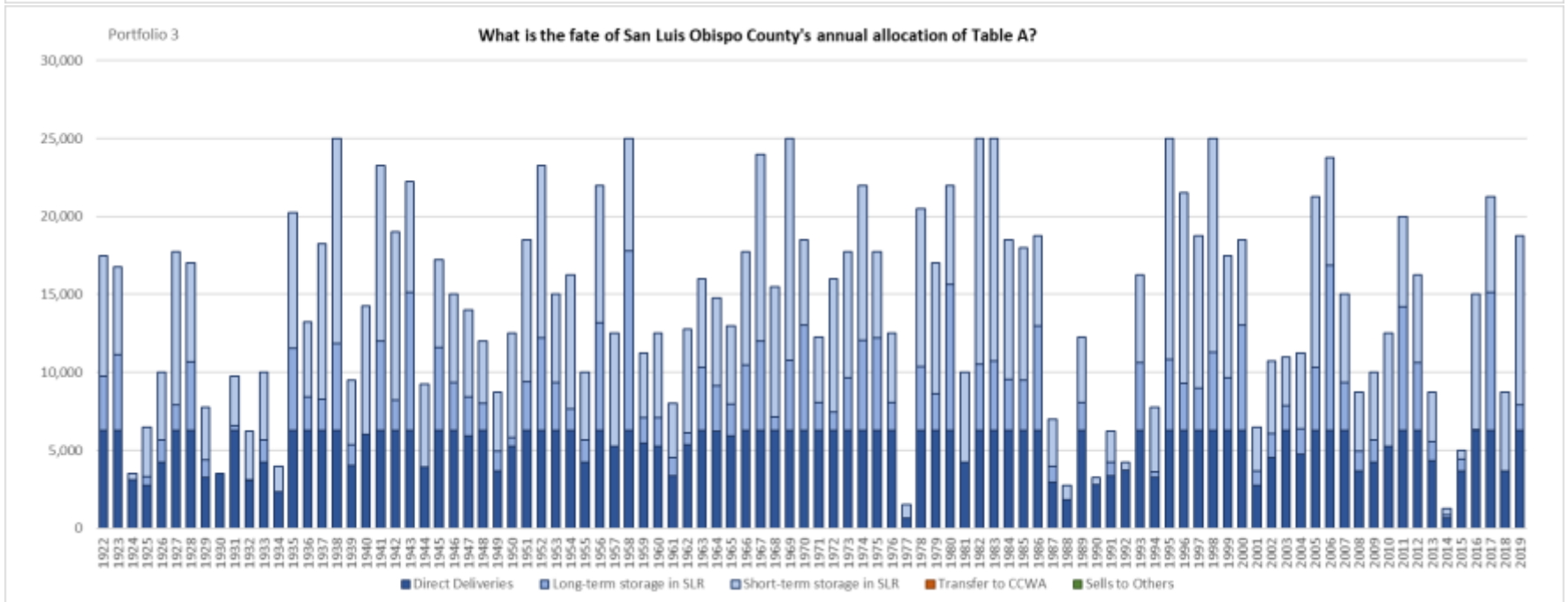

Portfolio 3
How much water was sold by Santa Barbara to other Contractors?
1
1
1
1
1
1
0
0
0
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Sales of SBC Table A to other SWP Contractors

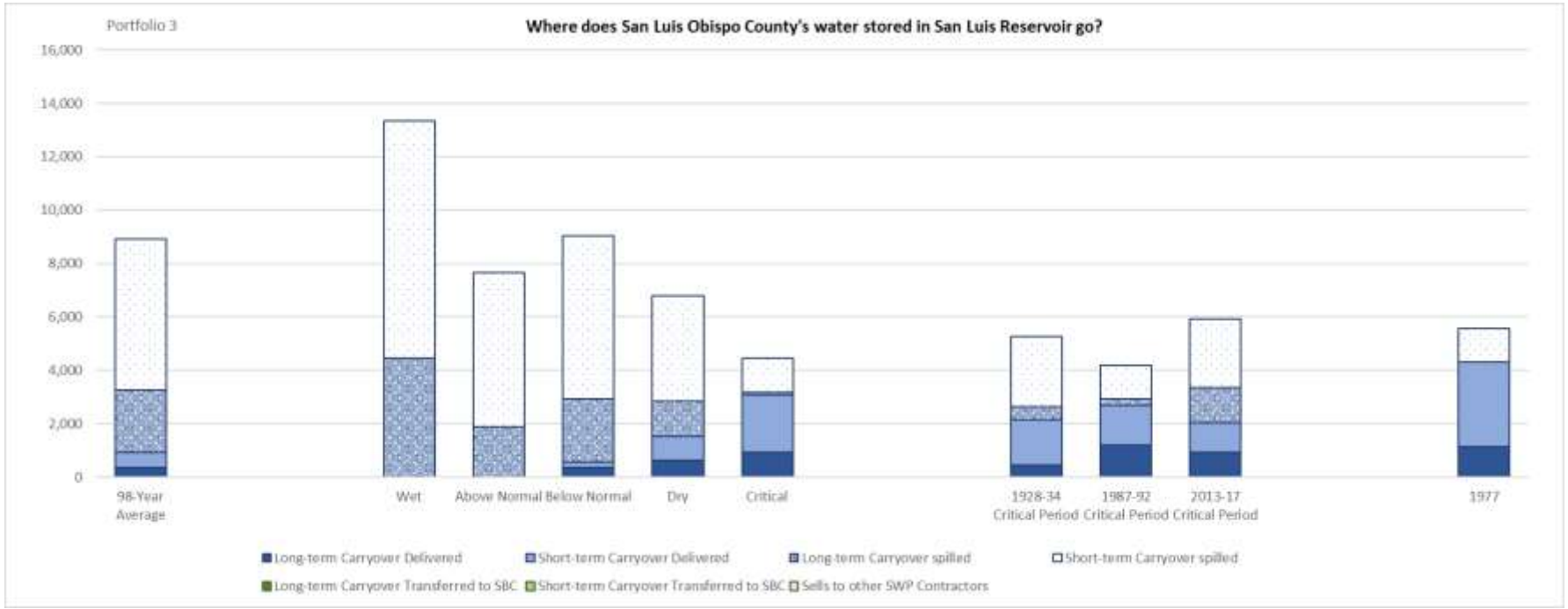

Portfolio 3
How much water was sold by Santa Barbara to other Contractors?
1
1
1
1
1
1
0
0
0
0
Sales of SBC Table A to other SWP Contractors

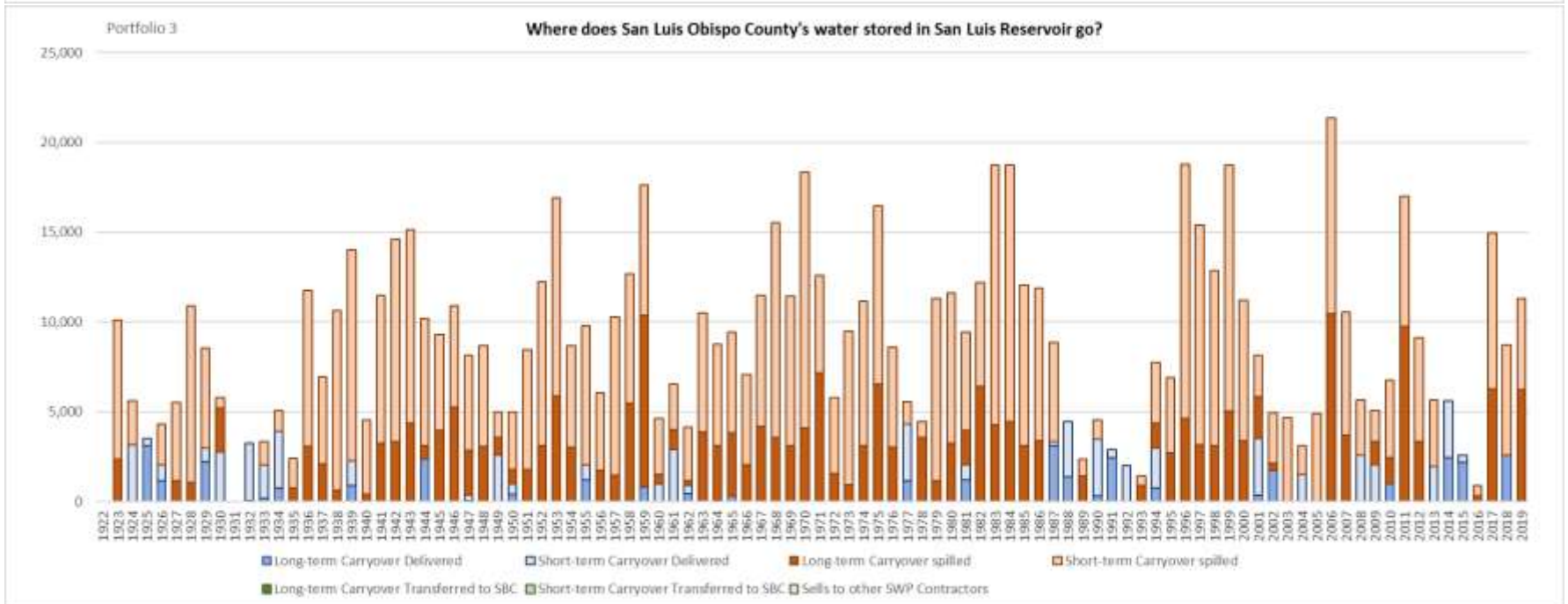

Portfolio 3
What are the sources of water to meet San Luis Obispo County's demands?
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer from SBC
Dry Year Purchase Program
Purchases from other SWP Contractors

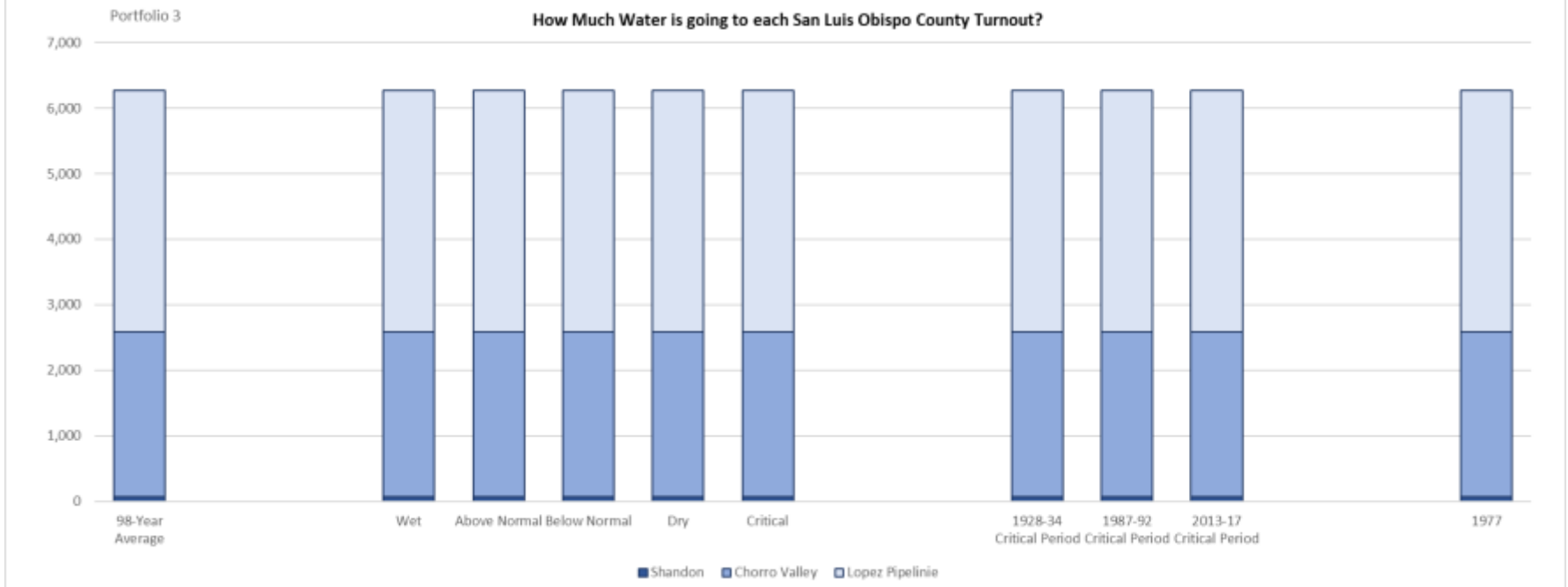

Portfolio 3
What are the sources of water to meet San Luis Obispo County's demands?
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer from SBC
Dry Year Purchase Program
Purchases from other SWP Contractors

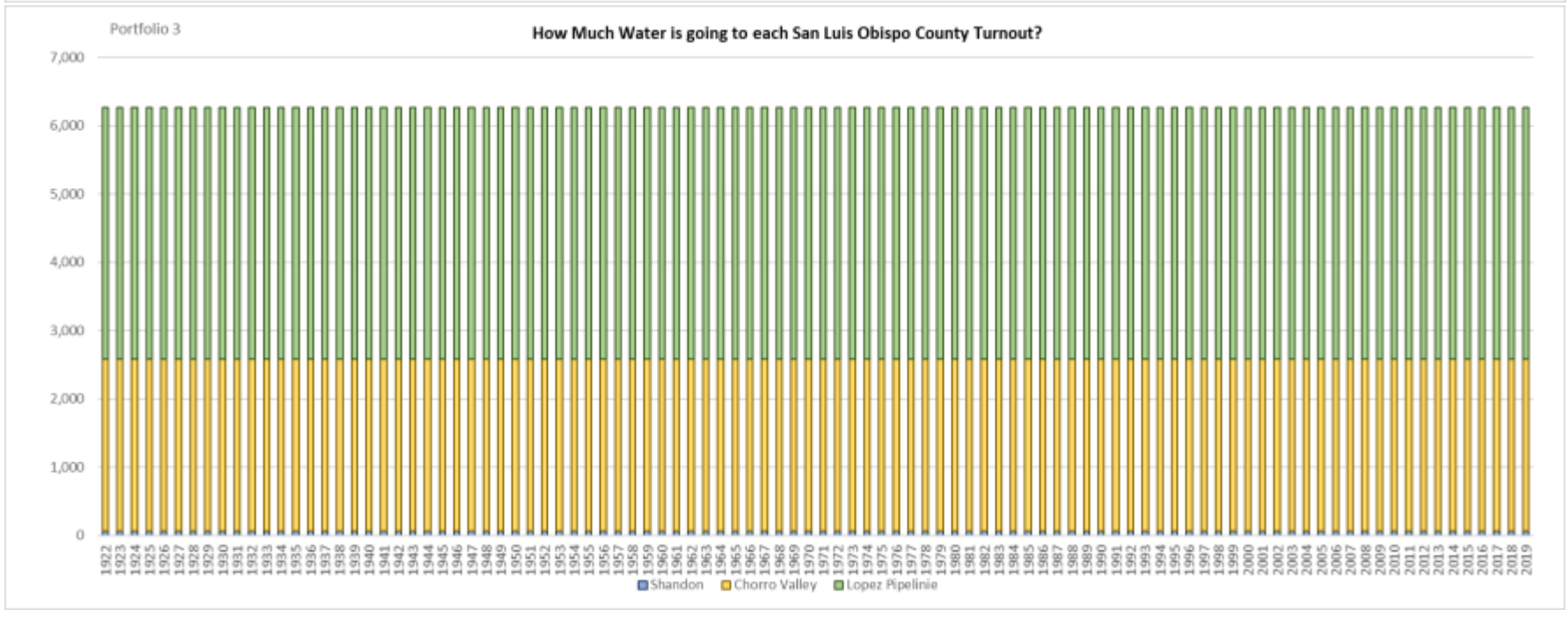

Portfolio 3
What is the fate of San Luis Obispo County's annual allocation of Table A?
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Direct Deliveries
Long-term storage in SLR
Short-term storage in SLR
Transfer to CCWA
Sells to Others

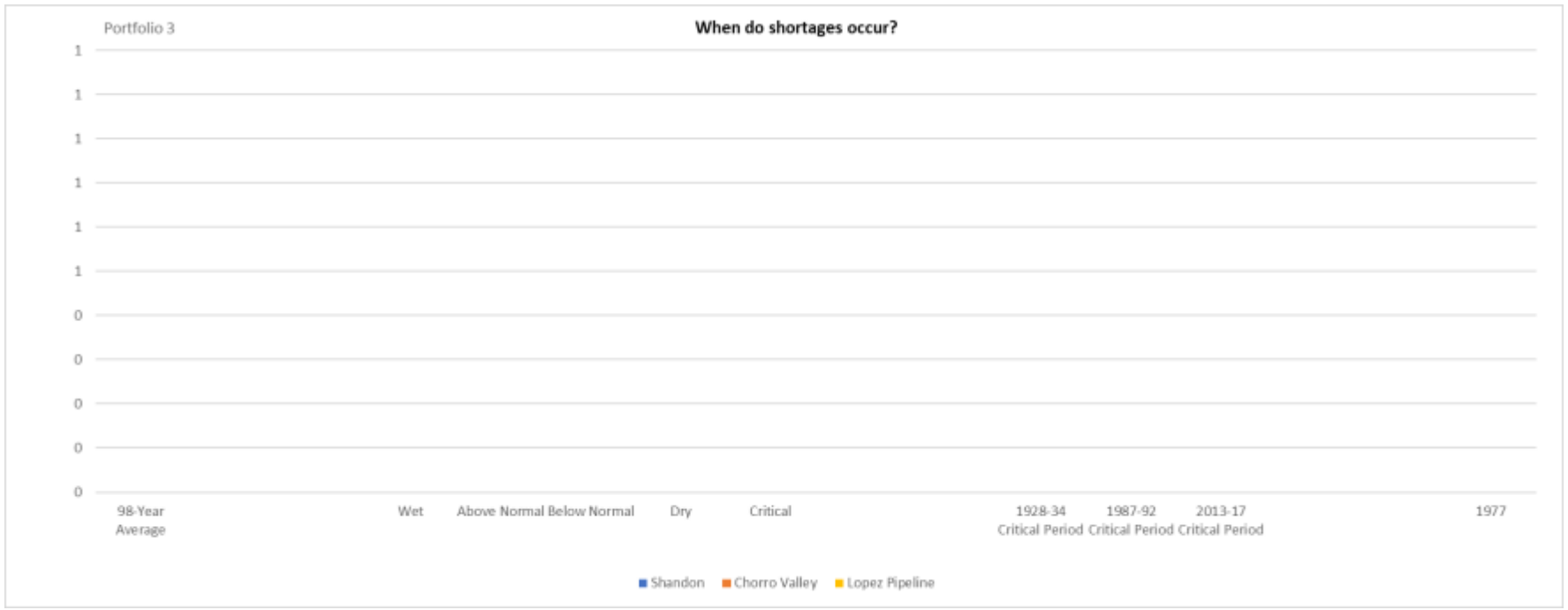

Portfolio 3
What is the fate of San Luis Obispo County's annual allocation of Table A?
30,000
25,000
20,000
15,000
10,000
5,000
0
Direct Deliveries
Long-term storage in SLR
Short-term storage in SLR
Transfer to CCWA
Sells to Others


Portfolio 3
Where does San Luis Obispo County's water stored in San Luis Reservoir go?
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Long-term Carryover Transferred to SBC
Short-term Carryover Transferred to SBC
Sells to other SWP Contractors

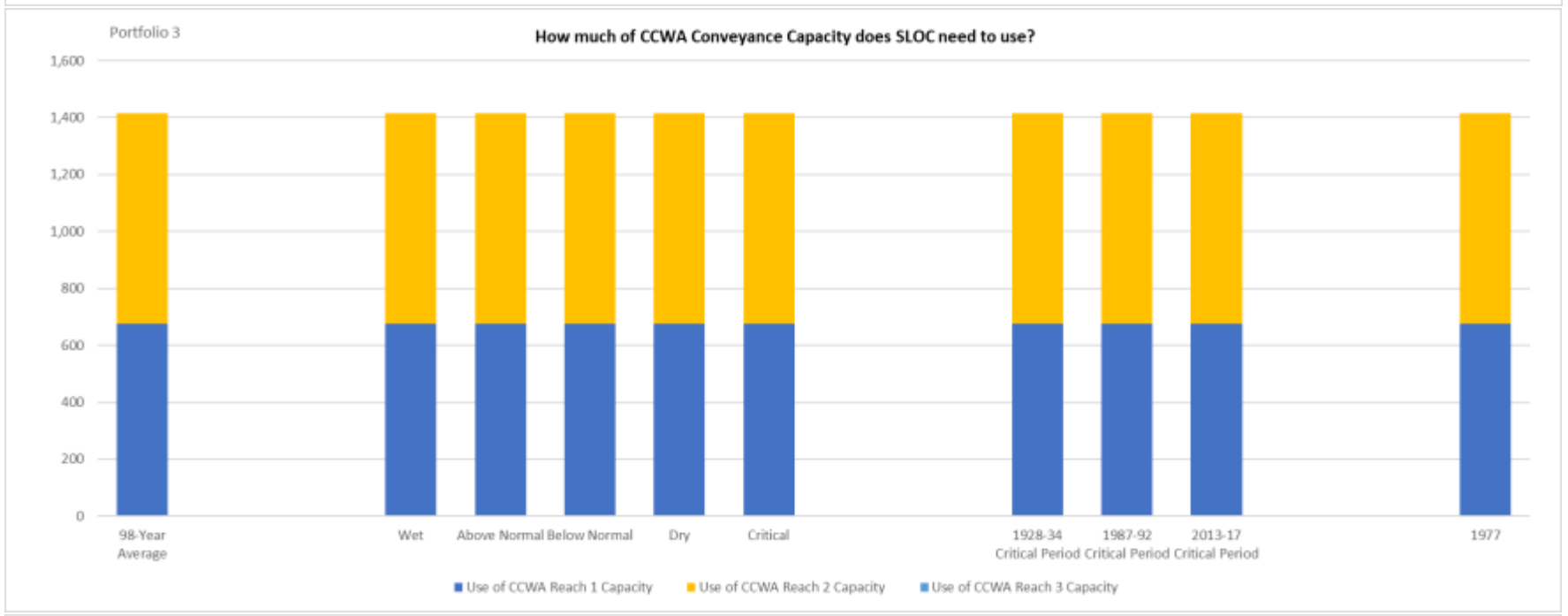

Portfolio 3
Where does San Luis Obispo County's water stored in San Luis Reservoir go?
25,000
20,000
15,000
10,000
5,000
0
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Long-term Carryover Transferred to SBC
Short-term Carryover Transferred to SBC
Sells to other SWP Contractors

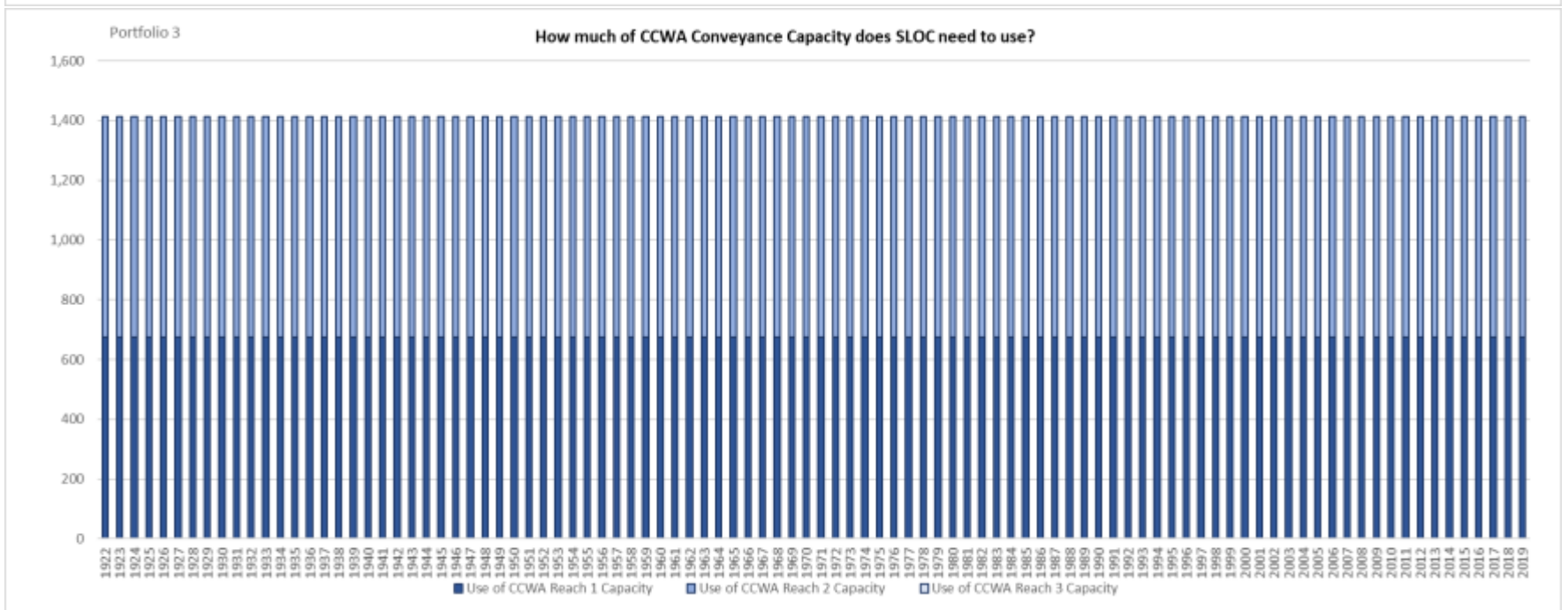

Portfolio 3
How Much Water is going to each San Luis Obispo County Turnout?
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Shandon
Chorro Valley
Lopez Pipelinie

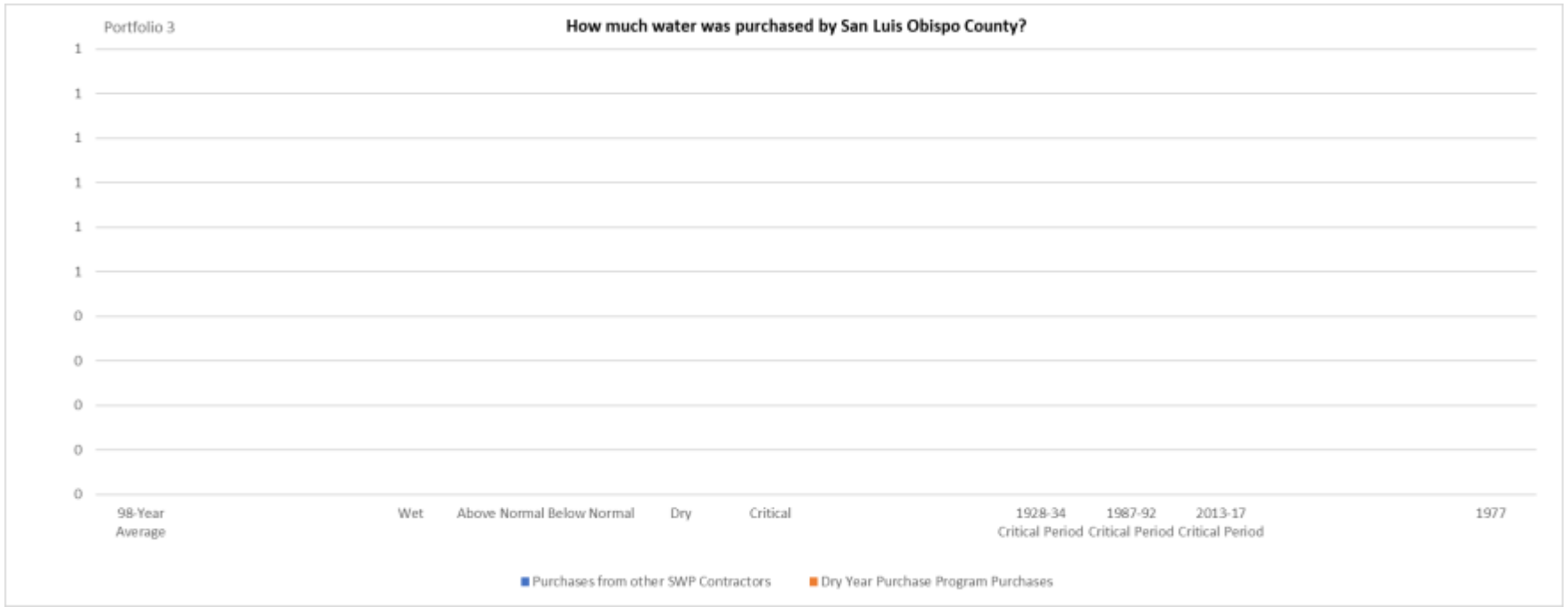

Portfolio 3
How Much Water is going to each San Luis Obispo County Turnout?
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Shandon
Chorro Valley
Lopez Pipelinie

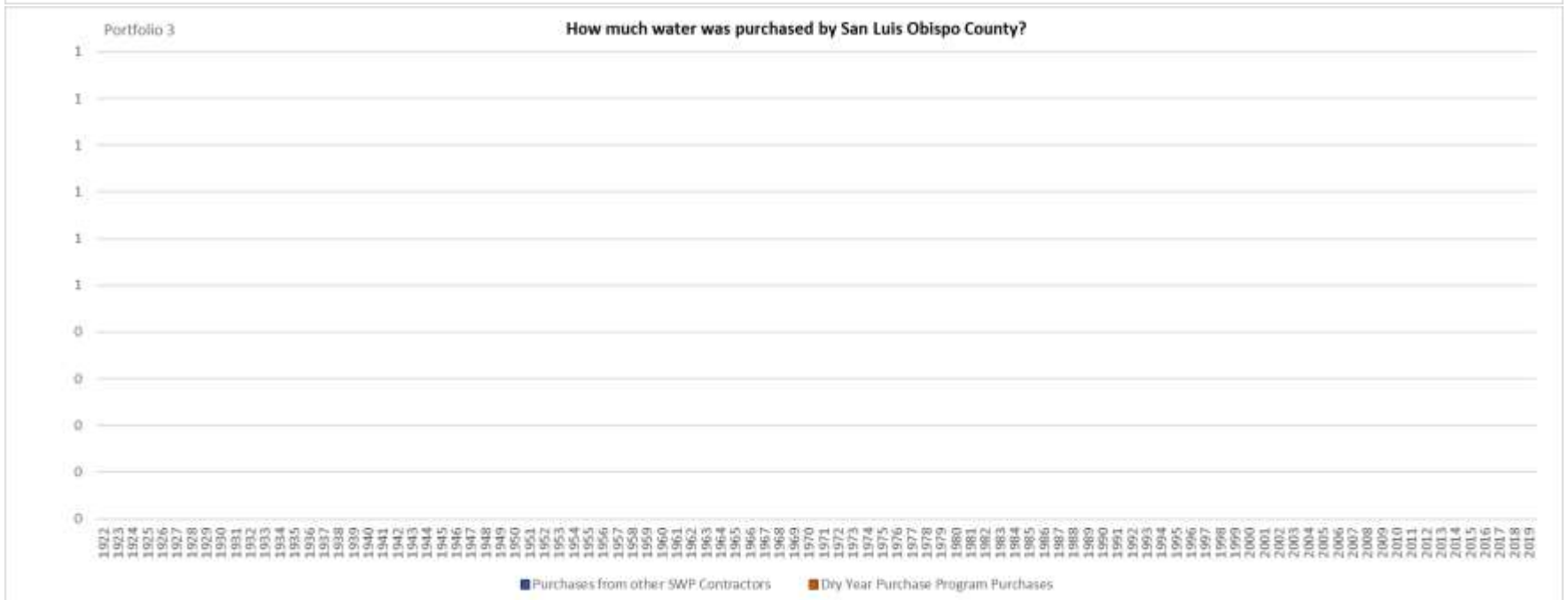

Portfolio 3
When do shortages occur?
1
1
1
1
1
1
0
0
0
0
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Shandon
Chorro Valley
Lopez Pipeline

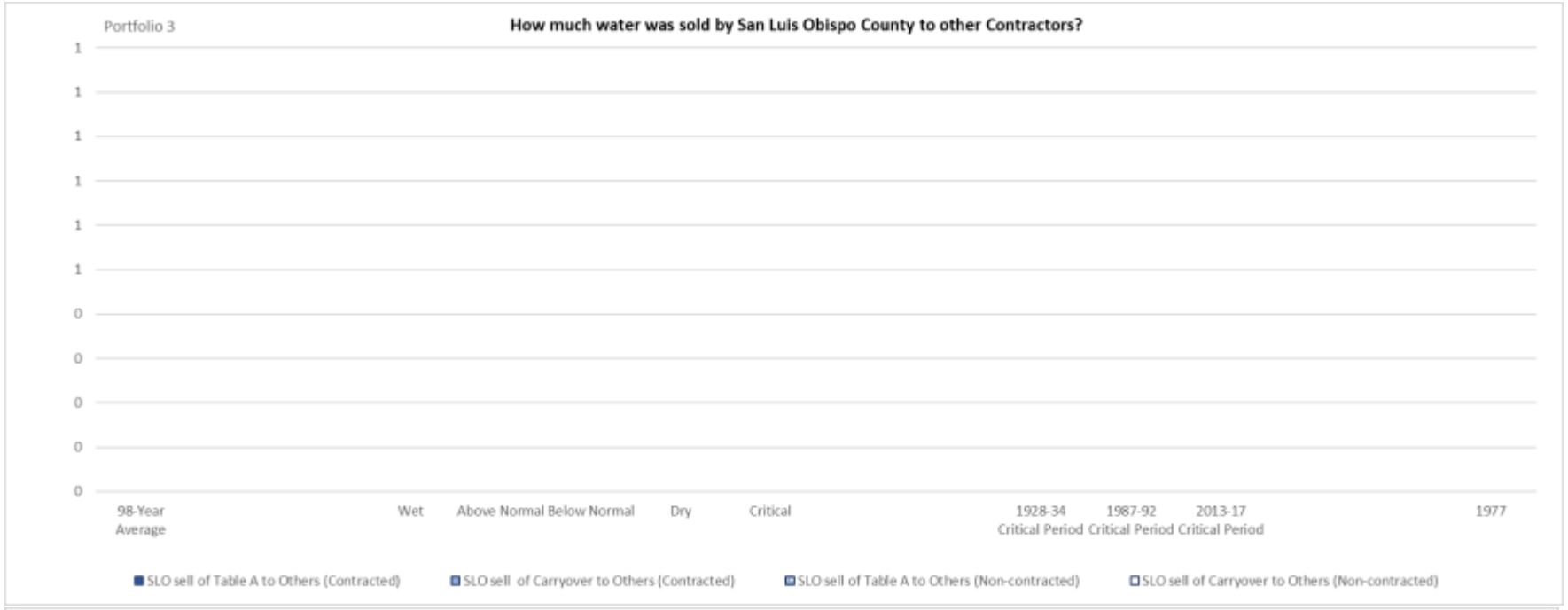

Portfolio 3
When do shortages occur?
1
1
1
1
0
0
0
0
0
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Shandon
Chorro Valley
Lopez Pipeline

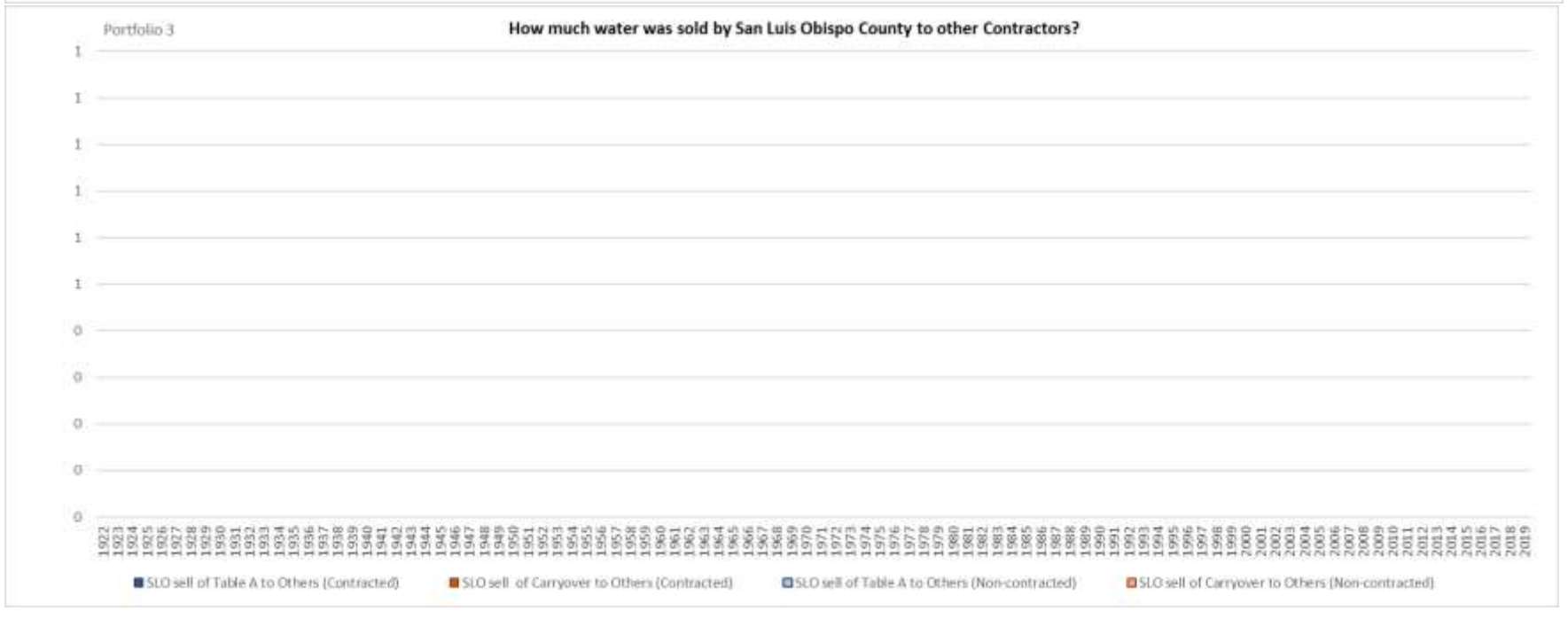

Portfolio 3
How much of CCWA Conveyance Capacity does SLOC need to use?
1,600
1,400
1,200
1,000
800
600
400
200
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Use of CCWA Reach 1 Capacity
Use of CCWA Reach 2 Capacity
Use of CCWA Reach 3 Capacity


Portfolio 3
How much of CCWA Conveyance Capacity does SLOC need to use?
1,600
1,400
1,200
1,000
800
600
400
200
0
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Use of CCWA Reach 1 Capacity
Use of CCWA Reach 2 Capacity
Use of CCWA Reach 3 Capacity


Portfolio 3
How much water was purchased by San Luis Obispo County?
1
1
1
1
1
0
0
0
0
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Purchases from other SWP Contractors
Dry Year Purchase Program Purchases


Portfolio 3
How much water was purchased by San Luis Obispo County?
1
1
1
1
0
0
0
0
0
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Purchases from other SWP Contractors
Dry Year Purchase Program Purchases


Portfolio 3
How much water was sold by San Luis Obispo County to other Contractors?
1
1
1
1
1
0
0
0
0
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
SLO sell of Table A to Others (Contracted)
SLO sell of Carryover to Others (Contracted)
SLO sell of Table A to Others (Non-contracted)
SLO sell of Carryover to Others (Non-contracted)


Portfolio 3
How much water was sold by San Luis Obispo County to other Contractors?
1
1
1
1
1
0
0
0
0
0
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
SLO sell of Table A to Others (Contracted)
SLO sell of Carryover to Others (Contracted)
SLO sell of Table A to Others (Non-contracted)
SLO sell of Carryover to Others (Non-contracted)

Portfolio 4 "Central Coast Integration"

Portfolio 4 provides for a limited implementation of the 2021 Water Management Amendment to the SWP Water Supply Contract. With Portfolio 4, the water management components of Portfolio 3 are supplemented with a limited sales program for SLOFCWCD and CCWA. Sales are allowed between the two Coastal Branch contractors based on an approximate schedule of transfer costs. As would be expected due to relatively low SLOFCWCD demands, the Model identified sales only from SLOFCWCD to CCWA.

Portfolio 4 does not provide any improvement in water supplies or shortages for SLOFCWCD , which were already being completely met in Portfolios 1, 2 and 3. SLOFCWCD does receive additional revenue of $919,151 per year which could be used to offset the fixed costs of its SWP supplies. The limited Central Coast sales program reduces SLOFCWCD 's spills by 1,000 acre-feet per year as compared to Portfolio 3.

Portfolio 4 provides improved water supplies and reduced shortages for CCWA. Deliveries increase by an average of about 1,000 acre-feet per year and shortages are reduced significantly. The costs for the additional purchases averaged $919,151 per year. Spills of unused SWP Table A remain unchanged. Because of the significant amount of unused Table A allocation for the SLOFCWCD service area, this Portfolio represents the greatest improvement in water supply for CCWA. While both Portfolios 2 and 3 represent a jump in water supplies for CCWA of 3.7% (as compared to Portfolio 1), Portfolio 4 results in an 8.3% increase in water supplies when compared to Portfolio 1 for CCWA.

Summary of Portfolio 4 Analysis

Time Period	Central Coast Water Authority (CCWA)							CCWA					CCWA			CCWA			CCWA				CCWA		CCWA	
	Sources of Water Delivered							Fate of Annual Table A Allocation					What Happens to water stored in San Luis Reservoir						How much water is delivered to each turnout			Delivery Shortages				Water Purchases					
	Table A	Carryover Long-Term	Carryover Short-Term	Return from Storage/Exchange Programs External	Return from Storage/Exchange Programs Internal	Transfers from SLOFCWCD	Purchases Dry Year Purchase	Purchases SWP Contractors	Direct Delivery	Storage in San Luis Reservoir Long-Term	Storage in San Luis Reservoir Short-Term	Transfers Sells to SLOFCWCD	Transfers Sells to Others	Carryover Delivered Long-Term	Carryover Delivered Short-Term	Carryover Spilled Long-Term	Carryover Spilled Short-Term	Carryover Sold to Others	North County	Mid County	Lake Cachuma	North County	Mid-County		Lake Cachuma	Transfers from SLOFCWCD Table A and Long-term Carryover	Transfers from SLOFCWCD Short-term Carryover	Other Transfers Dry Year Purchase	Other Transfers SWP Contractors	Sells to Others SLOFCWCD	Sells to Others SWP Contractors
98-Year Summary																														
Total	1,897,045	133,199	-	108,016		129,772	6,535	-	1,897,045	680,488	9,259	-	-	133,199	-	419,043	9,259	-	1,397,617	663,366	213,584	37,201	6,072		-	83,715	46,057	6,535	-	-	-
Average	19,358	1,359	-	1,102		1,324	67	-	19,358	6,944	94	-	-	1,359	-	4,276	94	-	14,261	6,769	2,179	380	62		-	854	470	67	-	-	-
Water Year Averages																														
Wet	22,404	-	-	-		101	-	-	22,404	14,859	309	-	-	-	-	10,327	212	-	14,641	6,831	1,033	-	-		-	8	93	-	-	-	-
Above Normal	22,238	79	-	232		700	-	-	22,238	8,757	-	-	-	79	-	2,335	-	-	14,641	6,831	1,777	-	-		-	700	-	-	-	-	-
Below Normal	21,630	450	-	621		2,335	-	-	21,630	3,814	-	-	-	450	-	4,784	182	-	14,641	6,769	3,626	-	62		-	1,282	1,053	-	-	-	-
Dry	18,187	2,699	-	1,190		1,969	104	-	18,187	2,222	-	-	-	2,699	-	-	-	-	14,334	6,809	3,006	307	22		-	1,437	531	104	-	-	-
Critically Dry	9,946	4,188	-	4,498		2,287	276	-	9,946	-	-	-	-	4,188	-	-	-	-	12,632	6,525	2,038	2,009	306		-	1,340	947	276	-	-	-
Critical Period Averages																														
1928-1934	13,789	1,526	-	2,079		2,374	446	-	13,789	1,351	-	-	-	1,526	-	-	-	-	12,763	6,776	674	1,878	55		-	1,699	675	446	-	-	-
1987-1992	10,705	2,324	-	5,000		2,616	130	-	10,705	136	-	-	-	2,324	-	-	-	-	13,991	6,783	-	651	48		-	1,822	794	130	-	-	-
2013-2017	18,248	2,983	-	4,687		6,123	192	-	18,248	401	-	-	-	2,983	-	-	-	-	10,813	5,850	15,571	3,828	981		-	4,248	1,876	192	-	-	-
1977	2,729	6,618	-	7,500		4,625	-	-	2,729	-	-	-	-	6,618	-	-	-	-	14,641	6,831	-	-	-		-	2,370	2,255	-	-	-	-

Time Period	San Luis Obispo County Flood Control and Water Conservation District (SLOFCWCD)								SLOFCWCD					SLOFCWCD					SLOFCWCD			SLOFCWCD			SLOFCWCD				SLOFCWCD	
	Sources of Water Delivered								Fate of Annual Table A Allocation					What Happens to water stored in San Luis Reservoir					How much water is delivered to each turnout			Delivery Shortages			Water Purchases				Sells to Others	
	Table A	Carryover Long-Term	Carryover Short-Term	Return from Storage/Exchange Programs External	Return from Storage/Exchange Programs Internal	Transfers from CCWA	Purchases Dry Year Purchase	Purchases SWP Contractors	Direct Delivery	Storage in San Luis Reservoir Long-Term	Storage in San Luis Reservoir Short-Term	Transfers Sells to CCWA	Transfers Sells to Others	Carryover Delivered Long-Term	Carryover Delivered Short-Term	Carryover Spilled Long-Term	Carryover Spilled Short-Term	Carryover Sold to Others	Shandon	Chorro Valley	Lopez Pipeline	Shandon	Chorro Valley	Lopez Pipeline	Transfers from SLOFCWCD Dry Year Purchase	Transfers from SLOFCWCD SWP Contractors	Sells to Others CCWA	Sells to Others SWP Contractors
98-Year Summary																														
Total	535,562	15,206	39,536	22,627		-	1,627	-	522,464	281,472	567,447	50,367	-	28,304	39,536	191,604	471,007	79,405	6,566	246,764	361,228	-	-	-	1,627	-	129,772	-
Average	5,465	155	403	231		-	17	-	5,331	2,872	5,790	514	-	289	403	1,955	4,806	810	67	2,518	3,686	-	-	-	17	-	1,324	-
Water Year Averages																														
Wet	6,260	11	-	-		-	-	-	6,260	-	9,070	-	-	11	-	4,098	8,104	93	67	2,518	3,686	-	-	-	-	-	101	-
Above Normal	6,180	-	-	91		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Below Normal	5,629	355	287	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dry	5,143	162	579	326		-	61	-	4,714	-	4,097	-	-	591	579	824	3,395	1,242	67	2,518	3,686	-	-	-	61	-	1,969	-
Critically Dry	3,526	363	1,442	925		-	15	-	3,311	-	1,254	-	-	579	1,442	-	204	1,671	67	2,518	3,686	-	-	-	15	-	2,287	-
Critical Period Averages																														
1928-1934	4,918	-	902	357		-	94	-	4,862	747	1,577	1,135	-	56	902	518	949	1,239	67	2,518	3,686	-	-	-	94	-	2,374	-
1987-1992	3,655	168	1,068	1,380		-	-	-	3,178	571	1,482	728	-	645	1,068	-	524	1,887	67	2,518	3,686	-	-	-	-	-	2,616	-
2013-2017	4,134	547	73	1,500		-	17	-	3,773	2,030	1,853	2,594	-	909	73	-	-	3,529	67	2,518	3,686	-	-	-	17	-	6,123	-
1977	632	1,143	3,169	1,327		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Periods	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
1922	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1923	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1924	6,368	11,756	-	417	18,541	-	2,451	480	-	2,931	2,876	-	3,169	-	6,045	-	-	-
1925	11,826	-	-	-	11,826	7,035	398	1,199	-	8,632	4,410	-	226	976	5,612	-	-	-
1926	18,194	-	-	-	18,194	3,278	-	-	-	3,278	6,271	-	-	-	6,271	-	-	-
1927	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1928	21,472	-	-	-	21,472	4,720	-	-	-	4,720	6,271	-	-	-	6,271	-	-	-
1929	14,101	6,569	-	-	20,670	802	-	-	-	802	3,656	-	2,615	-	6,271	-	-	-
1930	6,368	1,678	-	-	8,046	3,778	2,402	1,199	-	7,379	2,151	-	961	2,500	5,612	-	-	-
1931	17,740	2,436	-	816	20,992	-	-	480	-	480	6,271	-	-	-	6,271	-	-	-
1932	11,372	-	-	6,162	17,534	1,134	2,324	480	-	3,938	5,830	-	441	-	6,271	-	-	-
1933	18,194	-	-	513	18,707	1,434	-	480	-	1,914	6,271	-	-	-	6,271	-	-	-
1934	7,278	-	-	7,061	14,339	24	-	480	-	504	3,976	-	2,295	-	6,271	-	-	-
1935	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1936	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1937	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1938	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1939	17,285	4,187	-	-	21,472	-	-	-	-	-	4,004	875	1,392	-	6,271	-	-	-
1940	21,472	-	-	-	21,472	-	-	-	-	-	6,006	-	-	265	6,271	-	-	-
1941	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1942	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1943	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1944	16,830	4,642	-	-	21,472	-	-	-	-	-	4,996	1,275	-	-	6,271	-	-	-
1945	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1946	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1947	25,472	8,655	-	2,777	36,904	-	-	-	-	-	6,220	51	-	-	6,271	-	-	-
1948	21,833	-	-	7,449	29,282	3,414	4,157	-	-	7,571	5,058	-	1,213	-	6,271	-	-	-
1949	15,920	1,821	-	7,500	25,241	4,838	1,970	-	-	6,808	5,452	-	623	196	6,271	-	-	-
1950	22,743	-	-	7,500	30,243	5,216	480	-	-	5,696	5,268	422	-	581	6,271	-	-	-
1951	33,660	-	-	3,244	36,904	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1952	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-

	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
Periods	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
1953	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1954	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1955	18,194	3,278	-	-	21,472	-	-	-	-	-	5,005	575	691	-	6,271	-	-	-
1956	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1957	21,472	-	-	-	21,472	-	-	-	-	-	5,268	-	-	1,003	6,271	-	-	-
1958	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1959	20,469	1,003	-	-	21,472	-	-	-	-	-	5,480	791	-	-	6,271	-	-	-
1960	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1961	14,556	4,826	-	2,090	21,472	-	-	-	-	-	3,372	-	2,899	-	6,271	-	-	-
1962	21,472	-	-	-	21,472	-	-	-	-	-	5,374	435	462	-	6,271	-	-	-
1963	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1964	21,472	486	-	-	21,958	-	-	-	-	-	6,217	54	-	-	6,271	-	-	-
1965	21,472	-	-	-	21,472	-	-	-	-	-	5,936	335	-	-	6,271	-	-	-
1966	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1967	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1968	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1969	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1970	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1971	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1972	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1973	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1974	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1975	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1976	21,472	5,476	-	-	26,948	-	-	-	-	-	5,268	-	1,003	-	6,271	-	-	-
1977	2,729	6,618	-	7,500	16,847	2,370	2,255	-	-	4,625	632	1,143	3,169	1,327	6,271	-	-	-
1978	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1979	21,472	5,569	-	-	27,041	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1980	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1981	18,194	4,472	-	-	22,666	-	-	-	-	-	5,085	1,186	-	-	6,271	-	-	-
1982	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-

	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
Periods	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
1983	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1984	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1985	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1986	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1987	12,736	6,338	-	-	19,074	1,806	592	-	-	2,398	4,410	172	1,689	-	6,271	-	-	-
1988	5,003	6,787	-	7,500	19,290	2,182	-	-	-	2,182	2,357	835	3,038	41	6,271	-	-	-
1989	21,472	-	-	-	21,472	-	-	-	-	-	5,533	-	-	738	6,271	-	-	-
1990	5,913	816	-	7,500	14,229	3,052	4,032	159	-	7,243	2,488	-	1,283	2,500	6,271	-	-	-
1991	11,372	-	-	7,500	18,872	2,462	-	138	-	2,600	3,372	-	399	2,500	6,271	-	-	-
1992	7,733	-	-	7,500	15,233	1,429	138	480	-	2,047	3,771	-	-	2,500	6,271	-	-	-
1993	21,472	-	-	-	21,472	4,730	-	-	-	4,730	6,271	-	-	-	6,271	-	-	-
1994	14,101	7,371	-	-	21,472	-	-	-	-	-	3,266	737	2,268	-	6,271	-	-	-
1995	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1996	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1997	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1998	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1999	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2000	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2001	11,826	9,646	-	-	21,472	-	-	-	-	-	3,102	-	3,169	-	6,271	-	-	-
2002	19,559	1,913	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2003	20,014	1,104	-	-	21,118	354	-	-	-	354	6,271	-	-	-	6,271	-	-	-
2004	20,469	-	-	-	20,469	-	1,003	-	-	1,003	4,742	-	1,529	-	6,271	-	-	-
2005	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2006	21,606	-	-	-	21,606	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2007	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2008	15,920	5,552	-	-	21,472	-	-	-	-	-	3,688	-	2,583	-	6,271	-	-	-
2009	18,194	3,278	-	-	21,472	-	-	-	-	-	4,215	-	2,056	-	6,271	-	-	-
2010	21,472	-	-	-	21,472	-	-	-	-	-	5,271	1,000	-	-	6,271	-	-	-
2011	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2012	29,566	-	-	1,553	31,119	-	5,785	-	-	5,785	6,271	-	-	-	6,271	-	-	-

Periods	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
2013	15,920	-	-	7,500	23,420	7,106	6,378	-	-	13,484	3,688	-	-	2,500	6,188	-	-	-
2014	2,274	11,698	-	7,500	21,472	2,246	2,390	480	-	5,116	2,335	1,185	251	2,500	6,271	-	-	-
2015	9,097	3,219	-	7,500	19,816	2,962	611	480	-	4,053	2,107	1,552	112	2,500	6,271	-	-	-
2016	27,292	-	-	934	28,226	8,678	-	-	-	8,678	6,271	-	-	-	6,271	-	-	-
2017	36,658	-	-	-	36,658	246	-	-	-	246	6,271	-	-	-	6,271	-	-	-
2018	15,920	2,005	-	-	17,925	8,419	5,901	-	-	14,320	3,688	2,583	-	-	6,271	-	-	-
2019	34,114	-	-	-	34,114	-	2,790	-	-	2,790	6,271	-	-	-	6,271	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sum	1,897,045	133,199	-	108,016	2,138,260	83,715	46,057	6,535	-	136,307	535,562	15,206	39,536	22,627	612,931	-	-	-
Average	19,358	1,359	-	1,102	21,819	854	470	67	-	1,391	5,465	155	403	231	6,254	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Year Averages	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wet	22,404	-	-	-	22,404	8	93	-	-	101	6,260	11	-	-	6,271	-	-	-
Above Normal	22,238	79	-	232	22,549	700	-	-	-	700	6,180	-	-	91	6,271	-	-	-
Below Normal	21,630	450	-	621	22,701	1,282	1,053	-	-	2,335	5,629	355	287	-	6,271	-	-	-
Dry	18,187	2,699	-	1,190	22,076	1,437	531	104	-	2,073	5,143	162	579	326	6,210	-	-	-
Critically Dry	9,946	4,188	-	4,498	18,632	1,340	947	276	-	2,562	3,526	363	1,442	925	6,256	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Period Averages	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928-34	13,789	1,526	-	2,079	17,394	1,699	675	446	-	2,820	4,918	-	902	357	6,177	-	-	-
1987-92	10,705	2,324	-	5,000	18,028	1,822	794	130	-	2,745	3,655	168	1,068	1,380	6,271	-	-	-
2013-17	18,248	2,983	-	4,687	25,918	4,248	1,876	192	-	6,315	4,134	547	73	1,500	6,254	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Driest 1-Year	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1977	2,729	6,618	-	7,500	16,847	2,370	2,255	-	-	4,625	632	1,143	3,169	1,327	6,271	-	-	-

	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
Periods	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
1922	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1923	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1924	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1925	20,458	-	5,595	676	67	67	20,458	-	5,466	738	2,518	2,518	20,458	-	3,686	-	3,686	3,686
1926	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1927	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1928	26,192	-	5,595	676	67	67	26,192	-	5,466	738	2,518	2,518	26,192	-	3,686	-	3,686	3,686
1929	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1930	15,425	-	5,595	676	67	67	15,425	-	5,466	738	2,518	2,518	15,425	-	3,686	-	3,686	3,686
1931	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1932	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1933	20,621	-	5,595	676	67	67	20,621	-	5,466	738	2,518	2,518	20,621	-	3,686	-	3,686	3,686
1934	14,843	-	5,595	676	67	67	14,843	-	5,466	738	2,518	2,518	14,843	-	3,686	-	3,686	3,686
1935	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1936	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1937	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1938	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1939	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1940	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1941	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1942	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1943	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1944	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1945	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1946	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1947	36,904	-	5,595	676	67	67	36,904	-	5,466	738	2,518	2,518	36,658	246	3,686	-	3,686	3,686
1948	36,853	-	5,595	676	67	67	36,853	-	5,466	738	2,518	2,518	36,658	195	3,686	-	3,686	3,686
1949	32,049	-	5,595	676	67	67	32,049	-	5,466	738	2,518	2,518	32,049	-	3,686	-	3,686	3,686
1950	35,939	-	5,595	676	67	67	35,939	-	5,466	738	2,518	2,518	35,939	-	3,686	-	3,686	3,686
1951	36,904	-	5,595	676	67	67	36,904	-	5,466	738	2,518	2,518	36,658	246	3,686	-	3,686	3,686
1952	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686

	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
Periods	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
1953	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1954	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1955	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1956	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1957	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1958	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1959	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1960	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1961	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1962	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1963	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1964	21,958	-	5,595	676	67	67	21,958	-	5,466	738	2,518	2,518	21,958	-	3,686	-	3,686	3,686
1965	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1966	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1967	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1968	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1969	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1970	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1971	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1972	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1973	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1974	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1975	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1976	26,948	-	5,595	676	67	67	26,948	-	5,466	738	2,518	2,518	26,948	-	3,686	-	3,686	3,686
1977	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1978	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1979	27,041	-	5,595	676	67	67	27,041	-	5,466	738	2,518	2,518	27,041	-	3,686	-	3,686	3,686
1980	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1981	22,666	-	5,595	676	67	67	22,666	-	5,466	738	2,518	2,518	22,666	-	3,686	-	3,686	3,686
1982	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686

	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
Periods	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
1983	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1984	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1985	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1986	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1987	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1988	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1989	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1990	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1991	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1992	17,280	-	5,595	676	67	67	17,280	-	5,466	738	2,518	2,518	17,280	-	3,686	-	3,686	3,686
1993	26,202	-	5,595	676	67	67	26,202	-	5,466	738	2,518	2,518	26,202	-	3,686	-	3,686	3,686
1994	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1995	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1996	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1997	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1998	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1999	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2000	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2001	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2002	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2003	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2004	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2005	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2006	21,606	-	5,595	676	67	67	21,606	-	5,466	738	2,518	2,518	21,606	-	3,686	-	3,686	3,686
2007	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2008	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2009	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2010	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2011	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2012	36,904	-	5,595	676	67	67	36,904	-	5,466	738	2,518	2,518	36,658	246	3,686	-	3,686	3,686

Periods	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
2013	36,904	-	5,595	676	67	67	36,904	-	5,466	738	2,518	2,518	36,658	246	3,686	-	3,686	3,686
2014	26,588	-	5,595	676	67	67	26,588	-	5,466	738	2,518	2,518	26,588	-	3,686	-	3,686	3,686
2015	23,869	-	5,595	676	67	67	23,869	-	5,466	738	2,518	2,518	23,869	-	3,686	-	3,686	3,686
2016	36,904	-	5,595	676	67	67	36,904	-	5,466	738	2,518	2,518	36,658	246	3,686	-	3,686	3,686
2017	36,904	-	5,595	676	67	67	36,904	-	5,466	738	2,518	2,518	36,658	246	3,686	-	3,686	3,686
2018	32,245	-	5,595	676	67	67	32,245	-	5,466	738	2,518	2,518	32,245	-	3,686	-	3,686	3,686
2019	36,904	-	5,595	676	67	67	36,904	-	5,466	738	2,518	2,518	36,658	246	3,686	-	3,686	3,686
Sum	2,274,567	-	548,310	66,248	6,566	6,566	2,274,567	-	535,668	72,324	246,764	246,764	2,272,650	1,917	361,228	-	361,228	361,228
Average	23,210	-	5,595	676	67	67	23,210	-	5,466	738	2,518	2,518	23,190	20	3,686	-	3,686	3,686
Water Year Averages																		
Wet	22,505	-	5,595	676	67	67	22,505	-	5,466	738	2,518	2,518	22,489	16	3,686	-	3,686	3,686
Above Normal	23,249	-	5,595	676	67	67	23,249	-	5,466	738	2,518	2,518	23,232	18	3,686	-	3,686	3,686
Below Normal	25,036	-	5,595	676	67	67	25,036	-	5,466	738	2,518	2,518	24,993	43	3,686	-	3,686	3,686
Dry	24,149	-	5,595	676	67	67	24,149	-	5,466	738	2,518	2,518	24,128	21	3,686	-	3,686	3,686
Critically Dry	21,195	-	5,595	676	67	67	21,195	-	5,466	738	2,518	2,518	21,195	-	3,686	-	3,686	3,686
													-	-				
Critical Period Averages													-	-				
1928-34	20,214	-	5,595	676	67	67	20,214	-	5,466	738	2,518	2,518	20,214	-	3,686	-	3,686	3,686
1987-92	20,773	-	5,595	676	67	67	20,773	-	5,466	738	2,518	2,518	20,773	-	3,686	-	3,686	3,686
2013-17	32,234	-	5,595	676	67	67	32,234	-	5,466	738	2,518	2,518	32,086	148	3,686	-	3,686	3,686
Driest 1-Year																		
1977	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686

	Reach 4 Operations			Reach 5 Operations			Lake Cachuma Operations						
	CCWA			CCWA									
Periods	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
1922	21,472	14,641	14,641	6,831	6,831	6,831	-	192,009	11,277	196,000	14,000	30,000	30,000
1923	21,472	14,641	14,641	6,831	6,831	6,831	-	54,915	13,060	193,855	14,000	30,000	30,000
1924	21,472	14,641	14,641	6,831	6,831	6,831	-	-	11,956	137,899	14,000	30,000	30,000
1925	20,458	13,627	14,641	6,831	6,831	6,831	-	19,917	10,241	103,575	14,000	30,000	30,000
1926	21,472	14,641	14,641	6,831	6,831	6,831	-	88,712	10,244	138,043	14,000	30,000	30,000
1927	21,472	14,641	14,641	6,831	6,831	6,831	-	96,630	11,677	178,996	14,000	30,000	30,000
1928	26,192	14,641	14,641	11,551	6,831	6,831	4,720	38,724	12,214	166,226	14,000	30,000	30,000
1929	21,472	14,641	14,641	6,831	6,831	6,831	-	35,543	11,595	146,174	14,000	30,000	30,000
1930	15,425	8,594	14,641	6,831	6,831	6,831	-	24,442	10,647	115,969	14,000	30,000	30,000
1931	21,472	14,641	14,641	6,831	6,831	6,831	-	19,422	9,434	81,957	14,000	30,000	30,000
1932	21,472	14,641	14,641	6,831	6,831	6,831	-	132,123	10,274	159,806	14,000	30,000	30,000
1933	20,621	13,790	14,641	6,831	6,831	6,831	-	12,988	10,962	117,832	14,000	30,000	30,000
1934	14,843	8,395	14,641	6,448	6,448	6,831	-	36,250	9,837	100,245	14,000	30,000	30,000
1935	21,472	14,641	14,641	6,831	6,831	6,831	-	106,812	10,504	152,553	14,000	30,000	30,000
1936	21,472	14,641	14,641	6,831	6,831	6,831	-	49,754	11,397	146,910	14,000	30,000	30,000
1937	21,472	14,641	14,641	6,831	6,831	6,831	-	152,344	12,197	196,000	14,000	30,000	30,000
1938	21,472	14,641	14,641	6,831	6,831	6,831	-	186,211	13,101	196,000	14,000	30,000	30,000
1939	21,472	14,641	14,641	6,831	6,831	6,831	-	41,411	12,808	180,603	14,000	30,000	30,000
1940	21,472	14,641	14,641	6,831	6,831	6,831	-	29,816	12,018	154,401	14,000	30,000	30,000
1941	21,472	14,641	14,641	6,831	6,831	6,831	-	368,484	12,311	196,000	14,000	30,000	30,000
1942	21,472	14,641	14,641	6,831	6,831	6,831	-	30,806	12,611	170,195	14,000	30,000	30,000
1943	21,472	14,641	14,641	6,831	6,831	6,831	-	161,889	12,611	196,000	14,000	30,000	30,000
1944	21,472	14,641	14,641	6,831	6,831	6,831	-	104,761	13,101	196,000	14,000	30,000	30,000
1945	21,472	14,641	14,641	6,831	6,831	6,831	-	45,795	12,890	184,905	14,000	30,000	30,000
1946	21,472	14,641	14,641	6,831	6,831	6,831	-	75,561	12,890	196,000	14,000	30,000	30,000
1947	36,904	14,641	14,641	22,263	6,831	6,831	15,432	10,655	12,523	165,564	14,000	30,000	30,000
1948	36,853	14,641	14,641	22,212	6,831	6,831	15,381	-	11,188	125,757	14,000	30,000	30,000
1949	32,049	14,641	14,641	17,408	6,831	6,831	10,577	3,514	9,680	86,168	14,000	30,000	30,000
1950	35,939	14,641	14,641	21,298	6,831	6,831	14,467	13,837	8,468	62,004	14,000	30,000	30,000
1951	36,904	14,641	14,641	22,263	6,831	6,831	15,432	-	7,327	26,109	14,000	30,000	30,000
1952	21,472	14,641	14,641	6,831	6,831	6,831	-	246,309	9,873	196,000	14,000	30,000	30,000

	Reach 4 Operations			Reach 5 Operations			Lake Cachuma Operations						
	CCWA			CCWA									
Periods	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
1953	21,472	14,641	14,641	6,831	6,831	6,831	-	12,635	12,272	152,363	14,000	30,000	30,000
1954	21,472	14,641	14,641	6,831	6,831	6,831	-	42,047	11,193	139,217	14,000	30,000	30,000
1955	21,472	14,641	14,641	6,831	6,831	6,831	-	48,976	10,832	133,361	14,000	30,000	30,000
1956	21,472	14,641	14,641	6,831	6,831	6,831	-	65,238	10,917	143,682	14,000	30,000	30,000
1957	21,472	14,641	14,641	6,831	6,831	6,831	-	30,099	10,647	119,134	14,000	30,000	30,000
1958	21,472	14,641	14,641	6,831	6,831	6,831	-	265,046	11,641	196,000	14,000	30,000	30,000
1959	21,472	14,641	14,641	6,831	6,831	6,831	-	21,331	12,434	160,897	14,000	30,000	30,000
1960	21,472	14,641	14,641	6,831	6,831	6,831	-	3,797	10,798	109,896	14,000	30,000	30,000
1961	21,472	14,641	14,641	6,831	6,831	6,831	-	-	8,825	57,071	14,000	30,000	30,000
1962	21,472	14,641	14,641	6,831	6,831	6,831	-	152,344	9,696	155,719	14,000	30,000	30,000
1963	21,472	14,641	14,641	6,831	6,831	6,831	-	27,977	11,056	128,640	14,000	30,000	30,000
1964	21,958	14,641	14,641	7,317	6,831	6,831	486	11,857	9,755	87,228	14,000	30,000	30,000
1965	21,472	14,641	14,641	6,831	6,831	6,831	-	57,744	9,057	91,915	14,000	30,000	30,000
1966	21,472	14,641	14,641	6,831	6,831	6,831	-	106,812	10,148	144,579	14,000	30,000	30,000
1967	21,472	14,641	14,641	6,831	6,831	6,831	-	173,909	12,125	196,000	14,000	30,000	30,000
1968	21,472	14,641	14,641	6,831	6,831	6,831	-	3,231	12,097	143,134	14,000	30,000	30,000
1969	21,472	14,641	14,641	6,831	6,831	6,831	-	309,518	12,097	196,000	14,000	30,000	30,000
1970	21,472	14,641	14,641	6,831	6,831	6,831	-	19,776	12,405	159,371	14,000	30,000	30,000
1971	21,472	14,641	14,641	6,831	6,831	6,831	-	55,764	11,710	159,425	14,000	30,000	30,000
1972	21,472	14,641	14,641	6,831	6,831	6,831	-	7,261	10,808	111,878	14,000	30,000	30,000
1973	21,472	14,641	14,641	6,831	6,831	6,831	-	167,263	11,503	196,000	14,000	30,000	30,000
1974	21,472	14,641	14,641	6,831	6,831	6,831	-	75,349	13,101	196,000	14,000	30,000	30,000
1975	21,472	14,641	14,641	6,831	6,831	6,831	-	92,176	13,101	196,000	14,000	30,000	30,000
1976	26,948	14,641	14,641	12,307	6,831	6,831	5,476	3,868	12,213	149,131	14,000	30,000	30,000
1977	21,472	14,641	14,641	6,831	6,831	6,831	-	37,805	11,001	131,935	14,000	30,000	30,000
1978	21,472	14,641	14,641	6,831	6,831	6,831	-	308,669	11,890	196,000	14,000	30,000	30,000
1979	27,041	14,641	14,641	12,400	6,831	6,831	5,569	99,953	13,101	196,000	14,000	30,000	30,000
1980	21,472	14,641	14,641	6,831	6,831	6,831	-	152,203	13,101	196,000	14,000	30,000	30,000
1981	22,666	14,641	14,641	8,025	6,831	6,831	1,194	51,875	13,026	192,043	14,000	30,000	30,000
1982	21,472	14,641	14,641	6,831	6,831	6,831	-	58,238	12,976	193,305	14,000	30,000	30,000

Periods	Reach 4 Operations			Reach 5 Operations			Lake Cachuma Operations						
	CCWA			CCWA									
	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
1983	21,472	14,641	14,641	6,831	6,831	6,831	-	356,323	13,051	196,000	14,000	30,000	30,000
1984	21,472	14,641	14,641	6,831	6,831	6,831	-	28,826	12,574	168,252	14,000	30,000	30,000
1985	21,472	14,641	14,641	6,831	6,831	6,831	-	16,877	11,316	129,813	14,000	30,000	30,000
1986	21,472	14,641	14,641	6,831	6,831	6,831	-	112,114	11,659	186,268	14,000	30,000	30,000
1987	21,472	14,641	14,641	6,831	6,831	6,831	-	-	11,673	130,595	14,000	30,000	30,000
1988	21,472	14,641	14,641	6,831	6,831	6,831	-	72,521	10,949	148,167	14,000	30,000	30,000
1989	21,472	14,641	14,641	6,831	6,831	6,831	-	403	10,260	94,310	14,000	30,000	30,000
1990	21,472	14,641	14,641	6,831	6,831	6,831	-	-	8,244	42,066	14,000	30,000	30,000
1991	21,472	14,641	14,641	6,831	6,831	6,831	-	108,933	8,327	98,672	14,000	30,000	30,000
1992	17,280	10,738	14,641	6,542	6,542	6,831	-	167,121	11,252	196,000	14,000	30,000	30,000
1993	26,202	14,641	14,641	11,561	6,831	6,831	4,730	334,360	13,101	196,000	14,000	30,000	30,000
1994	21,472	14,641	14,641	6,831	6,831	6,831	-	15,575	12,327	155,248	14,000	30,000	30,000
1995	21,472	14,641	14,641	6,831	6,831	6,831	-	366,102	12,327	196,000	14,000	30,000	30,000
1996	21,472	14,641	14,641	6,831	6,831	6,831	-	41,187	12,804	180,383	14,000	30,000	30,000
1997	21,472	14,641	14,641	6,831	6,831	6,831	-	59,768	12,568	183,583	14,000	30,000	30,000
1998	21,472	14,641	14,641	6,831	6,831	6,831	-	465,884	12,865	196,000	14,000	30,000	30,000
1999	21,472	14,641	14,641	6,831	6,831	6,831	-	18,239	12,376	157,863	14,000	30,000	30,000
2000	21,472	14,641	14,641	6,831	6,831	6,831	-	51,869	11,581	154,151	14,000	30,000	30,000
2001	21,472	14,641	14,641	6,831	6,831	6,831	-	151,409	12,306	196,000	14,000	30,000	30,000
2002	21,472	14,641	14,641	6,831	6,831	6,831	-	6,421	12,156	146,265	14,000	30,000	30,000
2003	21,472	14,641	14,641	6,831	6,831	6,831	-	17,144	10,501	108,908	14,000	30,000	30,000
2004	21,472	14,641	14,641	6,831	6,831	6,831	-	18,695	9,137	74,466	14,000	30,000	30,000
2005	21,472	14,641	14,641	6,831	6,831	6,831	-	388,819	10,792	196,000	14,000	30,000	30,000
2006	21,606	14,641	14,641	6,965	6,831	6,831	134	100,283	13,101	196,000	14,000	30,000	30,000
2007	21,472	14,641	14,641	6,831	6,831	6,831	-	4,920	12,128	144,792	14,000	30,000	30,000
2008	21,472	14,641	14,641	6,831	6,831	6,831	-	108,331	12,128	196,000	14,000	30,000	30,000
2009	21,472	14,641	14,641	6,831	6,831	6,831	-	13,188	12,282	152,906	14,000	30,000	30,000
2010	21,472	14,641	14,641	6,831	6,831	6,831	-	75,948	11,845	173,009	14,000	30,000	30,000
2011	21,472	14,641	14,641	6,831	6,831	6,831	-	131,349	12,664	196,000	14,000	30,000	30,000
2012	36,904	14,641	14,641	22,263	6,336	6,831	15,927	6,429	12,453	161,903	14,000	30,000	30,000

Periods	Reach 4 Operations CCWA			Reach 5 Operations CCWA			Lake Cachuma Operations						
	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
2013	36,904	14,641	14,641	22,263	6,336	6,831	15,927	3,520	11,127	126,223	14,000	30,000	30,000
2014	26,588	5,599	14,641	20,989	5,248	6,831	15,741	3,942	9,801	92,105	14,000	30,000	30,000
2015	23,869	4,543	14,641	19,326	4,499	6,831	14,827	2,264	8,481	56,715	14,000	30,000	30,000
2016	36,904	14,641	14,641	22,263	6,336	6,831	15,927	4,694	7,227	26,109	14,000	30,000	30,000
2017	36,904	14,641	14,641	22,263	6,831	6,831	15,432	87,303	7,616	77,228	14,000	30,000	30,000
2018	32,245	14,641	14,641	17,604	6,831	6,831	10,773	3,373	7,875	39,499	14,000	30,000	30,000
2019	36,904	14,641	14,641	22,263	6,831	6,831	15,432	104,953	8,462	107,422	14,000	30,000	30,000
Sum	2,274,567	1,397,617	1,434,818	876,950	663,366	669,438	213,584	8,291,482	1,107,778	14,568,591	1,372,000	2,940,000	2,940,000
Average	23,210	14,261	14,641	8,948	6,769	6,831	2,179	84,607	11,304	148,659	14,000	30,000	30,000
Water Year Averages													
Wet	22,505	14,641	14,641	7,864	6,831	6,831	1,033	142,380	11,877	173,330	14,000	30,000	30,000
Above Normal	23,249	14,641	14,641	8,608	6,831	6,831	1,777	123,800	11,460	158,796	14,000	30,000	30,000
Below Normal	25,036	14,641	14,641	10,395	6,769	6,831	3,626	38,054	11,024	134,565	14,000	30,000	30,000
Dry	24,149	14,334	14,641	9,815	6,809	6,831	3,006	40,225	11,221	136,161	14,000	30,000	30,000
Critically Dry	21,195	12,632	14,641	8,563	6,525	6,831	2,038	50,188	10,438	124,055	14,000	30,000	30,000
Critical Period Averages													
1928-34	20,214	12,763	14,641	7,451	6,776	6,831	674	42,785	10,709	126,887	14,000	30,000	30,000
1987-92	20,773	13,991	14,641	6,783	6,783	6,831	-	58,163	10,118	118,302	14,000	30,000	30,000
2013-17	32,234	10,813	14,641	21,421	5,850	6,831	15,571	20,345	8,850	75,676	14,000	30,000	30,000
Driest 1-Year													
1977	21,472	14,641	14,641	6,831	6,831	6,831	-	37,805	11,001	131,935	14,000	30,000	30,000

Periods	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
1922	2,752	-	-	-	10,124	-	-	-	-	7,616	-	993	1,105	-	144
1923	9,004	-	-	-	9,690	-	-	-	9,249	-	-	-	789	-	103
1924	-	11,756	-	-	624	3,169	2,451	-	-	-	417	-	-	-	-
1925	-	-	-	-	-	1,316	4,253	-	-	-	-	-	-	976	-
1926	-	-	-	-	451	-	-	-	-	-	-	-	-	-	-
1927	1,225	-	-	-	10,269	-	-	-	451	9,598	-	1,252	1,210	-	158
1928	9,458	-	-	-	5,115	-	-	-	10,269	-	-	-	894	-	117
1929	-	6,569	-	-	4,484	3,005	802	-	-	-	-	-	-	-	-
1930	-	1,678	-	-	-	961	4,831	-	-	-	-	-	-	2,500	-
1931	-	2,436	-	-	3,479	-	-	-	-	-	816	-	-	-	-
1932	-	-	-	-	-	441	3,038	-	-	-	6,162	-	-	-	-
1933	-	-	-	-	2,295	-	-	-	-	-	513	-	-	-	-
1934	-	-	-	-	-	2,295	-	-	-	-	7,061	-	-	-	-
1935	5,372	-	-	-	11,715	-	-	-	-	10,000	-	1,304	2,264	-	295
1936	-	-	-	5,193	6,979	-	-	-	11,715	2,636	-	344	-	-	-
1937	1,733	-	-	-	10,558	-	-	-	6,922	10,000	-	1,304	1,421	-	185
1938	18,981	-	-	1,912	16,308	-	-	-	10,615	5,033	-	605	2,421	-	302
1939	-	4,187	-	10,608	5,496	2,267	-	-	11,740	-	-	-	-	-	-
1940	1,732	-	-	-	8,244	-	-	-	4,541	2,723	-	355	-	265	-
1941	20,830	-	-	5,918	16,979	-	-	-	11,500	-	-	-	-	-	-
1942	13,097	-	-	16,456	12,729	-	-	-	14,575	-	-	-	-	-	-
1943	17,021	-	-	17,471	14,294	-	-	-	15,133	1,990	-	-	1,685	-	-
1944	-	4,642	-	-	5,351	2,372	-	-	7,839	-	-	-	-	-	-
1945	9,913	-	-	11,742	10,979	-	-	-	9,085	-	-	-	-	-	-
1946	5,820	-	-	5,894	8,729	-	-	-	10,906	-	-	-	-	-	-
1947	-	8,655	-	-	8,099	370	-	-	7,780	-	2,777	-	-	-	-
1948	-	-	-	-	3,528	1,213	4,157	-	218	-	7,449	-	-	-	-
1949	-	1,821	-	-	1,746	2,387	3,492	-	-	-	7,500	-	-	196	-
1950	-	-	-	-	2,793	422	1,257	-	-	-	7,500	-	-	581	-
1951	-	-	-	-	12,229	-	-	-	4,021	-	3,244	-	-	-	-
1952	16,700	-	-	-	16,979	-	-	-	12,229	4,130	-	539	-	-	-

Periods	San Luis Reservoir Operations								External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir				CCWA Use			SLOFCWCD Use		
	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
1953	-	-	-	14,216	8,729	-	-	-	16,912	5,820	-	759	-	-	-
1954	794	-	-	-	9,979	-	-	-	8,678	7,300	-	952	-	-	-
1955	-	3,278	-	-	5,785	2,056	-	-	7,754	-	-	-	-	-	-
1956	8,556	-	-	-	15,729	-	-	-	6,072	10,000	-	1,304	-	-	-
1957	-	-	-	-	7,232	-	-	-	10,261	1,271	-	166	-	1,003	-
1958	24,014	-	-	8,556	16,078	-	-	-	12,700	-	-	-	2,651	-	-
1959	-	1,003	-	19,456	5,770	791	-	-	14,463	-	-	-	-	-	-
1960	1,271	-	-	-	6,229	-	-	-	5,747	-	-	-	-	-	-
1961	-	4,826	-	-	4,628	2,899	-	-	1,522	-	2,090	-	-	-	-
1962	1,726	-	-	-	7,376	897	-	-	3,256	-	-	-	-	-	-
1963	2,167	-	-	1,726	9,699	-	-	-	10,506	5,472	-	-	30	-	-
1964	5,365	486	-	-	8,533	54	-	-	8,722	-	-	-	-	-	-
1965	2,181	-	-	7,046	7,064	335	-	-	9,121	-	-	-	-	-	-
1966	8,733	-	-	2,181	11,479	-	-	-	7,064	2,090	-	273	-	-	-
1967	22,195	-	-	8,733	16,004	-	-	-	11,479	-	-	-	1,725	-	-
1968	6,729	-	-	18,170	9,229	-	-	-	13,792	-	-	-	-	-	-
1969	24,014	-	-	10,754	18,729	-	-	-	11,441	-	-	-	-	-	-
1970	12,188	-	-	23,310	12,229	-	-	-	18,342	-	-	-	-	-	-
1971	816	-	-	12,892	5,979	-	-	-	12,616	-	-	-	-	-	-
1972	7,639	-	-	196	9,729	-	-	-	5,782	-	-	-	-	-	-
1973	10,823	-	-	7,459	11,479	-	-	-	9,487	-	-	-	-	-	-
1974	18,556	-	-	10,288	15,729	-	-	-	11,184	-	-	-	-	-	-
1975	10,823	-	-	19,891	11,479	-	-	-	16,463	-	-	-	-	-	-
1976	1,271	5,476	-	-	7,232	1,003	-	-	7,566	-	-	-	-	-	-
1977	-	6,618	-	-	772	4,312	4,529	-	-	-	7,500	-	-	1,327	-
1978	7,349	-	-	-	12,272	-	-	-	2,073	8,478	-	978	1,957	-	-
1979	9,458	5,569	-	-	10,729	-	-	-	11,294	-	-	-	-	-	-
1980	18,556	-	-	11,238	15,729	-	-	-	11,611	-	-	-	-	-	-
1981	-	4,472	-	-	5,785	2,056	-	-	7,379	-	-	-	-	-	-
1982	24,014	-	-	14,084	18,729	-	-	-	12,175	-	-	-	-	-	-

Periods	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
1983	24,014	-	-	24,014	18,729	-	-	-	18,729	-	-	-	-	-	-
1984	12,188	-	-	24,014	12,229	-	-	-	18,729	-	-	-	-	-	-
1985	11,278	-	-	11,903	11,729	-	-	-	12,072	-	-	-	-	-	-
1986	12,642	-	-	11,080	12,479	-	-	-	11,774	-	-	-	-	-	-
1987	-	6,338	-	-	4,050	3,321	2,398	-	3,142	-	-	-	-	-	-
1988	-	6,787	-	-	-	4,908	754	-	-	-	7,500	-	-	41	-
1989	816	-	-	-	7,087	370	-	-	-	-	-	-	-	738	-
1990	-	816	-	-	762	1,283	7,084	-	-	-	7,500	-	-	2,500	-
1991	-	-	-	-	416	399	-	-	-	-	7,500	-	-	2,500	-
1992	-	-	-	-	-	-	1,088	-	-	-	7,500	-	-	2,500	-
1993	7,371	-	-	-	5,249	-	-	-	-	723	-	94	-	-	-
1994	-	7,371	-	-	4,484	3,005	-	-	-	-	-	-	-	-	-
1995	14,014	-	-	-	14,625	-	-	-	6,553	10,000	-	1,304	4,104	-	-
1996	7,646	-	-	13,031	12,685	-	-	-	14,484	10,000	-	1,304	2,544	-	-
1997	3,365	-	-	7,932	12,479	-	-	-	12,776	9,277	-	1,210	-	-	-
1998	24,014	-	-	4,062	18,729	-	-	-	12,863	-	-	-	-	-	-
1999	8,576	-	-	24,014	10,234	-	-	-	18,729	1,792	-	-	995	-	-
2000	12,188	-	-	8,101	11,593	-	-	-	10,124	-	-	-	636	-	-
2001	-	9,646	-	-	3,760	3,531	-	-	4,606	-	-	-	-	-	-
2002	-	1,913	-	-	6,219	1,740	-	-	3,213	-	-	-	-	-	-
2003	-	1,104	-	-	4,375	-	-	-	4,664	-	-	-	-	-	-
2004	-	-	-	-	6,508	1,529	1,003	-	252	-	-	-	-	-	-
2005	17,191	-	-	-	14,979	-	-	-	4,881	-	-	-	-	-	-
2006	19,309	-	-	17,191	17,479	-	-	-	21,380	2,297	-	177	-	-	-
2007	5,820	-	-	-	8,729	-	-	-	10,552	-	-	-	-	-	-
2008	-	5,552	-	-	5,062	2,583	-	-	3,058	-	-	-	-	-	-
2009	-	3,278	-	-	5,785	2,056	-	-	3,006	-	-	-	-	-	-
2010	1,271	-	-	-	7,232	1,003	-	-	5,782	-	-	-	-	-	-
2011	14,917	-	-	17,570	13,729	-	-	-	16,992	-	-	-	-	-	-
2012	-	-	-	-	9,979	-	5,785	-	-	-	1,553	-	-	-	-

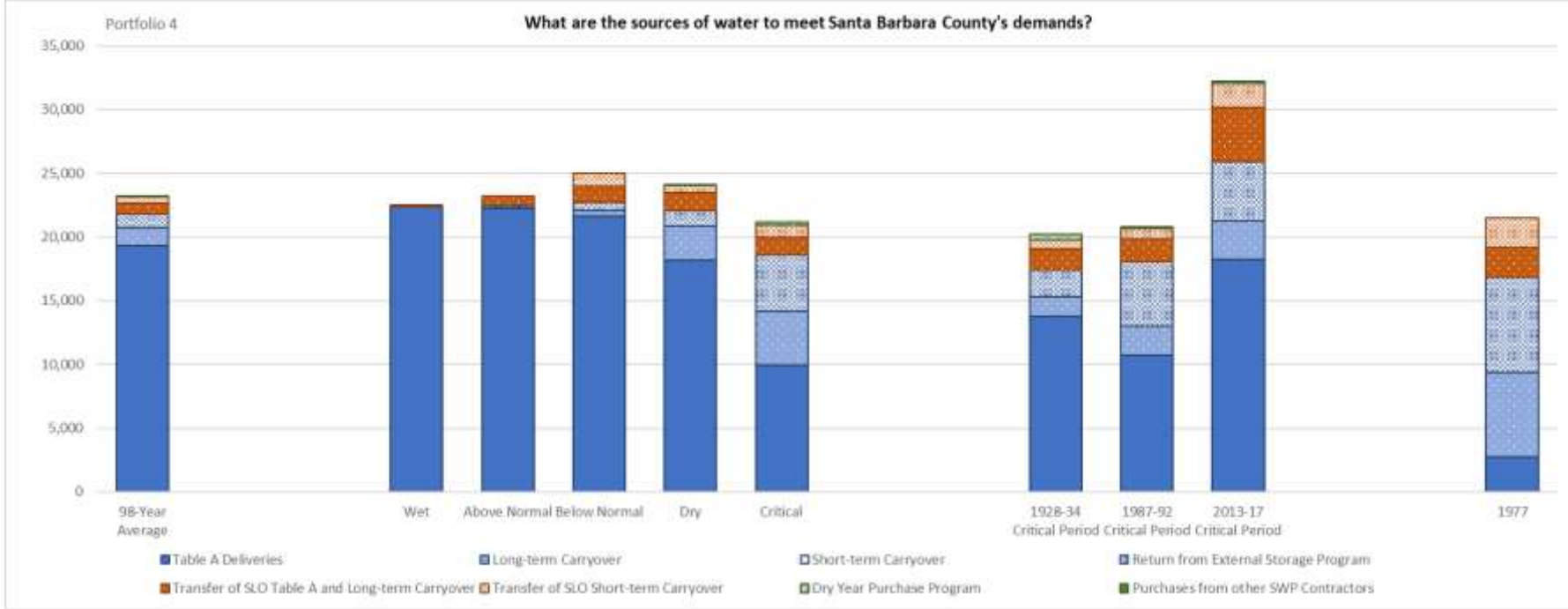
Periods	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
2013	-	-	-	-	3,907	-	12,329	-	-	-	7,500	-	-	2,500	-
2014	-	11,698	-	-	723	3,244	4,636	-	-	-	7,500	-	-	2,500	-
2015	-	3,219	-	-	-	1,664	680	-	-	-	7,500	-	-	2,500	-
2016	-	-	-	-	-	-	-	-	-	-	934	-	51	-	-
2017	2,005	-	-	-	14,631	-	-	-	-	-	-	-	102	-	-
2018	-	2,005	-	-	2,790	2,583	12,048	-	-	-	-	-	-	-	-
2019	-	-	-	-	12,479	-	2,790	-	-	-	-	-	-	-	-
Sum	561,501	133,199	-	428,302	822,335	67,840	79,405	-	662,611	128,246	108,016	15,217	26,584	22,627	1,304
Average	5,730	1,359	-	4,370	8,391	692	810	-	6,761	1,309	1,102	155	271	231	13
Water Year Averages															
Wet	12,720	-	-	10,539	13,803	11	93	-	12,202	2,448	-	273	579	-	15
Above Normal	6,608	79	-	2,335	9,820	-	-	-	6,569	2,150	232	271	336	91	20
Below Normal	3,518	450	-	4,966	7,406	643	1,437	-	6,529	295	621	39	53	-	6
Dry	1,352	2,699	-	-	5,616	1,170	1,242	-	4,219	870	1,190	113	160	326	21
Critically Dry	-	4,188	-	-	1,540	2,021	1,671	-	204	-	4,498	-	-	925	-
Critical Period Averages															
1928-34	1,351	1,526	-	-	2,196	957	1,239	-	1,467	-	2,079	-	128	357	17
1987-92	136	2,324	-	-	2,053	1,714	1,887	-	524	-	5,000	-	-	1,380	-
2013-17	401	2,983	-	-	3,852	982	3,529	-	-	-	4,687	-	31	1,500	-
Driest 1-Year															
1977	-	6,618	-	-	772	4,312	4,529	-	-	-	7,500	-	-	1,327	-

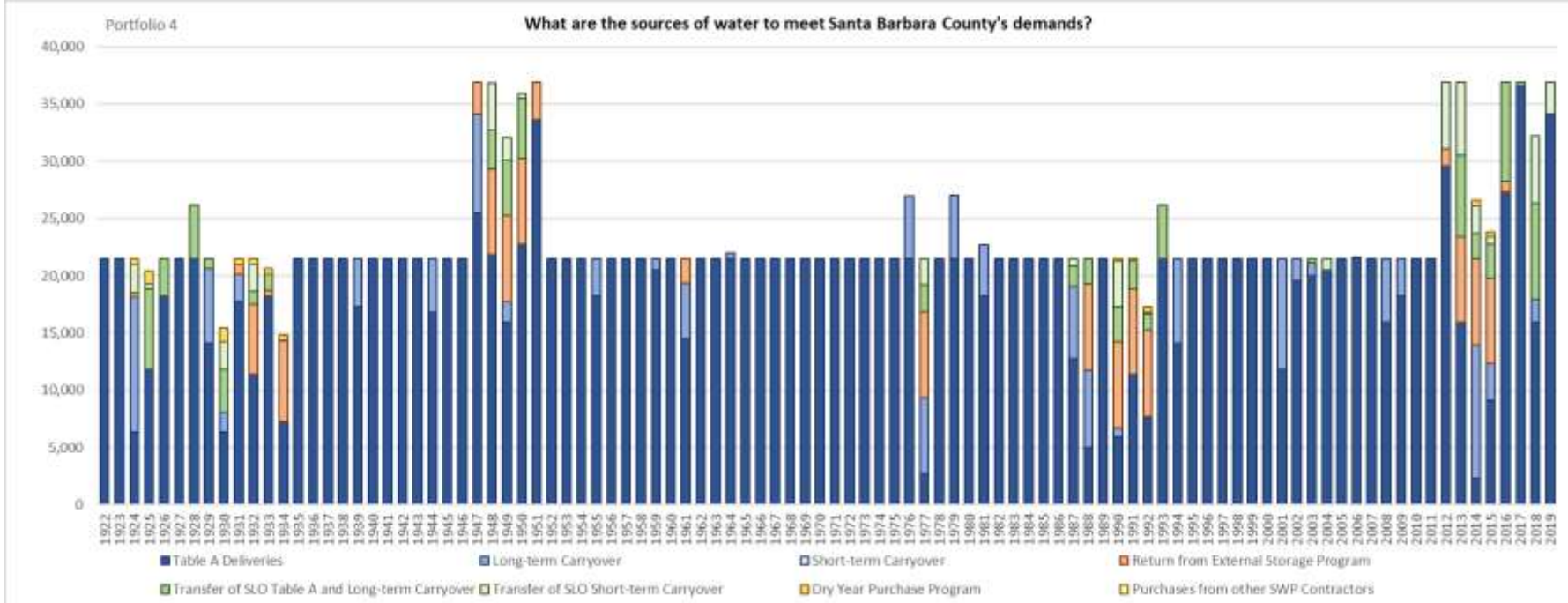
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCDPurchases from Others	SLOFCWCD Purchases from CCWA
1922	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	-	-	480	2,451	226	-
1925	-	-	-	7,035.0	-	-	1,199	7,433	659	-
1926	-	-	-	3,278.0	-	-	-	3,278	-	-
1927	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	4,720.0	-	-	-	4,720	-	-
1929	-	-	-	802.0	-	-	-	802	-	-
1930	-	-	-	3,778.0	-	-	1,199	6,180	659	-
1931	-	-	-	-	-	-	480	-	-	-
1932	-	-	-	1,134.0	-	-	480	3,458	-	-
1933	-	-	-	1,434.0	-	-	480	1,434	-	-
1934	-	-	-	24.0	-	-	480	24	-	-
1935	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	3,414.0	-	-	-	7,571	-	-
1949	-	-	-	4,838.0	-	-	-	6,808	-	-
1950	-	-	-	5,216.0	-	-	-	5,696	-	-
1951	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-

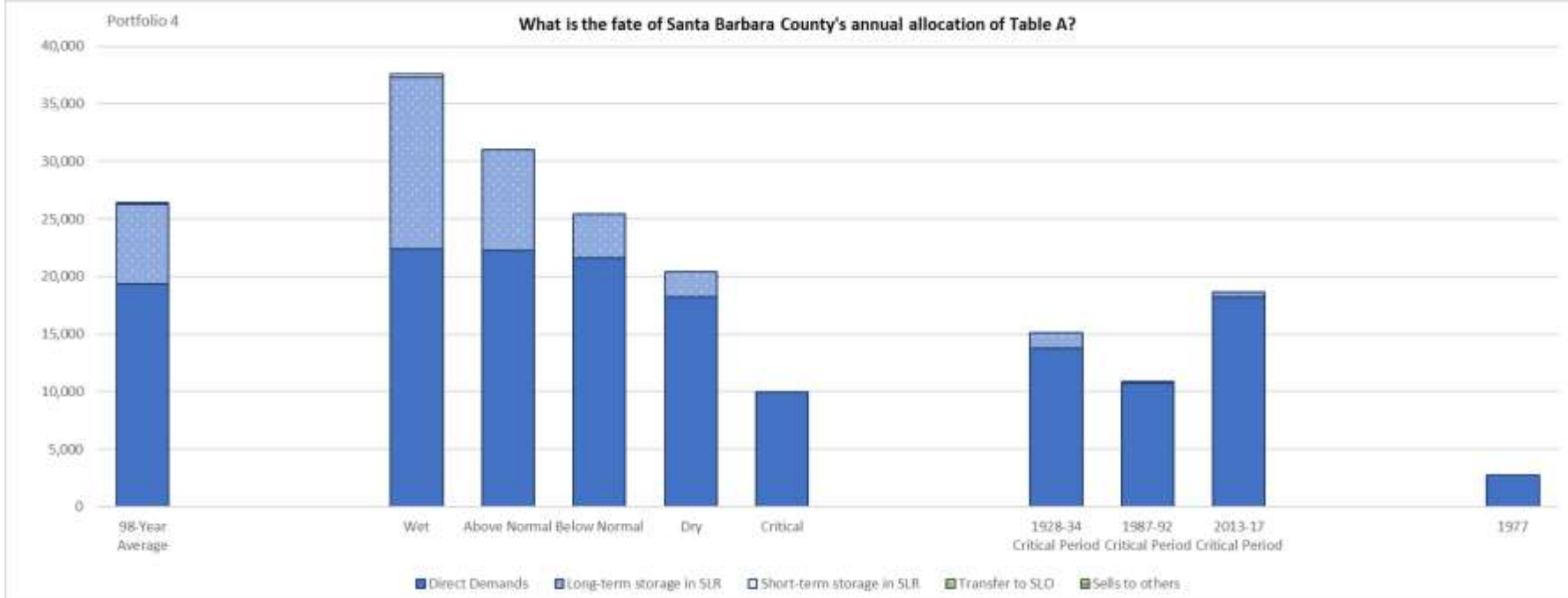
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCDPurchases from Others	SLOFCWCD Purchases from CCWA
1953	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-	-	-
1976	-	-	-	-	-	-	-	-	-	-
1977	-	-	-	2,370.0	-	-	-	4,625	-	-
1978	-	-	-	-	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	-	-	-	-	-	-	-	-	-	-
1982	-	-	-	-	-	-	-	-	-	-

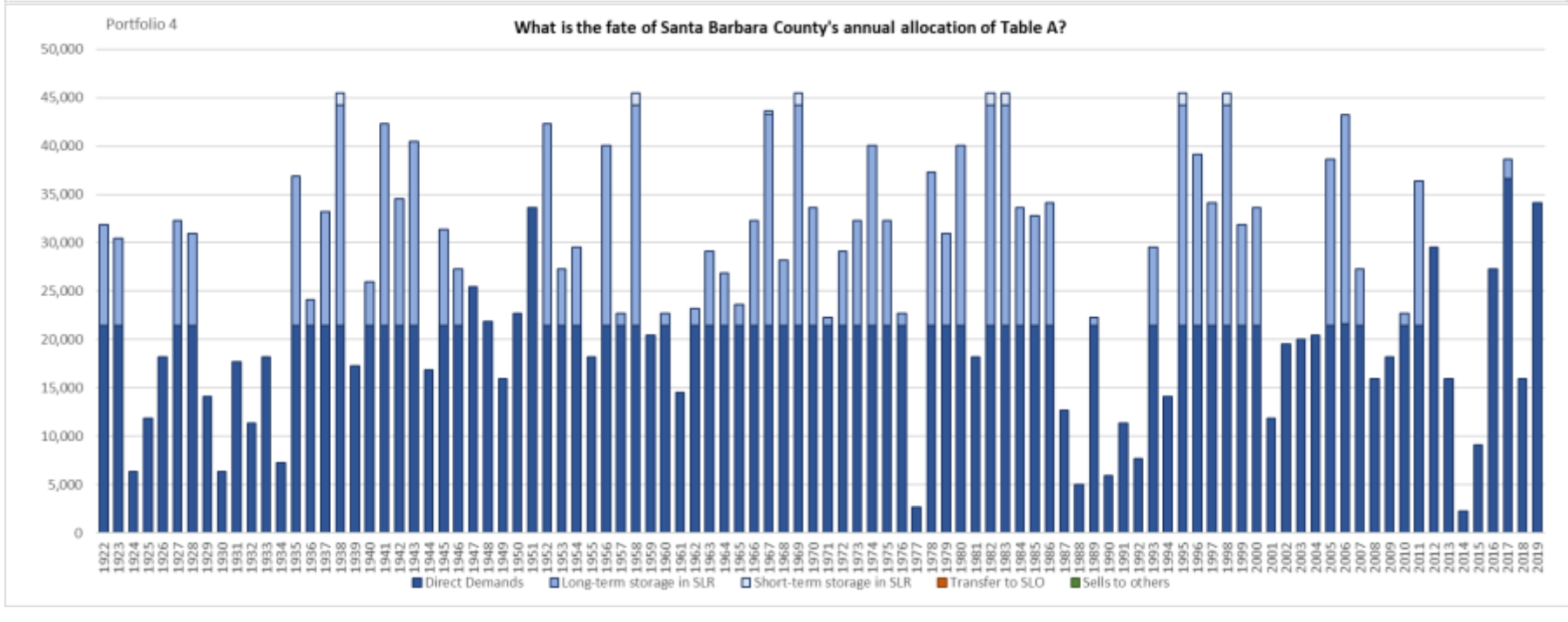
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCDPurchases from Others	SLOFCWCD Purchases from CCWA
1983	-	-	-	-	-	-	-	-	-	-
1984	-	-	-	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-	-	-	-
1986	-	-	-	-	-	-	-	-	-	-
1987	-	-	-	1,806.0	-	-	-	2,398	-	-
1988	-	-	-	2,182.0	-	-	-	2,182	-	-
1989	-	-	-	-	-	-	-	-	-	-
1990	-	-	-	3,052.0	-	-	159	7,084	-	-
1991	-	-	-	2,462.0	-	-	138	2,462	-	-
1992	-	-	-	1,429.0	-	-	480	1,567	-	-
1993	-	-	-	4,730.0	-	-	-	4,730	-	-
1994	-	-	-	-	-	-	-	-	-	-
1995	-	-	-	-	-	-	-	-	-	-
1996	-	-	-	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	-	-	-
1998	-	-	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-	-	-	-
2000	-	-	-	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-	-	-	-
2003	-	-	-	354.0	-	-	-	354	-	-
2004	-	-	-	-	-	-	-	1,003	-	-
2005	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	5,785	-	-

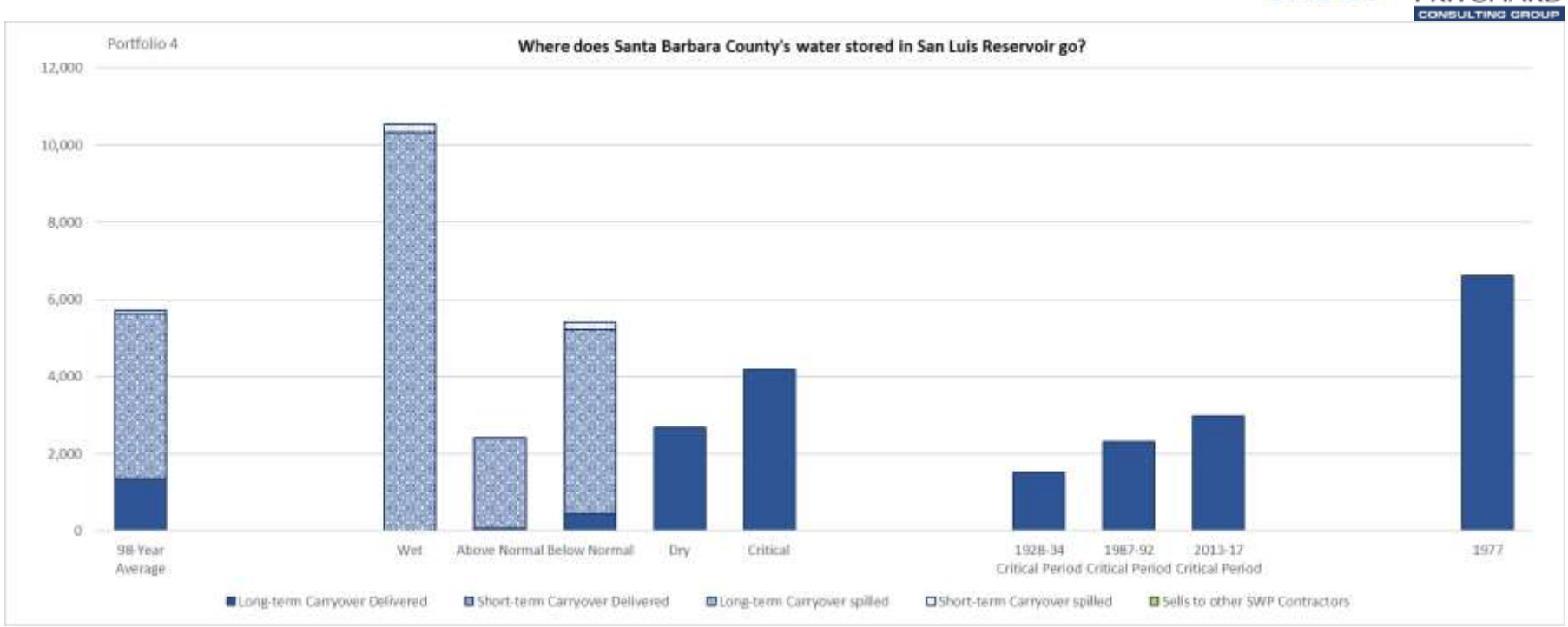
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCDPurchases from Others	SLOFCWCD Purchases from CCWA
2013	-	-	-	7,106.0	-	-	-	13,484	83	-
2014	-	-	-	2,246.0	-	-	480	4,636	-	-
2015	-	-	-	2,962.0	-	-	480	3,573	-	-
2016	-	-	-	8,678.0	-	-	-	8,678	-	-
2017	-	-	-	246.0	-	-	-	246	-	-
2018	-	-	-	8,419.0	-	-	-	14,320	-	-
2019	-	-	-	-	-	-	-	2,790	-	-
Sum	-	-	-	83,715	-	-	6,535	129,772	1,627	-
Average	-	-	-	854.2	-	-	67	1,324	17	-
Water Year Averages										
Wet	-	-	-	8.2	-	-	-	101	-	-
Above Normal	-	-	-	700.3	-	-	-	700	-	-
Below Normal	-	-	-	1,281.9	-	-	-	2,335	-	-
Dry	-	-	-	1,437.3	-	-	104	1,969	61	-
Critically Dry	-	-	-	1,339.8	-	-	276	2,287	15	-
Critical Period Averages										
1928-34	-	-	-	1,698.9	-	-	446	2,374	94	-
1987-92	-	-	-	1,821.8	-	-	130	2,616	-	-
2013-17	-	-	-	4,247.6	-	-	192	6,123	17	-
Driest 1-Year										
1977	-	-	-	2,370.0	-	-	-	4,625	-	-

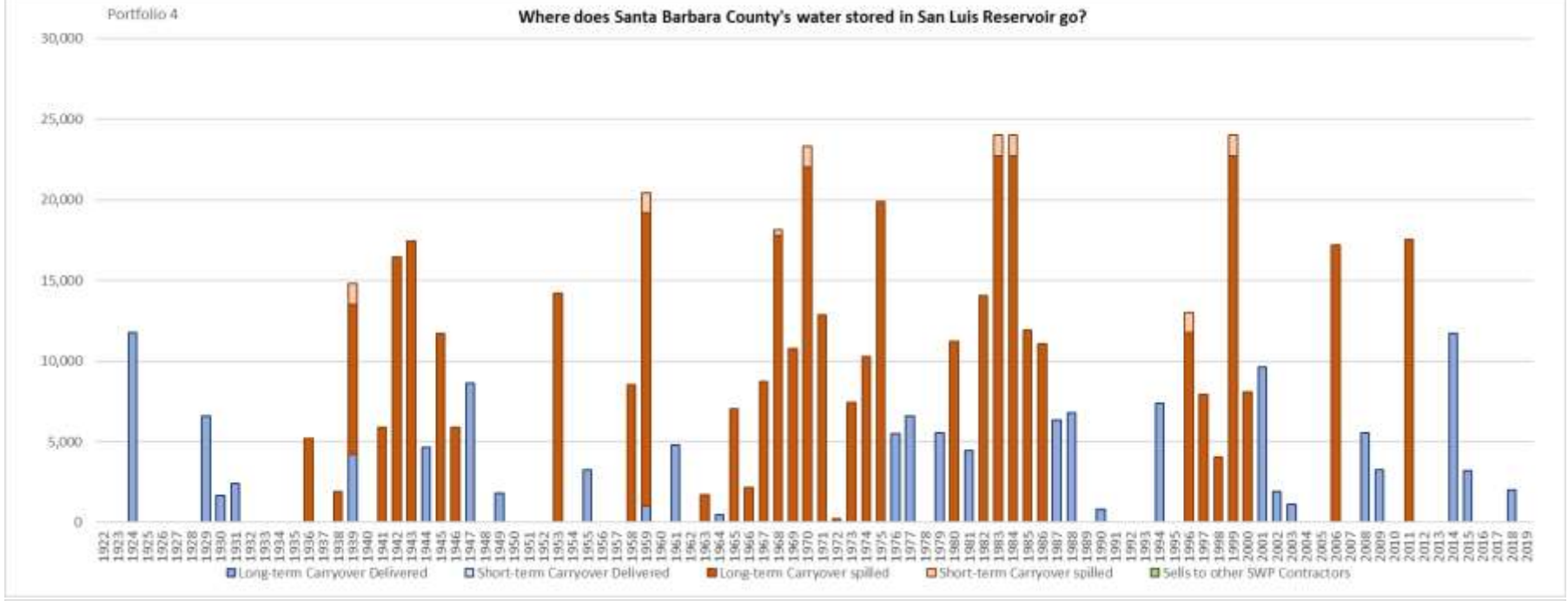

Portfolio 4
What are the sources of water to meet Santa Barbara County's demands?
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer of SLO Table A and Long-term Carryover
Transfer of SLO Short-term Carryover
Dry Year Purchase Program
Purchases from other SWP Contractors

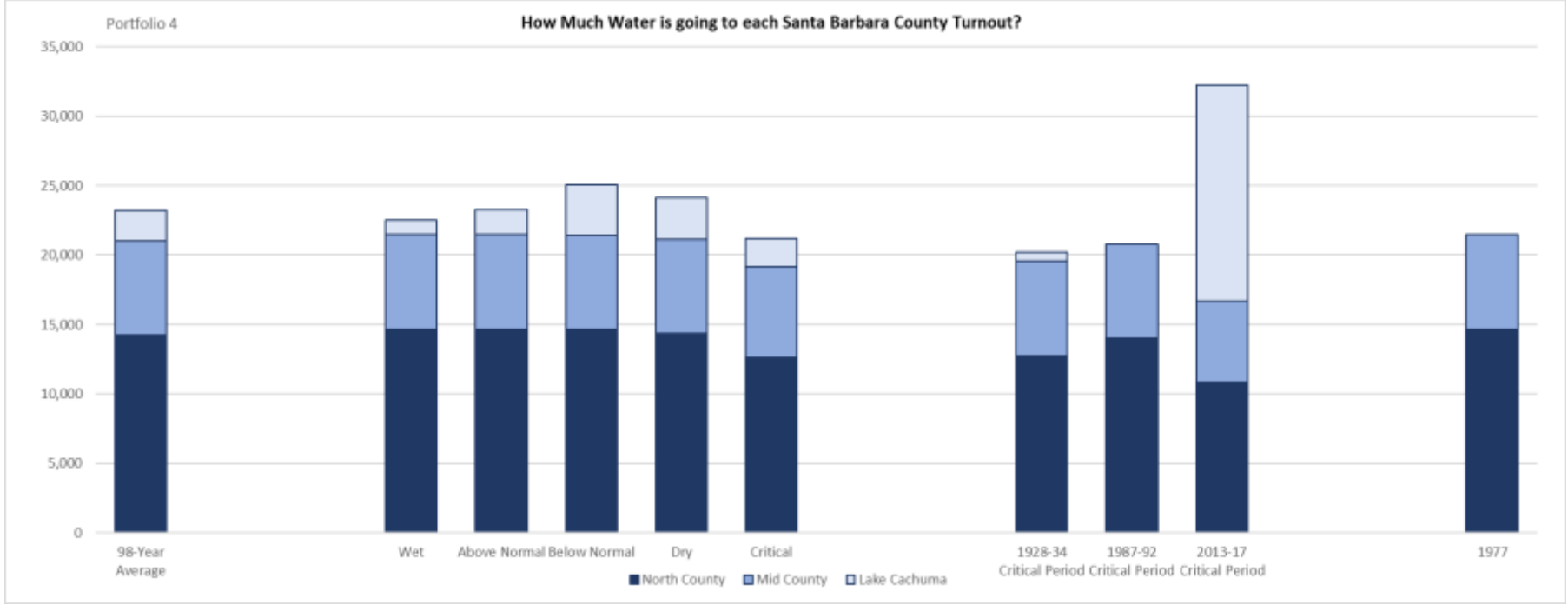

Portfolio 4
What are the sources of water to meet Santa Barbara County's demands?
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer of SLO Table A and Long-term Carryover
Transfer of SLO Short-term Carryover
Dry Year Purchase Program
Purchases from other SWP Contractors

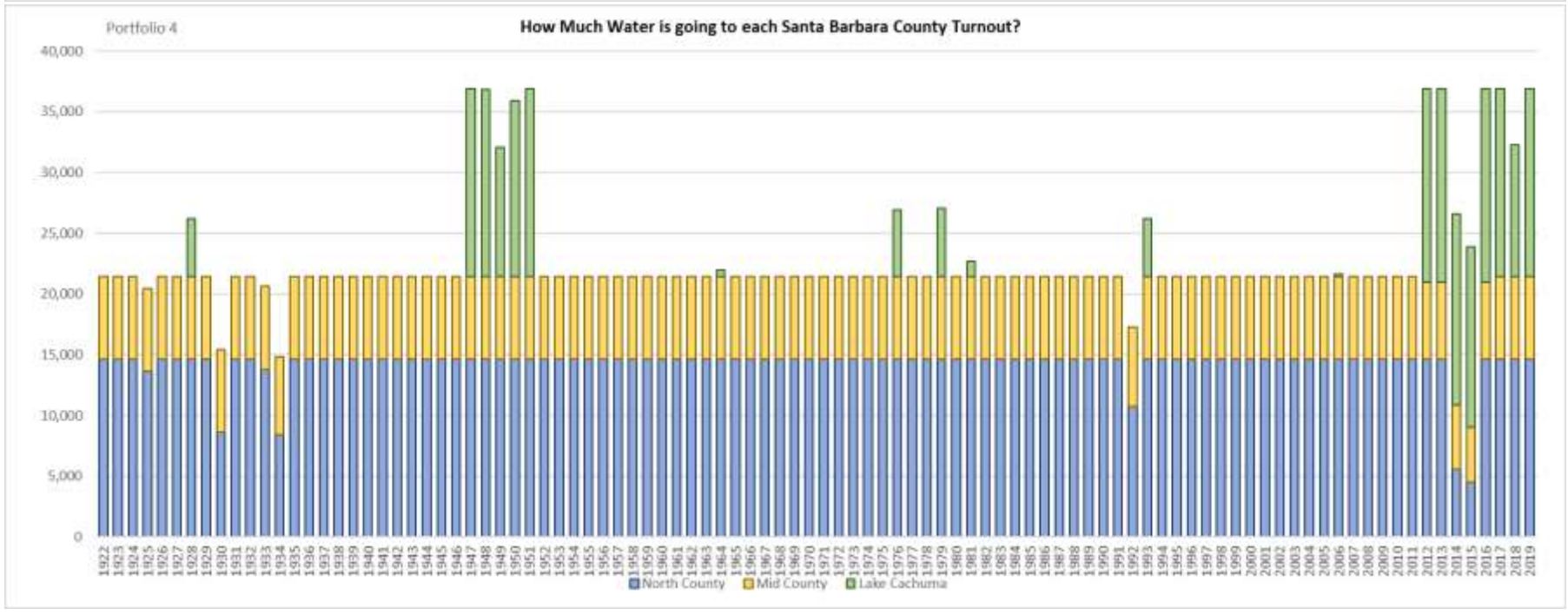

Portfolio 4
What is the fate of Santa Barbara County's annual allocation of Table A?
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Direct Demands
Long-term storage in SLR
Short-term storage in SLR
Transfer to SLO
Sells to others

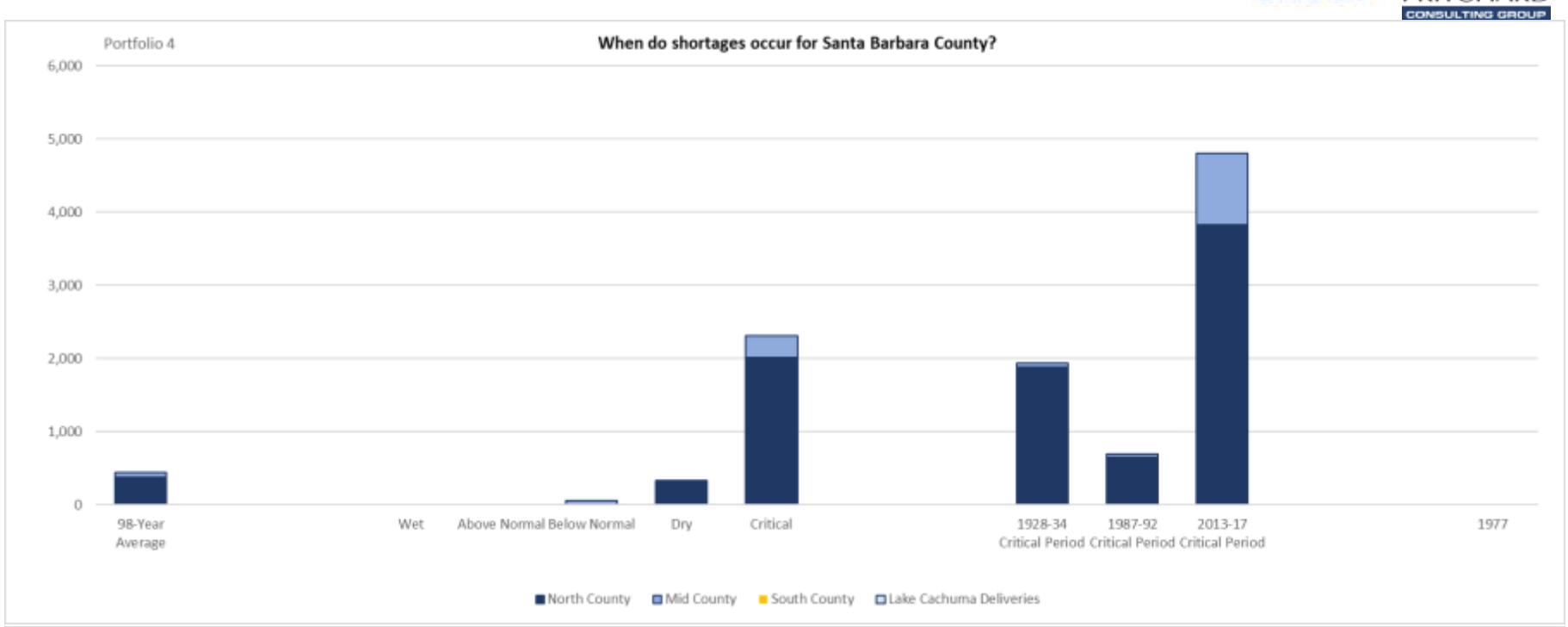

Portfolio 4
What is the fate of Santa Barbara County's annual allocation of Table A?
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Direct Demands
Long-term storage in SLR
Short-term storage in SLR
Transfer to SLO
Sells to others

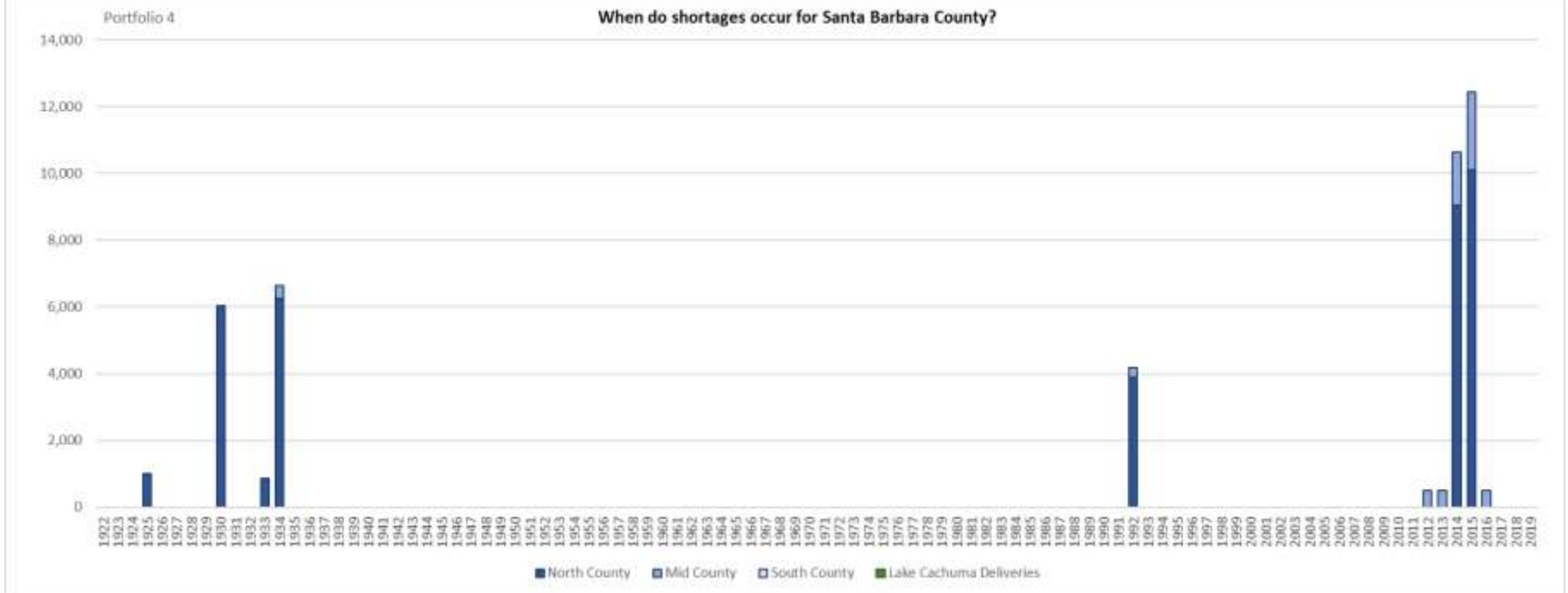

Portfolio 4
Where does Santa Barbara County's water stored in San Luis Reservoir go?
12,000
10,000
8,000
6,000
4,000
2,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Sells to other SWP Contractors

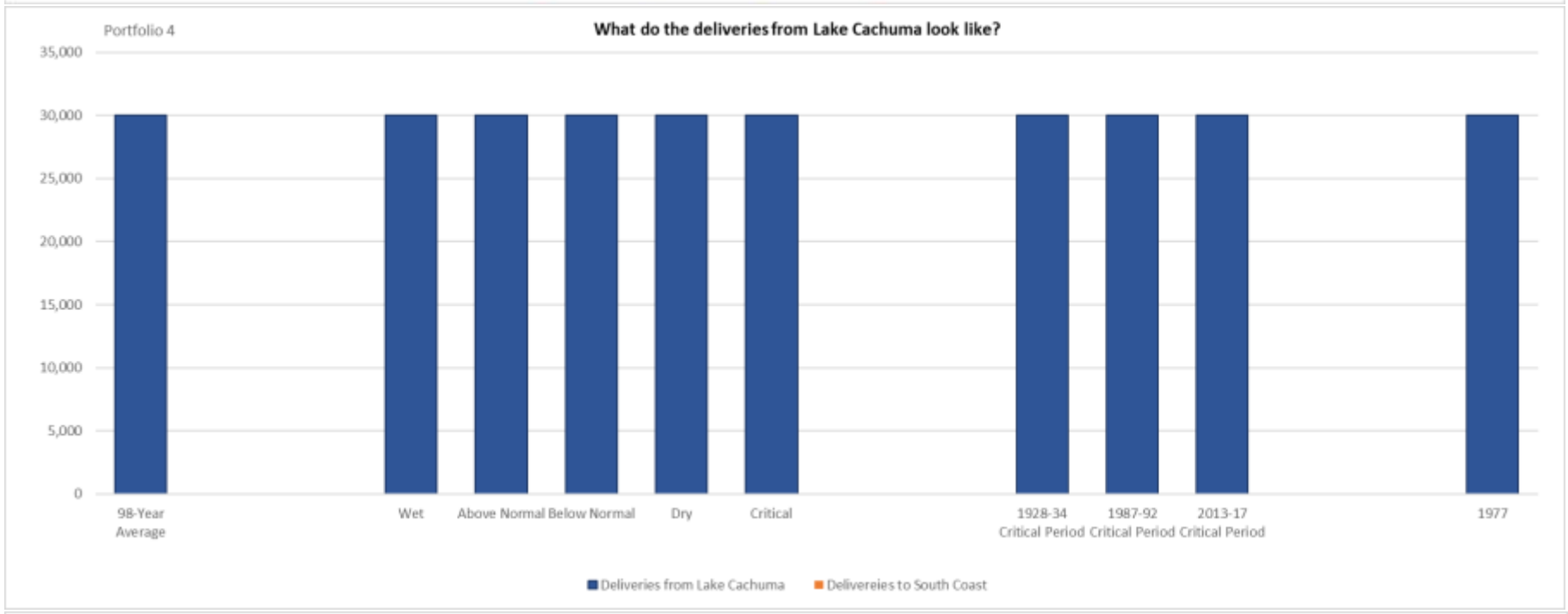

Portfolio 4
Where does Santa Barbara County's water stored in San Luis Reservoir go?
30,000
25,000
20,000
15,000
10,000
5,000
0
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Sells to other SWP Contractors

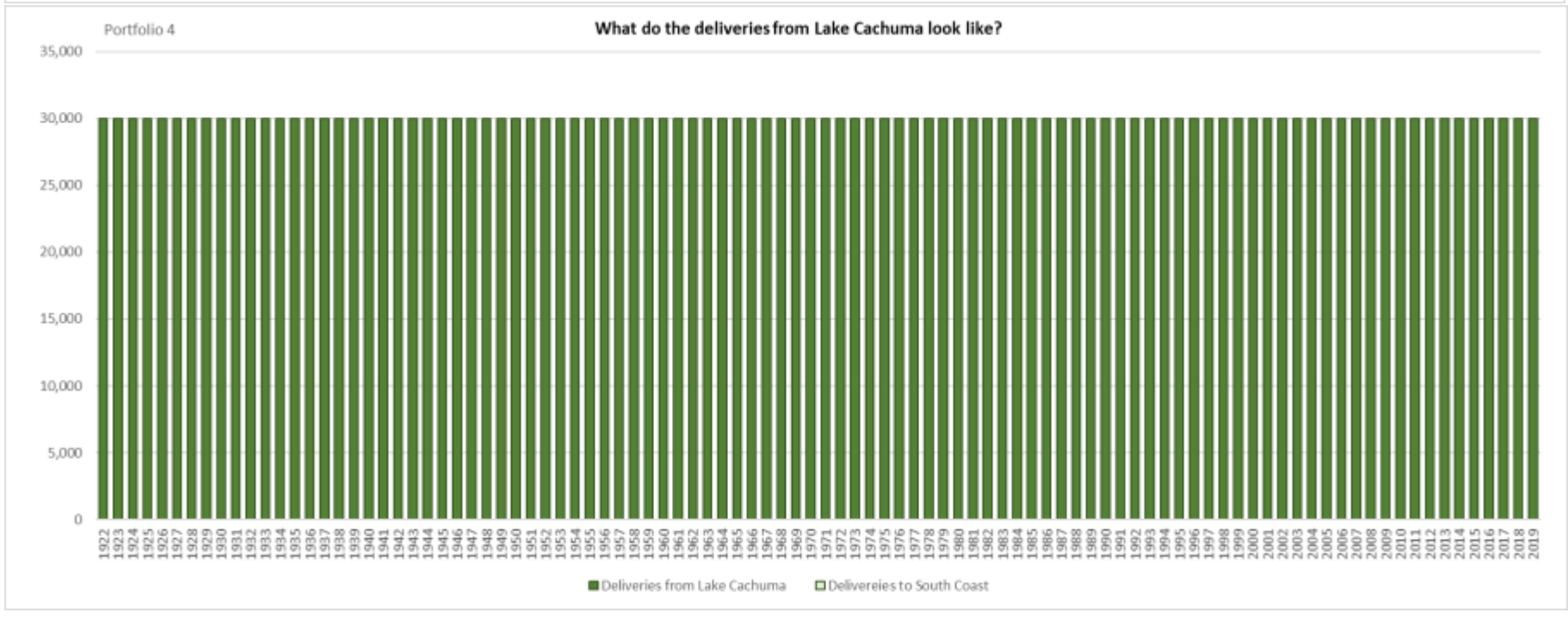

Portfolio 4
How Much Water is going to each Santa Barbara County Turnout?
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
North County
Mid County
Lake Cachuma

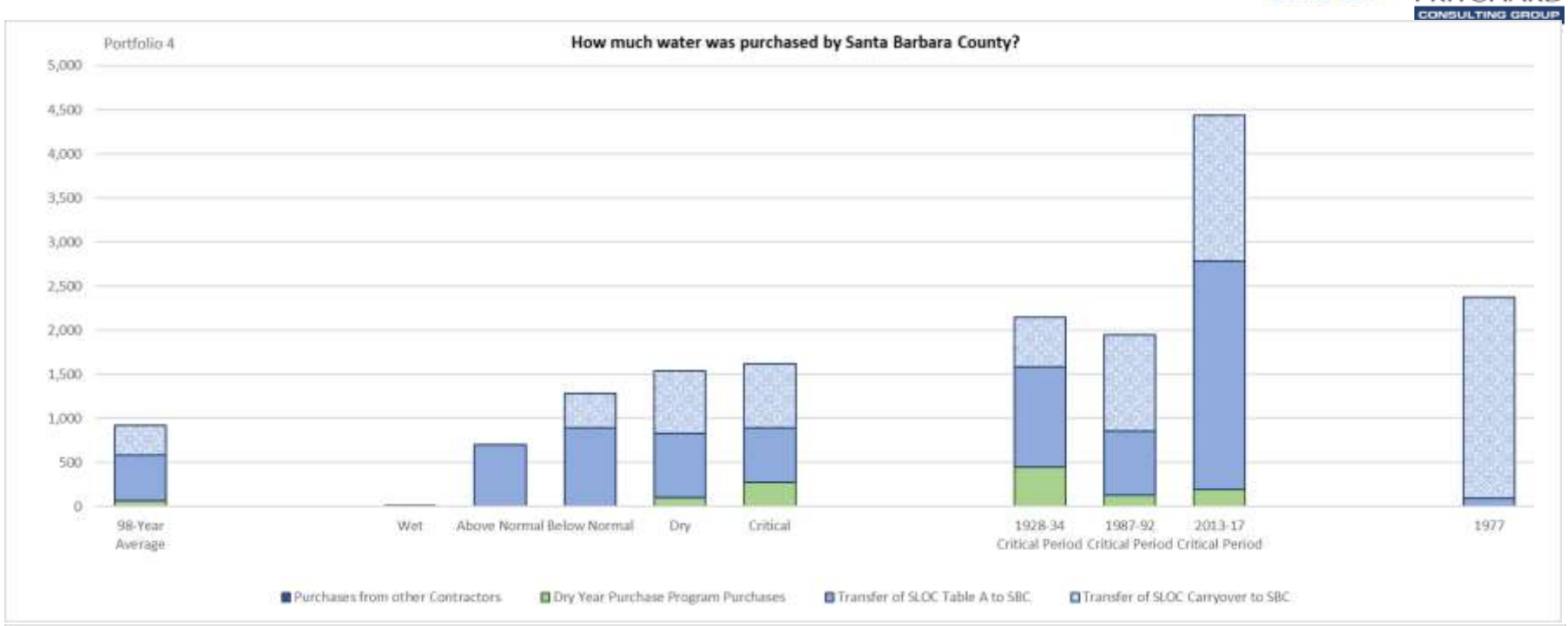

Portfolio 4
How Much Water is going to each Santa Barbara County Turnout?
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
North County
Mid County
Lake Cachuma

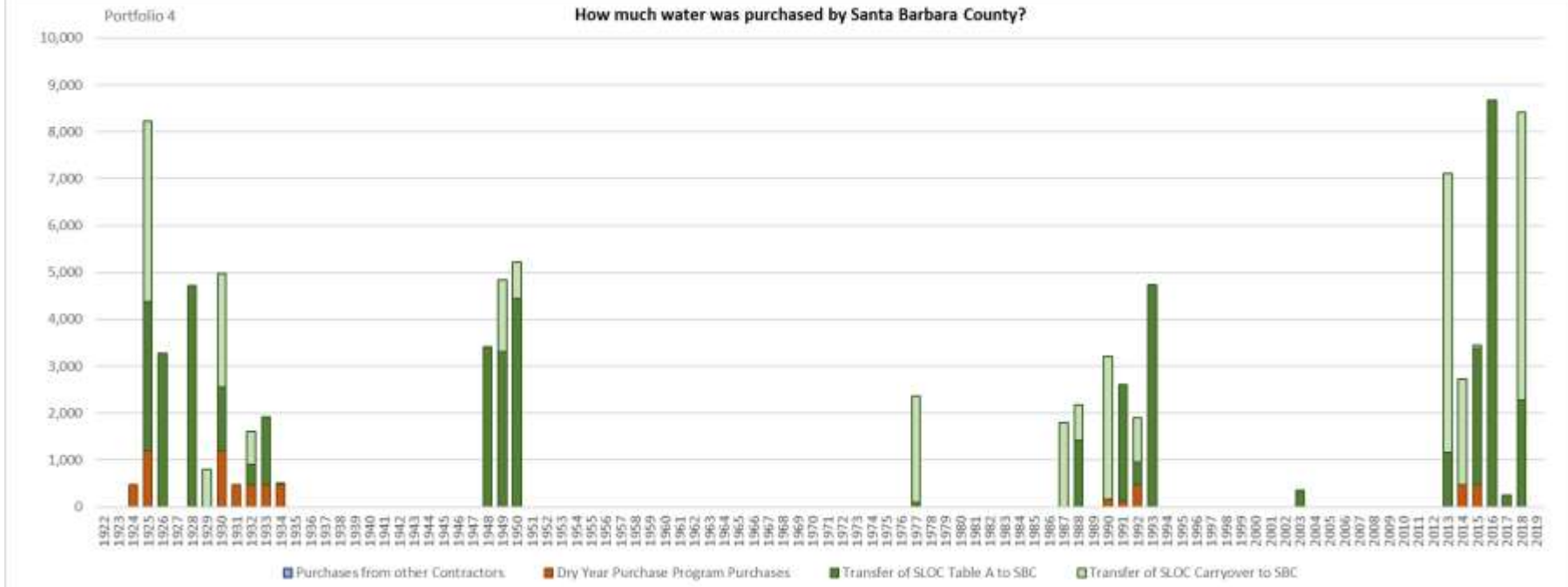

Portfolio 4
When do shortages occur for Santa Barbara County?
6,000
5,000
4,000
3,000
2,000
1,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
North County
Mid County
South County
Lake Cachuma Deliveries

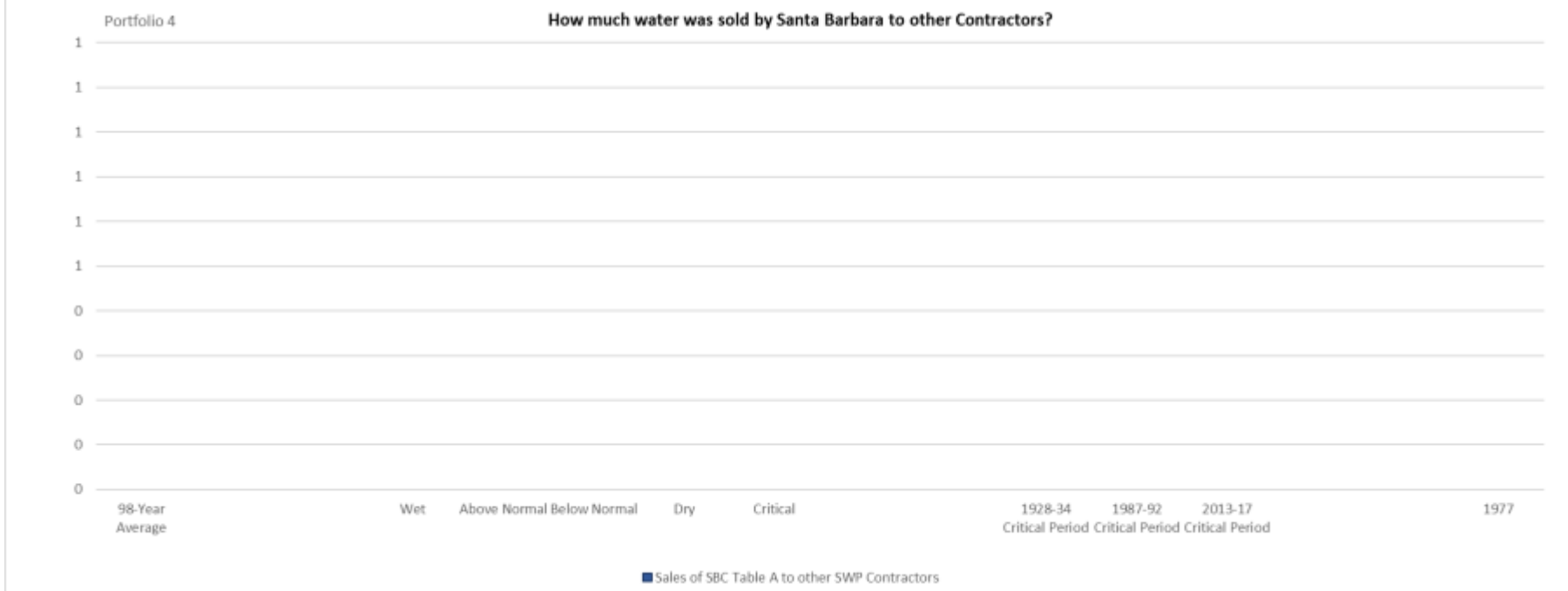

Portfolio 4
When do shortages occur for Santa Barbara County?
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
North County
Mid County
South County
Lake Cachuma Deliveries

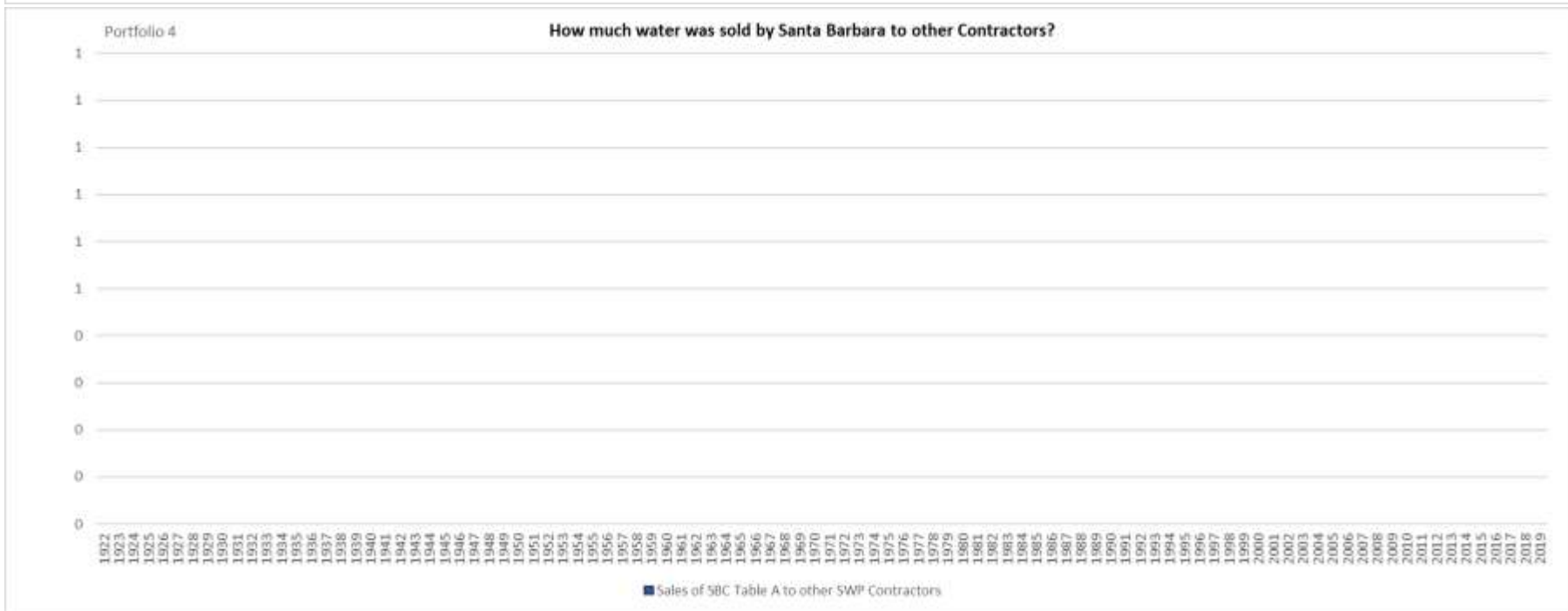

Portfolio 4
What do the deliveries from Lake Cachuma look like?
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Deliveries from Lake Cachuma
Delivereies to South Coast

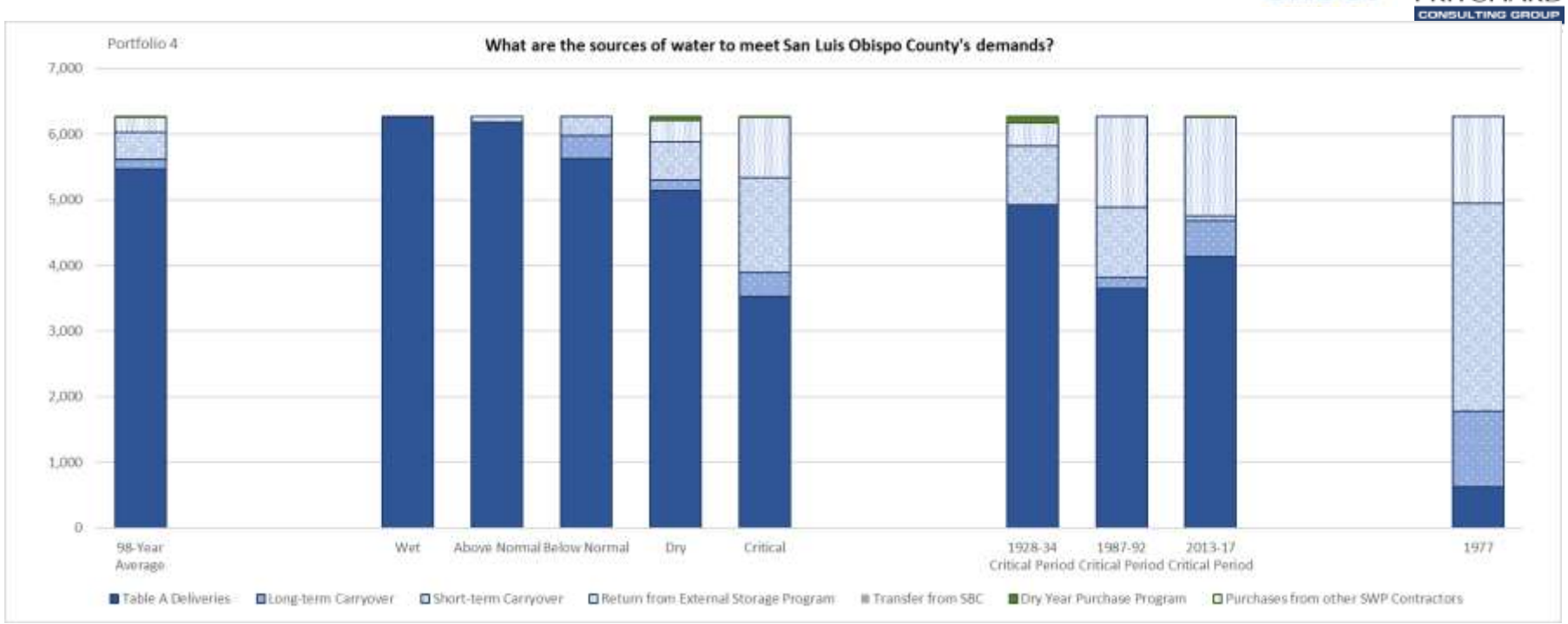

Portfolio 4
What do the deliveries from Lake Cachuma look like?
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Deliveries from Lake Cachuma
Delivereies to South Coast

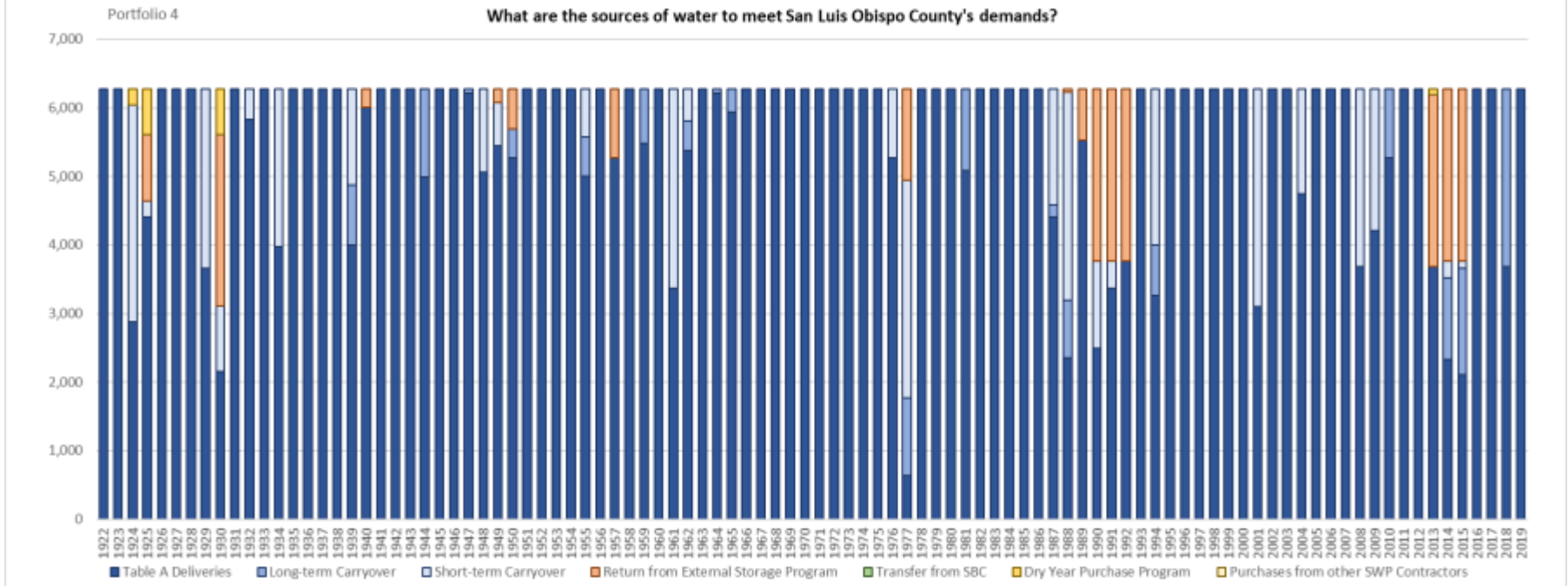

Portfolio 4
How much water was purchased by Santa Barbara County?
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Purchases from other Contractors
Dry Year Purchase Program Purchases
Transfer of SLOC Table A to SBC
Transfer of SLOC Carryover to SBC

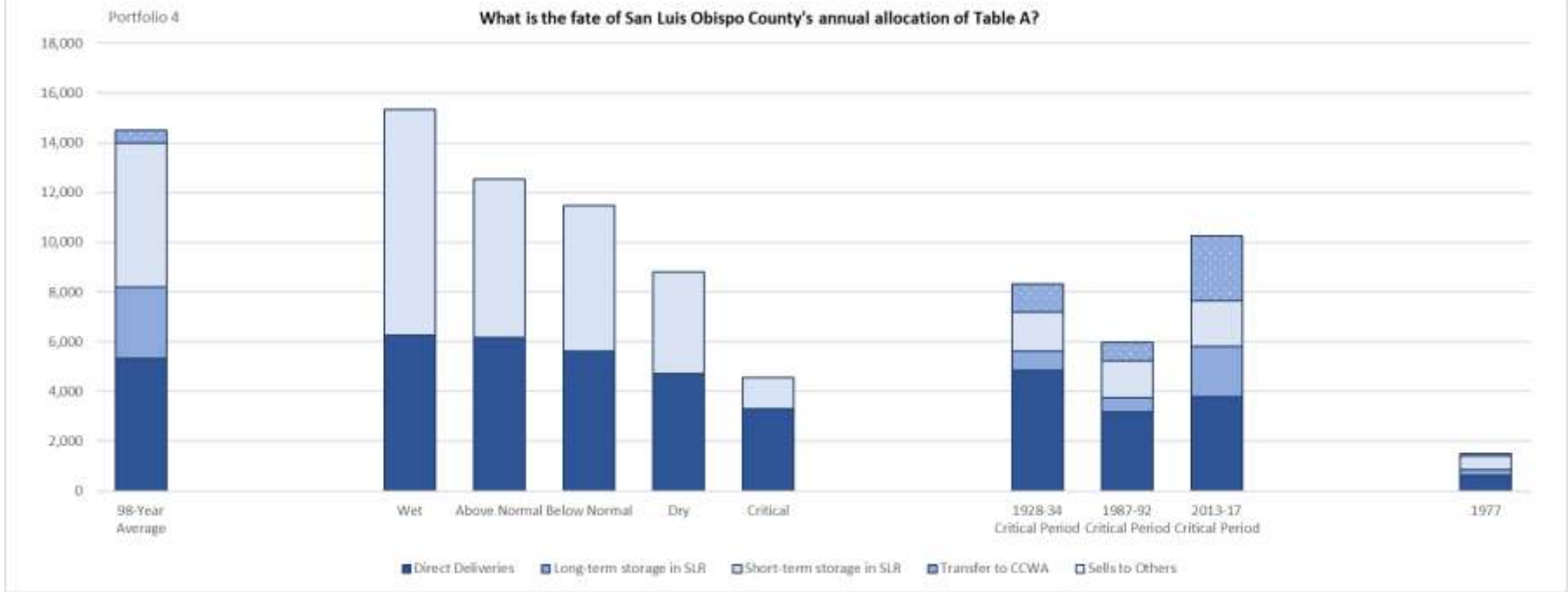

Portfolio 4
How much water was purchased by Santa Barbara County?
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Purchases from other Contractors
Dry Year Purchase Program Purchases
Transfer of SLOC Table A to SBC
Transfer of SLOC Carryover to SBC

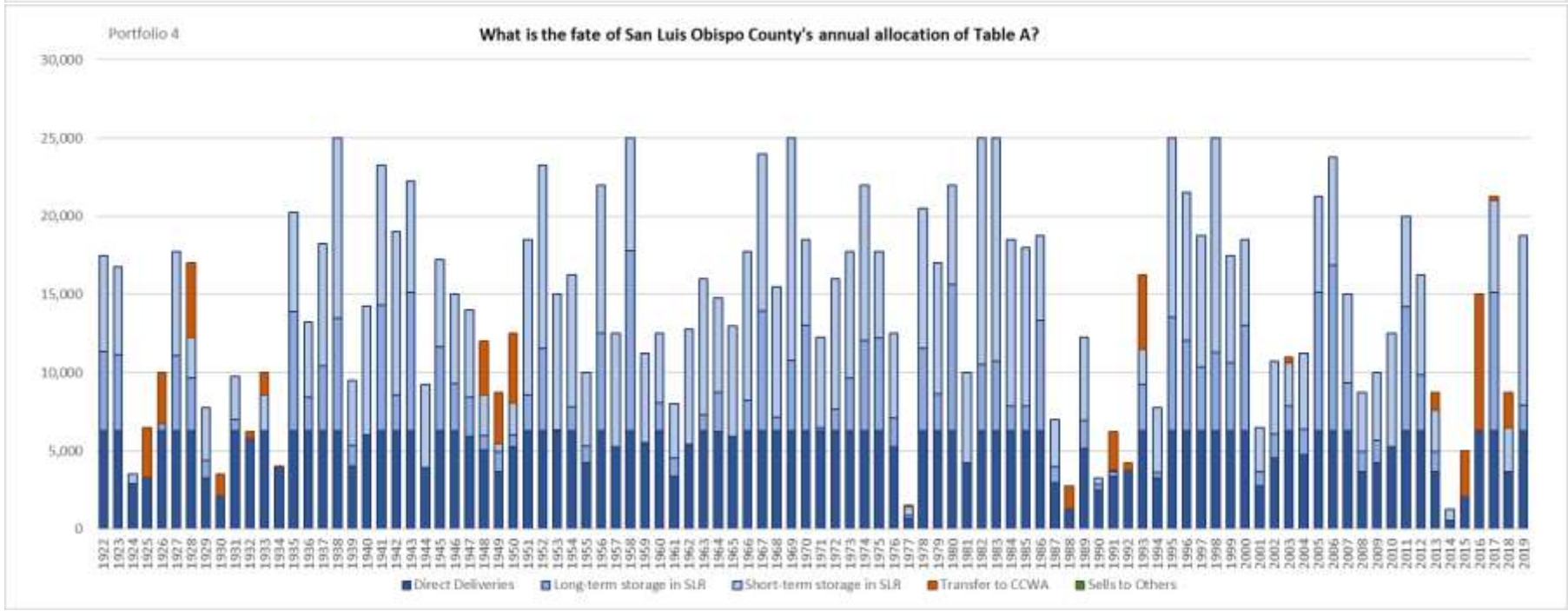

Portfolio 4
How much water was sold by Santa Barbara to other Contractors?
1
1
1
1
1
1
0
0
0
0
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Sales of SBC Table A to other SWP Contractors

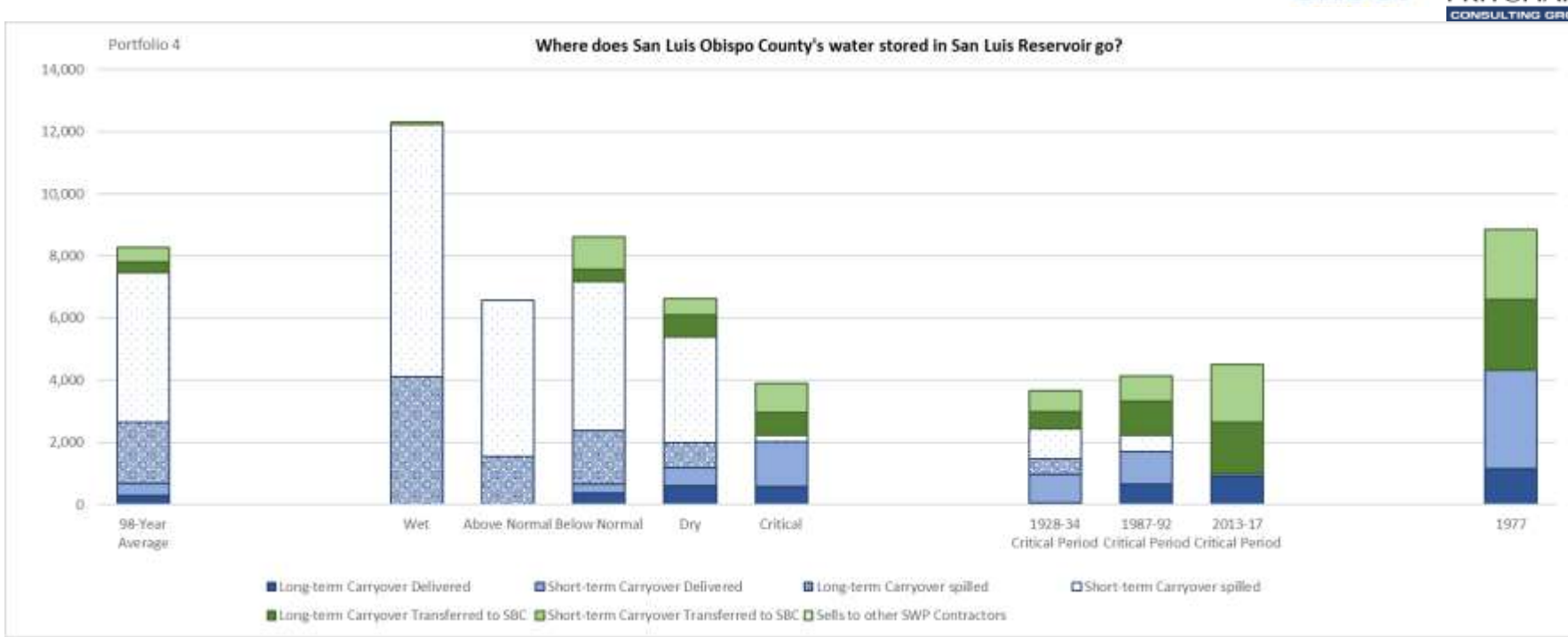

Portfolio 4
How much water was sold by Santa Barbara to other Contractors?
1
1
1
1
1
1
0
0
0
0
0
Sales of SBC Table A to other SWP Contractors

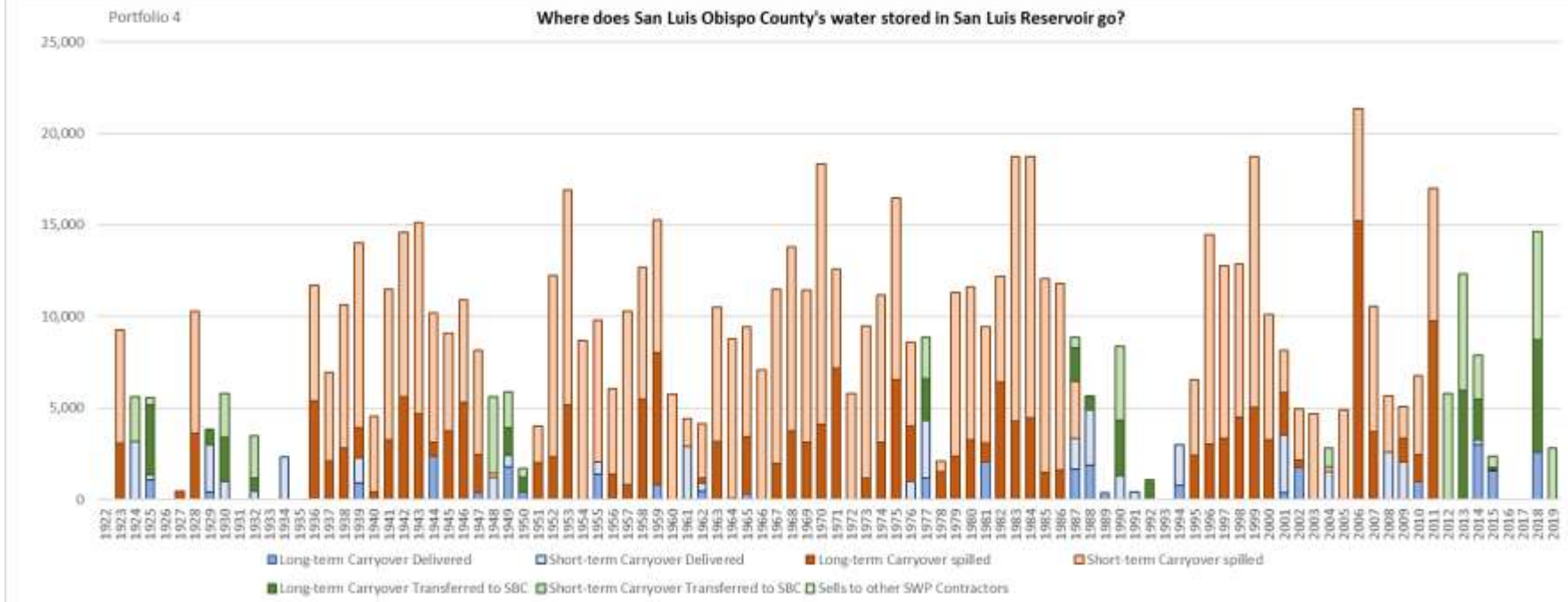

Portfolio 4
What are the sources of water to meet San Luis Obispo County's demands?
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer from SBC
Dry Year Purchase Program
Purchases from other SWP Contractors

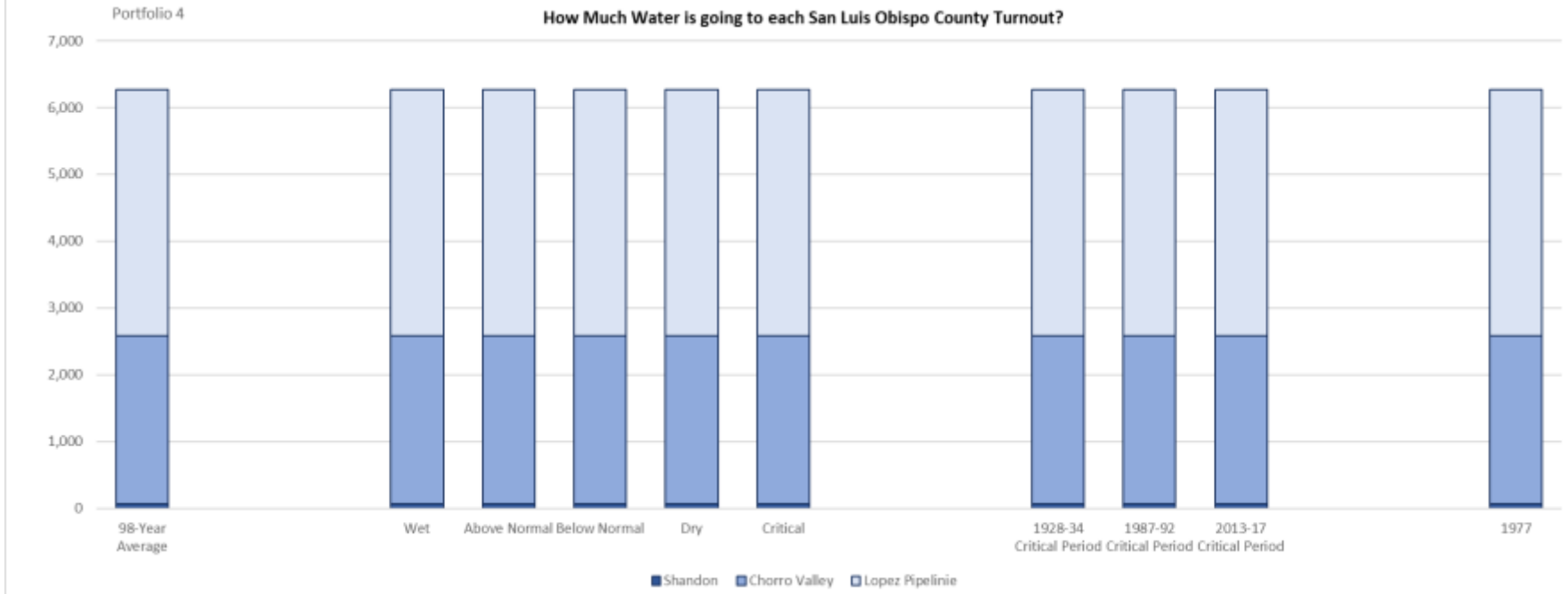

Portfolio 4
What are the sources of water to meet San Luis Obispo County's demands?
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer from SBC
Dry Year Purchase Program
Purchases from other SWP Contractors

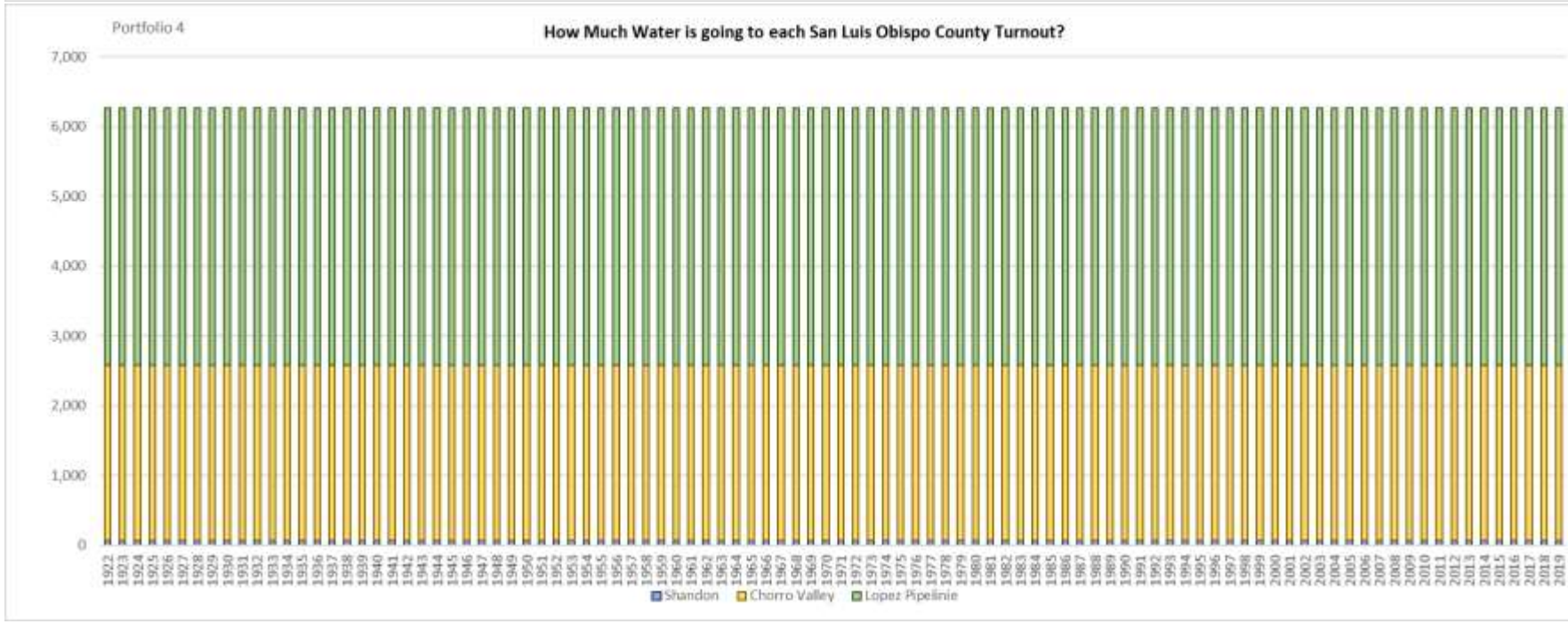

Portfolio 4
What is the fate of San Luis Obispo County's annual allocation of Table A?
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Direct Deliveries
Long-term storage in SLR
Short-term storage in SLR
Transfer to CCWA
Sells to Others

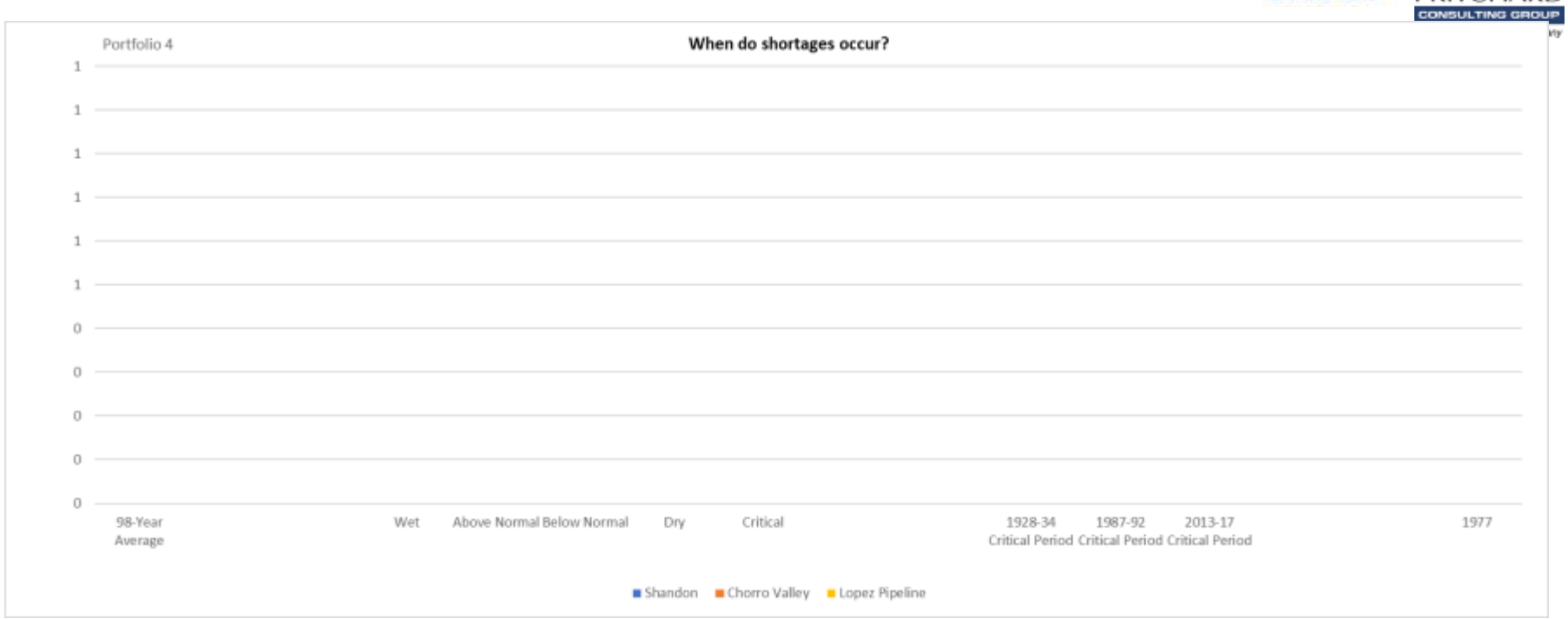

Portfolio 4
What is the fate of San Luis Obispo County's annual allocation of Table A?
30,000
25,000
20,000
15,000
10,000
5,000
0
Direct Deliveries
Long-term storage in SLR
Short-term storage in SLR
Transfer to CCWA
Sells to Others

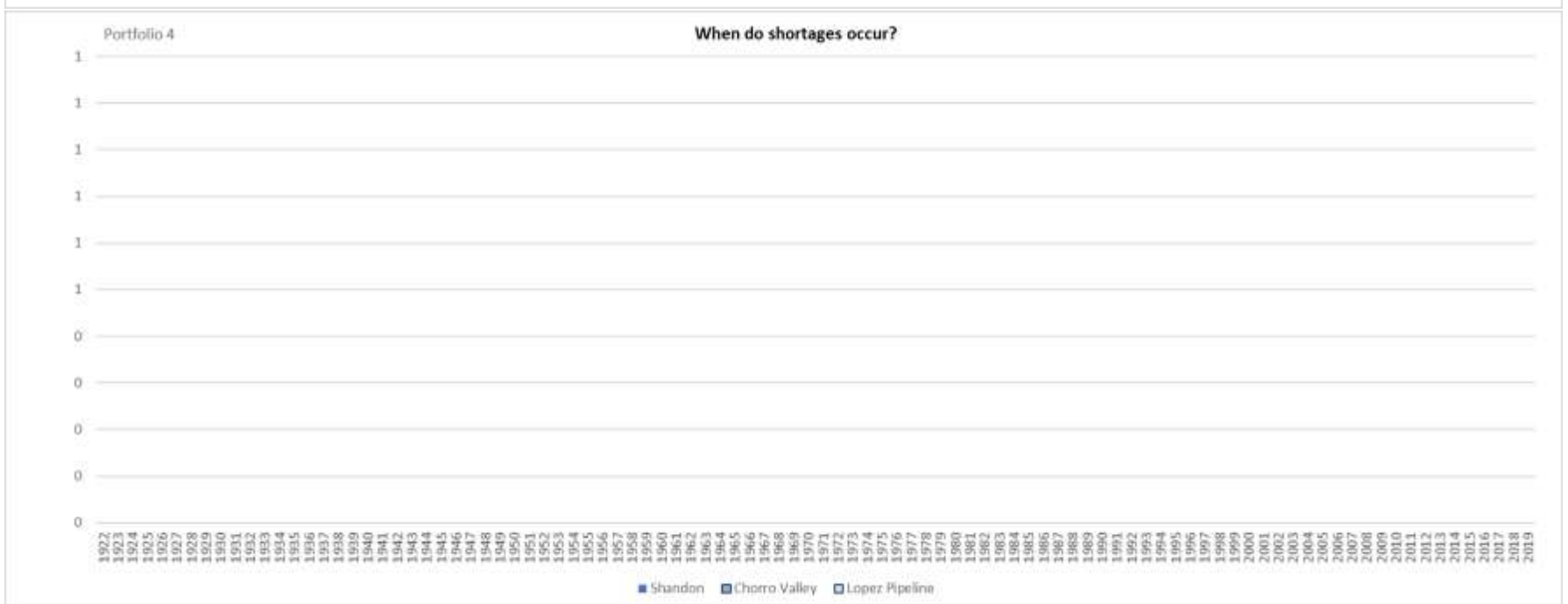

Portfolio 4
Where does San Luis Obispo County's water stored in San Luis Reservoir go?
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Long-term Carryover Transferred to SBC
Short-term Carryover Transferred to SBC
Sells to other SWP Contractors

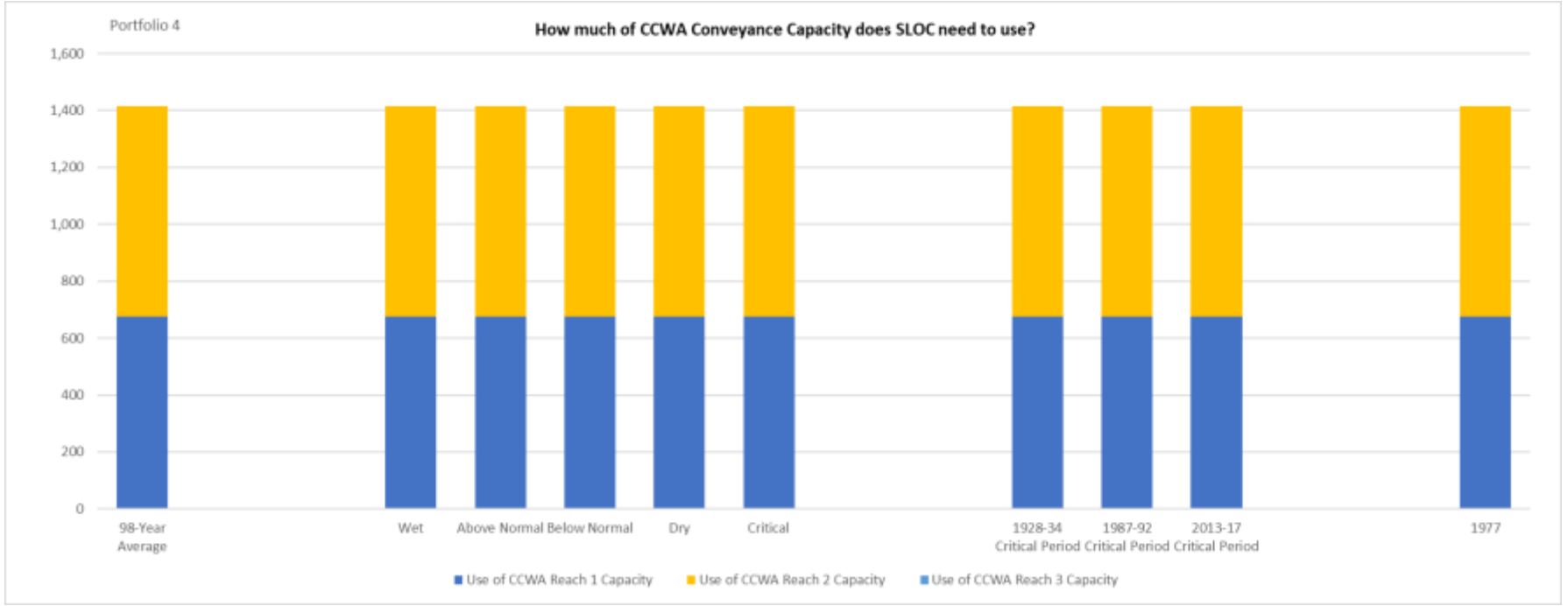

Portfolio 4
Where does San Luis Obispo County's water stored in San Luis Reservoir go?
25,000
20,000
15,000
10,000
5,000
0
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Long-term Carryover Transferred to SBC
Short-term Carryover Transferred to SBC
Sells to other SWP Contractors

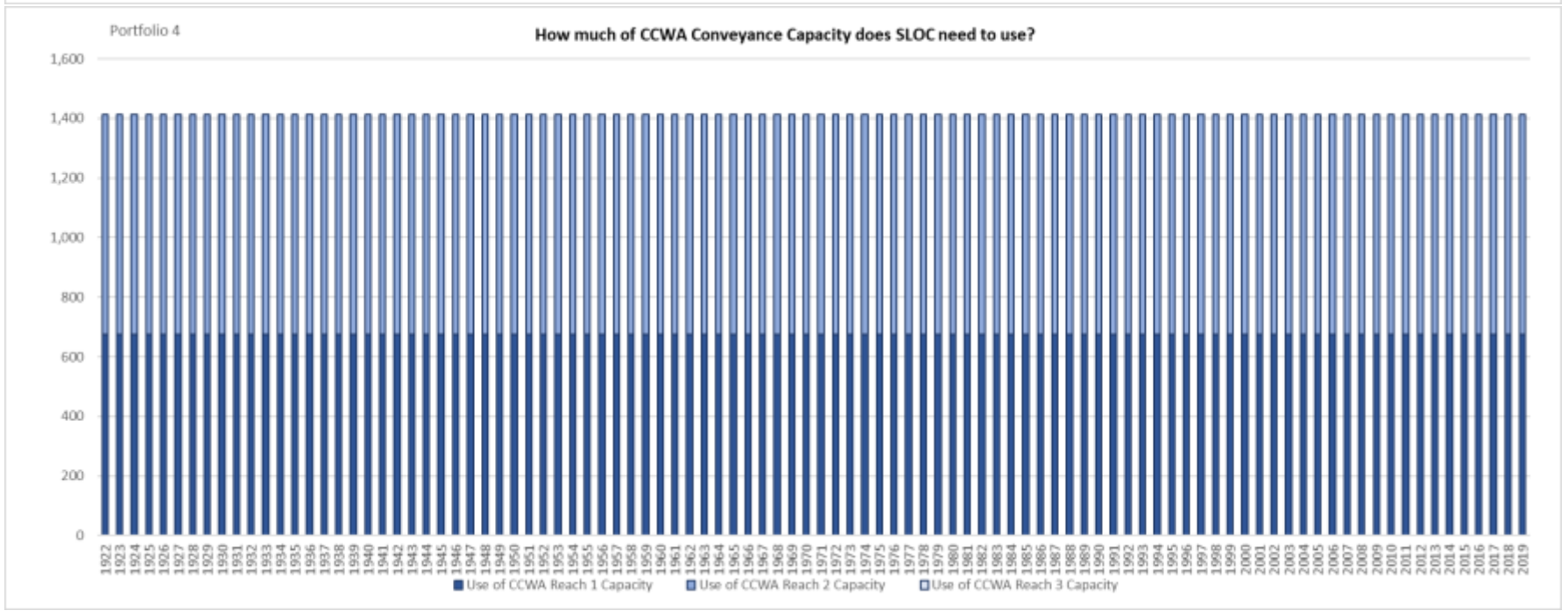

Portfolio 4
How Much Water is going to each San Luis Obispo County Turnout?
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Shandon
Chorro Valley
Lopez Pipelinie


Portfolio 4
How Much Water is going to each San Luis Obispo County Turnout?
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Shandon
Chorro Valley
Lopez Pipelinie

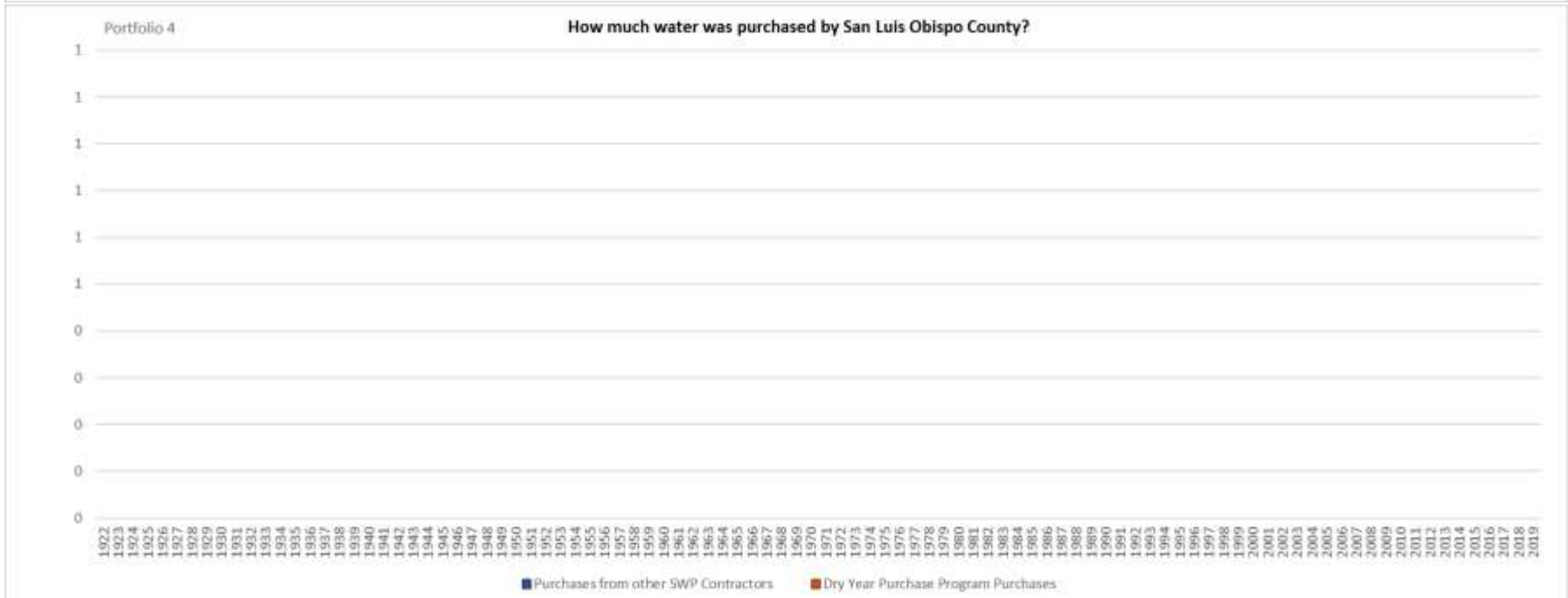

Portfolio 4
When do shortages occur?
1
1
1
1
1
1
0
0
0
0
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Shandon
Chorro Valley
Lopez Pipeline

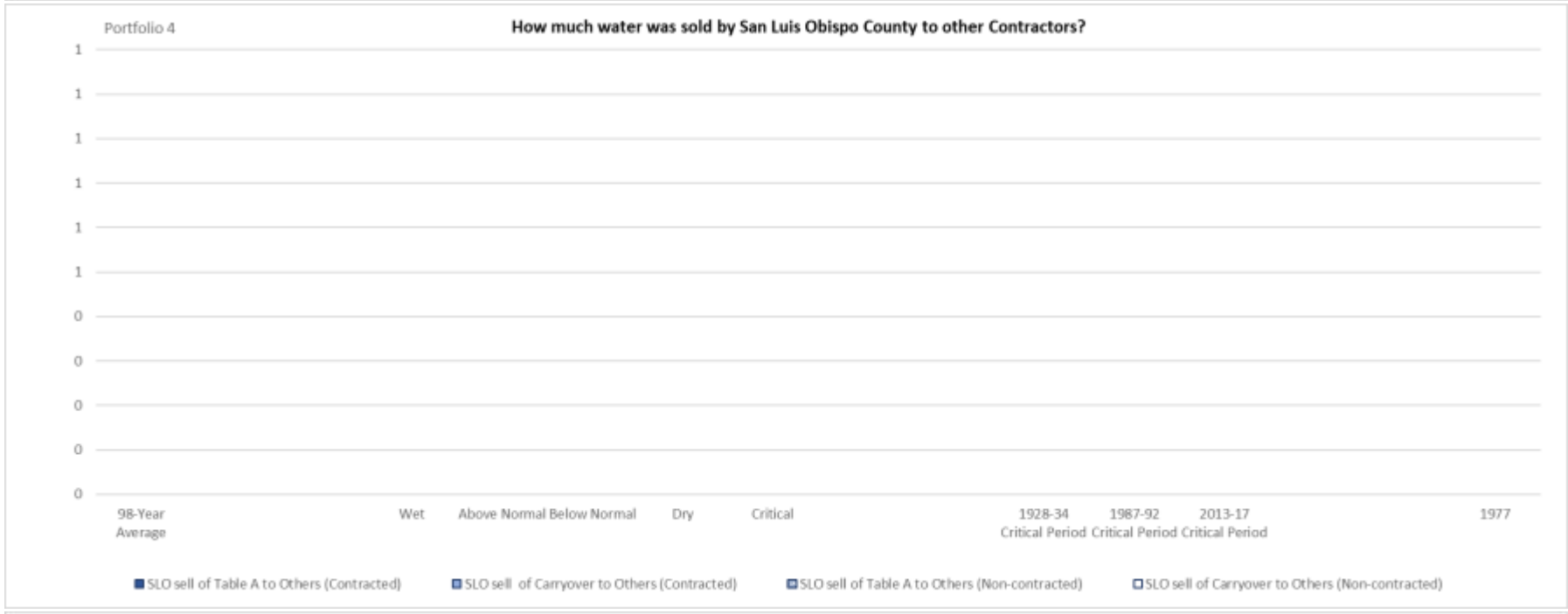

Portfolio 4
When do shortages occur?
1
1
1
1
0
0
0
0
0
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Shandon
Chorro Valley
Lopez Pipeline

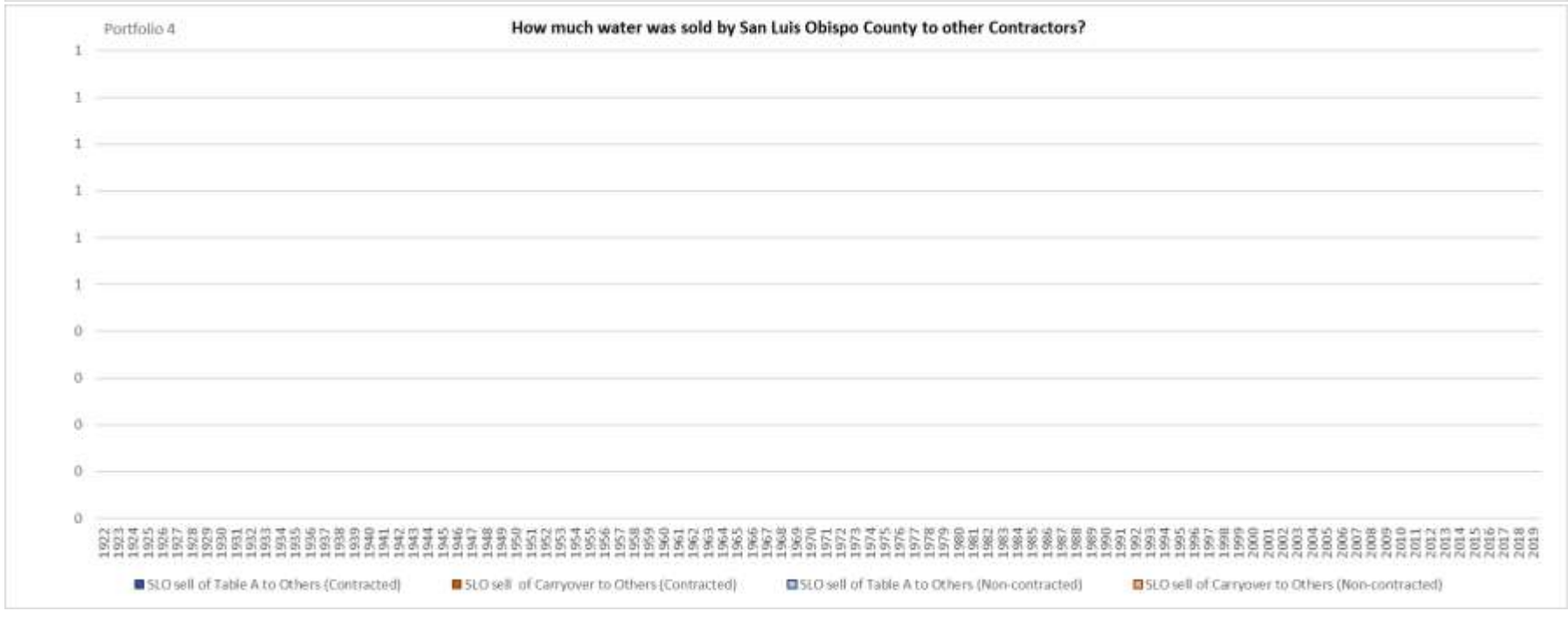

Portfolio 4
How much of CCWA Conveyance Capacity does SLOC need to use?
1,600
1,400
1,200
1,000
800
600
400
200
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Use of CCWA Reach 1 Capacity
Use of CCWA Reach 2 Capacity
Use of CCWA Reach 3 Capacity


Portfolio 4
How much of CCWA Conveyance Capacity does SLOC need to use?
1,600
1,400
1,200
1,000
800
600
400
200
0
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Use of CCWA Reach 1 Capacity
Use of CCWA Reach 2 Capacity
Use of CCWA Reach 3 Capacity


Portfolio 4
How much water was purchased by San Luis Obispo County?
1
1
1
1
1
1
0
0
0
0
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Purchases from other SWP Contractors
Dry Year Purchase Program Purchases


Portfolio 4
How much water was purchased by San Luis Obispo County?
1
1
1
1
1
0
0
0
0
0
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Purchases from other SWP Contractors
Dry Year Purchase Program Purchases


Portfolio 4
How much water was sold by San Luis Obispo County to other Contractors?
1
1
1
1
1
1
0
0
0
0
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
SLO sell of Table A to Others (Contracted)
SLO sell of Carryover to Others (Contracted)
SLO sell of Table A to Others (Non-contracted)
SLO sell of Carryover to Others (Non-contracted)


Portfolio 4
How much water was sold by San Luis Obispo County to other Contractors?
1
1
1
1
1
1
0
0
0
0
0
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
SLO sell of Table A to Others (Contracted)
SLO sell of Carryover to Others (Contracted)
SLO sell of Table A to Others (Non-contracted)
SLO sell of Carryover to Others (Non-contracted)

Portfolio 5 "Water Management Amendment"

The final portfolio that was analyzed includes full implementation of the 2021 SWP Water Management Amendment, which provides for annual and multi-year sales of SWP Table A outside the Central Coast region, among other provisions. For SLOFCWCD , there is no change to deliveries, which were already fully met with the other portfolios. The primary benefit for SLOFCWCD is more revenue from the assumed sale of unused Table A allocations in many years. Having buyers outside of the Central Coast area provides more opportunity for sales, and revenues are increased to $932,431 per year. The portfolio analysis assumes that the price for the sales is the same externally as with the sales within the Central Coast region, but a larger market for sales would be very likely to obtain higher prices.

For CCWA, Portfolio 5 provides nearly the same supply as with Portfolio 4, with purchases potentially spread across a broader group of SWP Contractors than just SLOFCWCD , as is the case with Portfolio 4. Portfolio 5 increases the water supplies to CCWA by 8.5% when compared to Portfolio 1. Shortages for CCWA are reduced from 158 af/year in Portfolio 4 to 97 af/year. The major benefit for CCWA is a reduction in spills of carryover water, unused Table A allocations were sold to other SWP Contractors. The sales of SWP water in mostly wet years provided an average of over $2 million per year, which could offset fixed SWP costs.

Summary of Portfolio 5 Analysis

	Central Coast Water Authority (CCWA)								CCWA					CCWA							CCWA				CCWA				CCWA	
	Sources of Water Delivered								Fate of Annual Table A Allocation					What Happens to water stored in San Luis Reservoir					How much water is delivered to each turnout			Delivery Shortages				Water Purchases				Sells to Others	
		Carryover		Return from Storage/Exchange Programs			Purchases			Storage in San Luis Reservoir		Transfers		Carryover Delivered		Carryover Spilled		Carryover Sold to Others							Transfers from SLOFCWD		Other Transfers			
Time Period	Table A	Long-Term	Short-Term	External	Internal	Transfers from SLOFCWD	Dry Year Purchase	SWP Contractors	Direct Delivery	Long-Term	Short-Term	Sells to SLOFCWD	Sells to Others	Long-Term	Short-Term	Long-Term	Short-Term		North County	Mid County	Lake Cachuma	North County	Mid-County		Lake Cachuma	Table A and Long-term Carryover	Short-term Carryover	Dry Year Purchase	SWP Contractors	SLOFCWD	SWP Contractors
98-Year Summary																															
Total	1,896,911	120,474	-	114,260		99,207	6,536	7,993	1,896,911	546,915	-	-	410,703	120,474	-	29,227	-	267,737	1,404,335	663,572	177,474	30,483	5,866		-	60,045	39,162	6,536	7,993	-	678,440
Average	19,356	1,229	-	1,166		1,012	67	82	19,356	5,581	-	-	4,191	1,229	-	298	-	2,732	14,330	6,771	1,811	311	60		-	613	400	67	82	-	6,923
Water Year Averages																															
Wet	22,400	-	-	-		-	-	-	22,400	12,913	-	-	4,525	-	-	974	-	2,266	14,641	6,831	928	-	-		-	-	-	-	-	-	6,792
Above Normal	22,238	79	-	244		-	-	13	22,238	7,860	-	-	2,572	79	-	-	-	1,676	14,641	6,831	1,102	-	-		-	-	-	-	13	-	4,248
Below Normal	21,630	450	-	1,000		1,286	-	-	21,630	1,269	-	-	6,764	450	-	-	-	4,220	14,641	6,769	2,955	-	62		-	484	802	-	-	-	10,984
Dry	18,187	2,146	-	1,217		1,928	104	170	18,187	1,269	-	-	4,962	2,146	-	-	-	4,009	14,492	6,809	2,450	149	22		-	1,397	531	104	170	-	8,972
Critically Dry	9,946	4,188	-	4,456		2,287	276	261	9,946	-	-	-	1,104	4,188	-	-	-	1,104	12,837	6,539	2,038	1,804	292		-	1,345	941	276	261	-	2,209
Critical Period Averages																															
1928-1934	13,789	1,526	-	2,138		1,700	446	571	13,789	1,351	-	-	-	1,526	-	-	-	-	13,394	6,776	-	1,247	55		-	1,025	675	446	571	-	-
1987-1992	10,705	2,324	-	5,000		2,616	130	83	10,705	136	-	-	-	2,324	-	-	-	-	14,090	6,767	-	552	64		-	1,822	794	130	83	-	-
2013-2017	18,248	2,983	-	5,689		5,072	192	200	18,248	401	-	-	-	2,983	-	-	-	-	10,952	5,910	15,523	3,689	921		-	3,212	1,859	192	200	-	-
1977	2,729	6,618	-	7,500		4,625	-	-	2,729	-	-	-	-	6,618	-	-	-	-	14,641	6,831	-	-	-		-	2,370	2,255	-	-	-	-

	San Luis Obispo County Flood Control and Water Conservation District (SLOFCWD)								SLOFCWD					SLOFCWD					SLOFCWD			SLOFCWD				SLOFCWD				SLOFCWD	
	Sources of Water Delivered								Fate of Annual Table A Allocation					What Happens to water stored in San Luis Reservoir					How much water is delivered to each turnout			Delivery Shortages				Water Purchases				Sells to Others	
		Carryover		Return from Storage/Exchange Programs			Purchases			Storage in San Luis Reservoir		Transfers		Carryover Delivered		Carryover Spilled		Carryover Sold to													
Time Period	Table A	Long-Term	Short-Term	External	Internal	Transfers from CCWA	Dry Year Purchase	SWP Contractors	Direct Delivery	Long-Term	Short-Term	Sells to CCWA	Sells to Others	Long-Term	Short-Term	Long-Term	Short-Term	Others	Shandon	Chorro Valley	Lopez Pipeline	Shandon	Chorro Valley	Lopez Pipeline		Dry Year Purchase	SWP Contractors		CCWA	SWP Contractors	
98-Year Summary																															
Total	522,926	16,335	34,288	39,501		-	1,407	101	519,738	319,812	143,209	34,648	404,343	17,354	34,288	70,494	67,280	228,152	6,566	246,764	361,228	-	-	-		1,407	101		99,207	567,936	
Average	5,336	167	350	403		-	14	1	5,303	3,263	1,461	354	4,126	177	350	719	687	2,328	67	2,518	3,686	-	-	-		14	1		1,012	5,795	
Water Year Averages																															
Wet	6,223	11	37	-		-	-	-	6,223	-	2,870	-	3,717	11	37	2,350	2,243	52	67	2,518	3,686	-	-	-		-	-		-	3,769	
Above Normal	6,180	57	-	33		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-		-	-	
Below Normal	5,540	355	139	238		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-		-	-	
Dry	4,818	179	411	797		-	61	4	4,735	-	1,006	-	4,201	179	411	-	-	4,496	67	2,518	3,686	-	-	-		61	4		1,928	7,503	
Critically Dry	3,351	359	1,433	1,127		-	-	-	3,266	-	663	-	769	427	1,433	-	-	3,058	67	2,518	3,686	-	-	-		-	-		2,287	2,217	
Critical Period Averages																															
1928-1934	4,784	-	1,021	372		-	94	-	4,745	931	1,696	563	386	-	1,021	-	-	1,495	67	2,518	3,686	-	-	-		94	-		1,700	745	
1987-1992	3,201	158	1,245	1,667		-	1	-	3,201	464	1,415	708	171	158	1,245	-	-	2,294	67	2,518	3,686	-	-	-		1	-		2,616	557	
2013-2017	3,931	547	276	1,500		-	17	-	3,773	1,985	1,446	1,390	1,656	706	276	-	-	3,681	67	2,518	3,686	-	-	-		17	-		5,072	1,656	
1977	632	1,143	1,996	2,500		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-		-	-	

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	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
Periods	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
1922	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1923	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1924	6,368	11,756	-	-	18,124	-	2,451	480	417	3,348	3,102	-	3,169	-	6,271	-	-	-
1925	11,826	-	-	-	11,826	6,150	398	1,199	1,899	9,646	4,639	-	-	872	5,511	-	101	101
1926	18,194	-	-	-	18,194	3,278	-	-	-	3,278	6,271	-	-	-	6,271	-	-	-
1927	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1928	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1929	14,101	6,569	-	-	20,670	802	-	-	-	802	3,266	-	3,005	-	6,271	-	-	-
1930	6,368	1,678	-	627	8,673	3,778	2,402	1,199	2,000	9,379	2,151	-	961	2,500	5,612	-	-	-
1931	17,740	2,436	-	316	20,492	-	-	480	500	980	6,167	-	-	104	6,271	-	-	-
1932	11,372	-	-	5,662	17,034	1,134	2,324	480	500	4,438	5,116	-	1,155	-	6,271	-	-	-
1933	18,194	-	-	864	19,058	1,434	-	480	500	2,414	6,271	-	-	-	6,271	-	-	-
1934	7,278	-	-	7,500	14,778	24	-	480	500	1,004	4,246	-	2,025	-	6,271	-	-	-
1935	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1936	21,472	-	-	-	21,472	-	-	-	-	-	5,585	-	-	686	6,271	-	-	-
1937	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1938	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1939	17,285	4,187	-	-	21,472	-	-	-	-	-	4,004	875	-	1,392	6,271	-	-	-
1940	21,472	-	-	-	21,472	-	-	-	-	-	6,006	-	-	265	6,271	-	-	-
1941	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1942	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1943	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1944	16,830	4,642	-	-	21,472	-	-	-	-	-	3,899	1,275	1,097	-	6,271	-	-	-
1945	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1946	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1947	25,472	8,655	-	2,777	36,904	-	-	-	-	-	5,901	51	-	319	6,271	-	-	-
1948	21,833	-	-	7,500	29,333	3,465	4,106	-	-	7,571	5,058	-	-	1,213	6,271	-	-	-
1949	15,920	1,821	-	7,500	25,241	4,787	1,970	-	-	6,757	3,688	-	83	2,500	6,271	-	-	-
1950	22,743	-	-	7,500	30,243	5,216	480	1	-	5,697	5,268	422	-	581	6,271	-	-	-
1951	33,660	-	-	3,244	36,904	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1952	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-

	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
Periods	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
1953	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1954	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1955	18,194	3,278	-	-	21,472	-	-	-	-	-	4,215	575	-	1,481	6,271	-	-	-
1956	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1957	21,472	-	-	-	21,472	-	-	-	-	-	5,268	801	-	202	6,271	-	-	-
1958	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1959	20,469	1,003	-	-	21,472	-	-	-	-	-	4,742	791	687	51	6,271	-	-	-
1960	21,472	-	-	-	21,472	-	-	-	-	-	5,268	-	-	1,003	6,271	-	-	-
1961	14,556	4,826	-	2,090	21,472	-	-	-	-	-	3,382	389	-	2,500	6,271	-	-	-
1962	21,472	-	-	-	21,472	-	-	-	-	-	5,374	435	-	462	6,271	-	-	-
1963	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1964	21,472	-	-	-	21,472	-	-	-	-	-	6,217	54	-	-	6,271	-	-	-
1965	21,472	-	-	-	21,472	-	-	-	-	-	5,936	335	-	-	6,271	-	-	-
1966	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1967	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1968	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1969	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1970	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1971	21,472	-	-	-	21,472	-	-	-	-	-	5,163	-	1,108	-	6,271	-	-	-
1972	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1973	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1974	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1975	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1976	21,472	-	-	-	21,472	-	-	-	-	-	5,268	-	1,003	-	6,271	-	-	-
1977	2,729	6,618	-	7,500	16,847	2,370	2,255	-	-	4,625	632	1,143	1,996	2,500	6,271	-	-	-
1978	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1979	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1980	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1981	18,194	3,278	-	-	21,472	-	-	-	-	-	4,215	1,186	-	870	6,271	-	-	-
1982	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-

Periods	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
1983	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1984	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1985	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1986	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1987	12,736	6,338	-	-	19,074	1,806	592	-	-	2,398	2,950	172	3,149	-	6,271	-	-	-
1988	5,003	6,787	-	7,500	19,290	2,182	-	-	-	2,182	1,159	676	3,038	1,398	6,271	-	-	-
1989	21,472	-	-	-	21,472	-	-	-	-	-	5,163	-	-	1,102	6,265	-	-	-
1990	5,913	816	-	7,500	14,229	3,052	4,032	159	-	7,243	2,488	-	1,283	2,500	6,271	-	-	-
1991	11,372	-	-	7,500	18,872	2,462	-	138	-	2,600	3,771	-	-	2,500	6,271	-	-	-
1992	7,733	-	-	7,500	15,233	1,429	138	480	500	2,547	3,673	98	-	2,500	6,271	-	-	-
1993	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1994	14,101	7,371	-	-	21,472	-	-	-	-	-	3,266	737	2,268	-	6,271	-	-	-
1995	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1996	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1997	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1998	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
1999	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2000	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2001	11,826	9,646	-	-	21,472	-	-	-	-	-	2,740	-	3,169	362	6,271	-	-	-
2002	19,559	1,913	-	-	21,472	-	-	-	-	-	4,531	-	-	1,740	6,271	-	-	-
2003	20,014	1,104	-	177	21,295	-	-	-	177	177	6,271	-	-	-	6,271	-	-	-
2004	20,469	-	-	1,003	21,472	-	-	-	-	-	4,742	-	1,529	-	6,271	-	-	-
2005	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2006	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2007	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2008	15,920	5,552	-	-	21,472	-	-	-	-	-	3,688	-	2,185	398	6,271	-	-	-
2009	18,194	3,278	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2010	21,472	-	-	-	21,472	-	-	-	-	-	5,271	1,000	-	-	6,271	-	-	-
2011	21,472	-	-	-	21,472	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2012	29,566	-	-	1,553	31,119	-	5,785	-	-	5,785	6,271	-	-	-	6,271	-	-	-

Periods	Inflows to Coastal Branch																	
	CCWA Operations										SLOFCWCD Operations							
	Table A delivered	Long-term Carryover Return from San Luis Reservoir	Short-term Carryover Return from San Luis Reservoir	Return from External Program	Total Inflow to Coastal Branch from CCWA Supplies	Transfer of SLOFCWCD Table A and Long-Term Carryover to CCWA	Transfer of SLOFCWCD Short-term Carryover to CCWA	CCWA Drought Purchase	Purchases from Other SWP Contractors	Total Purchases	Table A delivered	Long-term Carryover Returned from San Luis Reservoir	Short-term Carryover Returned from San Luis Reservoir	Return of Contracted Supplies from External Program	Total Inflow to Coastal Branch from SLOFCWCD Supplies	Transfer from CCWA to SLOFCWCD	SLOFCWCD Purchases from Other SWP Contractors	Total Purchases
2013	15,920	-	-	7,500	23,420	7,106	6,378	-	-	13,484	3,688	-	-	2,500	6,188	-	-	-
2014	2,274	11,698	-	7,500	21,472	2,246	2,376	480	500	5,602	1,208	1,185	1,378	2,500	6,271	-	-	-
2015	9,097	3,219	-	7,500	19,816	3,045	542	480	500	4,567	2,219	1,552	-	2,500	6,271	-	-	-
2016	27,292	-	-	5,947	33,239	3,665	-	-	-	3,665	6,271	-	-	-	6,271	-	-	-
2017	36,658	-	-	-	36,658	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
2018	15,920	2,005	-	-	17,925	614	2,933	-	-	3,547	3,688	2,583	-	-	6,271	-	-	-
2019	34,114	-	-	-	34,114	-	-	-	-	-	6,271	-	-	-	6,271	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sum	1,896,911	120,474	-	114,260	2,131,645	60,045	39,162	6,536	7,993	113,736	522,926	16,335	34,288	39,501	613,050	-	101	101
Average	19,356	1,229	-	1,166	21,751	613	400	67	82	1,161	5,336	167	350	403	6,256	-	1	1
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Year Averages	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wet	22,400	-	-	-	22,400	-	-	-	-	-	6,223	11	37	-	6,271	-	-	-
Above Normal	22,238	79	-	244	22,562	-	-	-	13	13	6,180	57	-	33	6,271	-	-	-
Below Normal	21,630	450	-	1,000	23,080	484	802	-	-	1,286	5,540	355	139	238	6,271	-	-	-
Dry	18,187	2,146	-	1,217	21,550	1,397	531	104	170	2,202	4,818	179	411	797	6,205	-	4	4
Critically Dry	9,946	4,188	-	4,456	18,591	1,345	941	276	261	2,823	3,351	359	1,433	1,127	6,271	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Period Averages	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928-34	13,789	1,526	-	2,138	17,454	1,025	675	446	571	2,717	4,784	-	1,021	372	6,177	-	-	-
1987-92	10,705	2,324	-	5,000	18,028	1,822	794	130	83	2,828	3,201	158	1,245	1,667	6,270	-	-	-
2013-17	18,248	2,983	-	5,689	26,921	3,212	1,859	192	200	5,464	3,931	547	276	1,500	6,254	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Driest 1-Year	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1977	2,729	6,618	-	7,500	16,847	2,370	2,255	-	-	4,625	632	1,143	1,996	2,500	6,271	-	-	-

	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
Periods	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
1922	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1923	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1924	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1925	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1926	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1927	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1928	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1929	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1930	18,052	-	5,595	676	67	67	18,052	-	5,466	738	2,518	2,518	18,052	-	3,686	-	3,686	3,686
1931	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1932	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1933	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1934	15,782	-	5,595	676	67	67	15,782	-	5,466	738	2,518	2,518	15,782	-	3,686	-	3,686	3,686
1935	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1936	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1937	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1938	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1939	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1940	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1941	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1942	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1943	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1944	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1945	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1946	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1947	36,904	-	5,595	676	67	67	36,904	-	5,466	738	2,518	2,518	36,658	246	3,686	-	3,686	3,686
1948	36,904	-	5,595	676	67	67	36,904	-	5,466	738	2,518	2,518	36,658	246	3,686	-	3,686	3,686
1949	31,998	-	5,595	676	67	67	31,998	-	5,466	738	2,518	2,518	31,998	-	3,686	-	3,686	3,686
1950	35,940	-	5,595	676	67	67	35,940	-	5,466	738	2,518	2,518	35,940	-	3,686	-	3,686	3,686
1951	36,904	-	5,595	676	67	67	36,904	-	5,466	738	2,518	2,518	36,658	246	3,686	-	3,686	3,686
1952	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686

	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
Periods	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
1953	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1954	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1955	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1956	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1957	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1958	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1959	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1960	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1961	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1962	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1963	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1964	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1965	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1966	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1967	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1968	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1969	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1970	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1971	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1972	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1973	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1974	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1975	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1976	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1977	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1978	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1979	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1980	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1981	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1982	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686

	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
Periods	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
1983	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1984	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1985	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1986	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1987	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1988	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1989	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1990	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1991	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1992	17,780	-	5,595	676	67	67	17,780	-	5,466	738	2,518	2,518	17,780	-	3,686	-	3,686	3,686
1993	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1994	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1995	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1996	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1997	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1998	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
1999	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2000	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2001	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2002	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2003	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2004	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2005	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2006	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2007	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2008	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2009	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2010	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2011	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2012	36,904	-	5,595	676	67	67	36,904	-	5,466	738	2,518	2,518	36,658	246	3,686	-	3,686	3,686

	Reach 1 Operations						Reach 2 Operations						Reach 3 Operations					
	CCWA		SLOFCWCD				CCWA		SLOFCWCD				CCWA		SLOFCWCD			
Periods	CCWA Reach1 Flow using CCWA Capacity	CCWA Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using SLOFCWCD Capacity	SLOFCWCD Reach1 Flow using CCWA Capacity	SLOFCWCD Delivery to Shandon	Shandon Demand	CCWA Reach2 Flow using CCWA Capacity	CCWA Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using SLOFCWCD Capacity	SLOFCWCD Reach2 Flow using CCWA Capacity	SLOFCWCD Delivery to Chorro Valley	Chorro Valley Demand	CCWA Reach3 Flow using CCWA Capacity	CCWA Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using SLOFCWCD Capacity	SLOFCWCD Reach3 Flow using CCWA Capacity	SLOFCWCD Delivery to Lopez Pipeline	Lopez Pipeline Demand
2013	36,904	-	5,595	676	67	67	36,904	-	5,466	738	2,518	2,518	36,658	246	3,686	-	3,686	3,686
2014	27,074	-	5,595	676	67	67	27,074	-	5,466	738	2,518	2,518	27,074	-	3,686	-	3,686	3,686
2015	24,383	-	5,595	676	67	67	24,383	-	5,466	738	2,518	2,518	24,383	-	3,686	-	3,686	3,686
2016	36,904	-	5,595	676	67	67	36,904	-	5,466	738	2,518	2,518	36,658	246	3,686	-	3,686	3,686
2017	36,658	-	5,595	676	67	67	36,658	-	5,466	738	2,518	2,518	36,658	-	3,686	-	3,686	3,686
2018	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686
2019	34,114	-	5,595	676	67	67	34,114	-	5,466	738	2,518	2,518	34,114	-	3,686	-	3,686	3,686
Sum	2,245,381	-	548,310	66,248	6,566	6,566	2,245,381	-	535,668	72,324	246,764	246,764	2,243,905	1,476	361,228	-	361,228	361,228
Average	22,912	-	5,595	676	67	67	22,912	-	5,466	738	2,518	2,518	22,897	15	3,686	-	3,686	3,686
Water Year Averages																		
Wet	22,400	-	5,595	676	67	67	22,400	-	5,466	738	2,518	2,518	22,400	-	3,686	-	3,686	3,686
Above Normal	22,574	-	5,595	676	67	67	22,574	-	5,466	738	2,518	2,518	22,557	18	3,686	-	3,686	3,686
Below Normal	24,366	-	5,595	676	67	67	24,366	-	5,466	738	2,518	2,518	24,319	46	3,686	-	3,686	3,686
Dry	23,752	-	5,595	676	67	67	23,752	-	5,466	738	2,518	2,518	23,731	21	3,686	-	3,686	3,686
Critically Dry	21,414	-	5,595	676	67	67	21,414	-	5,466	738	2,518	2,518	21,414	-	3,686	-	3,686	3,686
													-	-				
Critical Period Averages													-	-				
1928-34	20,171	-	5,595	676	67	67	20,171	-	5,466	738	2,518	2,518	20,171	-	3,686	-	3,686	3,686
1987-92	20,857	-	5,595	676	67	67	20,857	-	5,466	738	2,518	2,518	20,857	-	3,686	-	3,686	3,686
2013-17	32,385	-	5,595	676	67	67	32,385	-	5,466	738	2,518	2,518	32,286	98	3,686	-	3,686	3,686
Driest 1-Year																		
1977	21,472	-	5,595	676	67	67	21,472	-	5,466	738	2,518	2,518	21,472	-	3,686	-	3,686	3,686

Periods	Reach 4 Operations			Reach 5 Operations			Lake Cachuma Operations						
	CCWA			CCWA									
	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
1922	21,472	14,641	14,641	6,831	6,831	6,831	-	192,009	11,277	196,000	14,000	30,000	30,000
1923	21,472	14,641	14,641	6,831	6,831	6,831	-	54,915	13,060	193,855	14,000	30,000	30,000
1924	21,472	14,641	14,641	6,831	6,831	6,831	-	-	11,956	137,899	14,000	30,000	30,000
1925	21,472	14,641	14,641	6,831	6,831	6,831	-	19,917	10,241	103,575	14,000	30,000	30,000
1926	21,472	14,641	14,641	6,831	6,831	6,831	-	88,712	10,244	138,043	14,000	30,000	30,000
1927	21,472	14,641	14,641	6,831	6,831	6,831	-	96,630	11,677	178,996	14,000	30,000	30,000
1928	21,472	14,641	14,641	6,831	6,831	6,831	-	38,724	12,124	161,596	14,000	30,000	30,000
1929	21,472	14,641	14,641	6,831	6,831	6,831	-	35,543	11,416	141,723	14,000	30,000	30,000
1930	18,052	11,221	14,641	6,831	6,831	6,831	-	24,442	10,469	111,696	14,000	30,000	30,000
1931	21,472	14,641	14,641	6,831	6,831	6,831	-	19,422	9,256	77,862	14,000	30,000	30,000
1932	21,472	14,641	14,641	6,831	6,831	6,831	-	132,123	10,096	155,889	14,000	30,000	30,000
1933	21,472	14,641	14,641	6,831	6,831	6,831	-	12,988	10,786	114,091	14,000	30,000	30,000
1934	15,782	9,334	14,641	6,448	6,448	6,831	-	36,250	9,662	96,679	14,000	30,000	30,000
1935	21,472	14,641	14,641	6,831	6,831	6,831	-	106,812	10,330	149,161	14,000	30,000	30,000
1936	21,472	14,641	14,641	6,831	6,831	6,831	-	49,754	11,225	143,690	14,000	30,000	30,000
1937	21,472	14,641	14,641	6,831	6,831	6,831	-	152,344	12,112	196,000	14,000	30,000	30,000
1938	21,472	14,641	14,641	6,831	6,831	6,831	-	186,211	13,101	196,000	14,000	30,000	30,000
1939	21,472	14,641	14,641	6,831	6,831	6,831	-	41,411	12,808	180,603	14,000	30,000	30,000
1940	21,472	14,641	14,641	6,831	6,831	6,831	-	29,816	12,018	154,401	14,000	30,000	30,000
1941	21,472	14,641	14,641	6,831	6,831	6,831	-	368,484	12,311	196,000	14,000	30,000	30,000
1942	21,472	14,641	14,641	6,831	6,831	6,831	-	30,806	12,611	170,195	14,000	30,000	30,000
1943	21,472	14,641	14,641	6,831	6,831	6,831	-	161,889	12,611	196,000	14,000	30,000	30,000
1944	21,472	14,641	14,641	6,831	6,831	6,831	-	104,761	13,101	196,000	14,000	30,000	30,000
1945	21,472	14,641	14,641	6,831	6,831	6,831	-	45,795	12,890	184,905	14,000	30,000	30,000
1946	21,472	14,641	14,641	6,831	6,831	6,831	-	75,561	12,890	196,000	14,000	30,000	30,000
1947	36,904	14,641	14,641	22,263	6,831	6,831	15,432	10,655	12,523	165,564	14,000	30,000	30,000
1948	36,904	14,641	14,641	22,263	6,831	6,831	15,432	-	11,189	125,807	14,000	30,000	30,000
1949	31,998	14,641	14,641	17,357	6,831	6,831	10,526	3,514	9,680	86,167	14,000	30,000	30,000
1950	35,940	14,641	14,641	21,299	6,831	6,831	14,468	13,837	8,468	62,004	14,000	30,000	30,000
1951	36,904	14,641	14,641	22,263	6,831	6,831	15,432	-	7,327	26,109	14,000	30,000	30,000
1952	21,472	14,641	14,641	6,831	6,831	6,831	-	246,309	9,873	196,000	14,000	30,000	30,000

	Reach 4 Operations			Reach 5 Operations			Lake Cachuma Operations						
	CCWA			CCWA									
Periods	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
1953	21,472	14,641	14,641	6,831	6,831	6,831	-	12,635	12,272	152,363	14,000	30,000	30,000
1954	21,472	14,641	14,641	6,831	6,831	6,831	-	42,047	11,193	139,217	14,000	30,000	30,000
1955	21,472	14,641	14,641	6,831	6,831	6,831	-	48,976	10,832	133,361	14,000	30,000	30,000
1956	21,472	14,641	14,641	6,831	6,831	6,831	-	65,238	10,917	143,682	14,000	30,000	30,000
1957	21,472	14,641	14,641	6,831	6,831	6,831	-	30,099	10,647	119,134	14,000	30,000	30,000
1958	21,472	14,641	14,641	6,831	6,831	6,831	-	265,046	11,641	196,000	14,000	30,000	30,000
1959	21,472	14,641	14,641	6,831	6,831	6,831	-	21,331	12,434	160,897	14,000	30,000	30,000
1960	21,472	14,641	14,641	6,831	6,831	6,831	-	3,797	10,798	109,896	14,000	30,000	30,000
1961	21,472	14,641	14,641	6,831	6,831	6,831	-	-	8,825	57,071	14,000	30,000	30,000
1962	21,472	14,641	14,641	6,831	6,831	6,831	-	152,344	9,696	155,719	14,000	30,000	30,000
1963	21,472	14,641	14,641	6,831	6,831	6,831	-	27,977	11,056	128,640	14,000	30,000	30,000
1964	21,472	14,641	14,641	6,831	6,831	6,831	-	11,857	9,745	86,752	14,000	30,000	30,000
1965	21,472	14,641	14,641	6,831	6,831	6,831	-	57,744	9,039	91,457	14,000	30,000	30,000
1966	21,472	14,641	14,641	6,831	6,831	6,831	-	106,812	10,129	144,140	14,000	30,000	30,000
1967	21,472	14,641	14,641	6,831	6,831	6,831	-	173,909	12,116	196,000	14,000	30,000	30,000
1968	21,472	14,641	14,641	6,831	6,831	6,831	-	3,231	12,097	143,134	14,000	30,000	30,000
1969	21,472	14,641	14,641	6,831	6,831	6,831	-	309,518	12,097	196,000	14,000	30,000	30,000
1970	21,472	14,641	14,641	6,831	6,831	6,831	-	19,776	12,405	159,371	14,000	30,000	30,000
1971	21,472	14,641	14,641	6,831	6,831	6,831	-	55,764	11,710	159,425	14,000	30,000	30,000
1972	21,472	14,641	14,641	6,831	6,831	6,831	-	7,261	10,808	111,878	14,000	30,000	30,000
1973	21,472	14,641	14,641	6,831	6,831	6,831	-	167,263	11,503	196,000	14,000	30,000	30,000
1974	21,472	14,641	14,641	6,831	6,831	6,831	-	75,349	13,101	196,000	14,000	30,000	30,000
1975	21,472	14,641	14,641	6,831	6,831	6,831	-	92,176	13,101	196,000	14,000	30,000	30,000
1976	21,472	14,641	14,641	6,831	6,831	6,831	-	3,868	12,108	143,760	14,000	30,000	30,000
1977	21,472	14,641	14,641	6,831	6,831	6,831	-	37,805	10,793	126,772	14,000	30,000	30,000
1978	21,472	14,641	14,641	6,831	6,831	6,831	-	308,669	11,786	196,000	14,000	30,000	30,000
1979	21,472	14,641	14,641	6,831	6,831	6,831	-	99,953	13,101	196,000	14,000	30,000	30,000
1980	21,472	14,641	14,641	6,831	6,831	6,831	-	152,203	13,101	196,000	14,000	30,000	30,000
1981	21,472	14,641	14,641	6,831	6,831	6,831	-	51,875	13,004	190,871	14,000	30,000	30,000
1982	21,472	14,641	14,641	6,831	6,831	6,831	-	58,238	12,931	192,178	14,000	30,000	30,000

Periods	Reach 4 Operations			Reach 5 Operations			Lake Cachuma Operations						
	CCWA			CCWA									
	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
1983	21,472	14,641	14,641	6,831	6,831	6,831	-	356,323	13,028	196,000	14,000	30,000	30,000
1984	21,472	14,641	14,641	6,831	6,831	6,831	-	28,826	12,574	168,252	14,000	30,000	30,000
1985	21,472	14,641	14,641	6,831	6,831	6,831	-	16,877	11,316	129,813	14,000	30,000	30,000
1986	21,472	14,641	14,641	6,831	6,831	6,831	-	112,114	11,659	186,268	14,000	30,000	30,000
1987	21,472	14,641	14,641	6,831	6,831	6,831	-	-	11,673	130,595	14,000	30,000	30,000
1988	21,472	14,641	14,641	6,831	6,831	6,831	-	72,521	10,949	148,167	14,000	30,000	30,000
1989	21,472	14,641	14,641	6,831	6,831	6,831	-	403	10,260	94,310	14,000	30,000	30,000
1990	21,472	14,641	14,641	6,831	6,831	6,831	-	-	8,244	42,066	14,000	30,000	30,000
1991	21,472	14,641	14,641	6,831	6,831	6,831	-	108,933	8,327	98,672	14,000	30,000	30,000
1992	17,780	11,332	14,641	6,448	6,448	6,831	-	167,121	11,252	196,000	14,000	30,000	30,000
1993	21,472	14,641	14,641	6,831	6,831	6,831	-	334,360	13,101	196,000	14,000	30,000	30,000
1994	21,472	14,641	14,641	6,831	6,831	6,831	-	15,575	12,327	155,248	14,000	30,000	30,000
1995	21,472	14,641	14,641	6,831	6,831	6,831	-	366,102	12,327	196,000	14,000	30,000	30,000
1996	21,472	14,641	14,641	6,831	6,831	6,831	-	41,187	12,804	180,383	14,000	30,000	30,000
1997	21,472	14,641	14,641	6,831	6,831	6,831	-	59,768	12,568	183,583	14,000	30,000	30,000
1998	21,472	14,641	14,641	6,831	6,831	6,831	-	465,884	12,865	196,000	14,000	30,000	30,000
1999	21,472	14,641	14,641	6,831	6,831	6,831	-	18,239	12,376	157,863	14,000	30,000	30,000
2000	21,472	14,641	14,641	6,831	6,831	6,831	-	51,869	11,581	154,151	14,000	30,000	30,000
2001	21,472	14,641	14,641	6,831	6,831	6,831	-	151,409	12,306	196,000	14,000	30,000	30,000
2002	21,472	14,641	14,641	6,831	6,831	6,831	-	6,421	12,156	146,265	14,000	30,000	30,000
2003	21,472	14,641	14,641	6,831	6,831	6,831	-	17,144	10,501	108,908	14,000	30,000	30,000
2004	21,472	14,641	14,641	6,831	6,831	6,831	-	18,695	9,137	74,466	14,000	30,000	30,000
2005	21,472	14,641	14,641	6,831	6,831	6,831	-	388,819	10,792	196,000	14,000	30,000	30,000
2006	21,472	14,641	14,641	6,831	6,831	6,831	-	100,283	13,101	196,000	14,000	30,000	30,000
2007	21,472	14,641	14,641	6,831	6,831	6,831	-	4,920	12,128	144,792	14,000	30,000	30,000
2008	21,472	14,641	14,641	6,831	6,831	6,831	-	108,331	12,128	196,000	14,000	30,000	30,000
2009	21,472	14,641	14,641	6,831	6,831	6,831	-	13,188	12,282	152,906	14,000	30,000	30,000
2010	21,472	14,641	14,641	6,831	6,831	6,831	-	75,948	11,845	173,009	14,000	30,000	30,000
2011	21,472	14,641	14,641	6,831	6,831	6,831	-	131,349	12,664	196,000	14,000	30,000	30,000
2012	36,904	14,641	14,641	22,263	6,336	6,831	15,927	6,429	12,453	161,903	14,000	30,000	30,000

Periods	Reach 4 Operations CCWA			Reach 5 Operations CCWA			Lake Cachuma Operations						
	CCWA Reach 4 Flow	CCWA Delivery to North County	North County Demand	CCWA Reach 5 Flow	CCWA Delivery to Mid County	Mid County Demand	CCWA Inflow to Lake Cachuma	Stream Inflow	Losses	EoY Storage	Releases	Deliveries from the Reservoir	Reservoir Delivery Demand
2013	36,904	14,641	14,641	22,263	6,336	6,831	15,927	3,520	11,127	126,223	14,000	30,000	30,000
2014	27,074	5,599	14,641	21,475	5,548	6,831	15,927	3,942	9,805	92,287	14,000	30,000	30,000
2015	24,383	5,236	14,641	19,147	4,499	6,831	14,648	2,264	8,484	56,715	14,000	30,000	30,000
2016	36,904	14,641	14,641	22,263	6,336	6,831	15,927	4,694	7,227	26,109	14,000	30,000	30,000
2017	36,658	14,641	14,641	22,017	6,831	6,831	15,186	87,303	7,612	76,986	14,000	30,000	30,000
2018	21,472	14,641	14,641	6,831	6,831	6,831	-	3,373	7,661	28,698	14,000	30,000	30,000
2019	34,114	14,641	14,641	19,473	6,831	6,831	12,642	104,953	7,990	94,303	14,000	30,000	30,000
Sum	2,245,381	1,404,335	1,434,818	841,046	663,572	669,438	177,474	8,291,482	1,104,948	14,495,169	1,372,000	2,940,000	2,940,000
Average	22,912	14,330	14,641	8,582	6,771	6,831	1,811	84,607	11,275	147,910	14,000	30,000	30,000
Water Year Averages													
Wet	22,400	14,641	14,641	7,759	6,831	6,831	928	142,380	11,858	172,832	14,000	30,000	30,000
Above Normal	22,574	14,641	14,641	7,933	6,831	6,831	1,102	123,800	11,446	158,465	14,000	30,000	30,000
Below Normal	24,366	14,641	14,641	9,725	6,769	6,831	2,955	38,054	10,998	133,664	14,000	30,000	30,000
Dry	23,752	14,492	14,641	9,260	6,809	6,831	2,450	40,225	11,196	135,522	14,000	30,000	30,000
Critically Dry	21,414	12,837	14,641	8,577	6,539	6,831	2,038	50,188	10,365	122,405	14,000	30,000	30,000
Critical Period Averages													
1928-34	20,171	13,394	14,641	6,776	6,776	6,831	-	42,785	10,544	122,791	14,000	30,000	30,000
1987-92	20,857	14,090	14,641	6,767	6,767	6,831	-	58,163	10,118	118,302	14,000	30,000	30,000
2013-17	32,385	10,952	14,641	21,433	5,910	6,831	15,523	20,345	8,851	75,664	14,000	30,000	30,000
Driest 1-Year													
1977	21,472	14,641	14,641	6,831	6,831	6,831	-	37,805	10,793	126,772	14,000	30,000	30,000

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	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
Periods	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
1922	2,752	-	-	-	4,556	-	-	-	-	7,616	-	993	1,105	-	144
1923	9,004	-	-	-	9,690	-	-	3,681	-	-	-	-	789	-	103
1924	-	11,756	-	-	398	3,395	2,451	430	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	2,788	-	-	-	-	-	-	872	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	1,225	-	-	-	390	-	-	-	-	9,598	-	1,252	1,210	-	158
1928	9,458	-	-	-	7,234	-	-	-	-	-	-	-	894	-	117
1929	-	6,569	-	-	4,484	3,005	802	2,509	-	-	-	-	-	-	-
1930	-	1,678	-	-	-	961	4,831	-	-	-	627	-	-	2,500	-
1931	-	2,436	-	-	3,479	-	-	-	-	-	316	-	-	104	-
1932	-	-	-	-	-	1,155	2,324	-	-	-	5,662	-	-	-	-
1933	-	-	-	-	2,295	-	-	-	-	-	864	-	-	-	-
1934	-	-	-	-	-	2,025	-	-	-	-	7,500	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	10,000	-	1,304	2,264	-	295
1936	-	-	-	-	2,146	-	-	-	-	2,636	-	344	-	686	-
1937	-	-	-	-	-	-	-	2,146	-	10,000	-	1,304	1,421	-	185
1938	18,102	-	-	-	9,181	-	-	-	-	4,641	-	605	2,317	-	302
1939	-	4,187	13,915	-	-	875	-	8,306	-	-	-	-	-	1,392	-
1940	-	-	-	-	-	-	-	-	-	2,723	-	355	-	265	-
1941	10,830	-	-	-	13,619	-	-	-	-	-	-	-	3,360	-	-
1942	9,185	-	10,000	-	10,992	-	-	-	12,060	3,912	-	-	1,737	-	-
1943	19,011	-	4,661	4,628	10,640	-	-	-	12,152	-	-	-	-	-	-
1944	-	4,642	15,095	-	-	2,372	-	8,667	-	-	-	-	-	-	-
1945	4,656	-	-	-	2,480	-	-	-	-	-	-	-	-	-	-
1946	5,820	-	-	-	3,088	-	-	-	-	-	-	-	-	-	-
1947	-	8,655	-	-	4,106	51	-	4,783	-	-	2,777	-	-	319	-
1948	-	-	-	-	3,477	-	4,106	-	-	-	7,500	-	-	1,213	-
1949	-	1,821	-	-	480	83	3,706	-	-	-	7,500	-	-	2,500	-
1950	-	-	-	-	-	422	480	-	-	-	7,500	-	-	581	-
1951	-	-	-	-	-	-	-	-	-	-	3,244	-	-	-	-
1952	9,498	-	-	-	11,843	-	-	-	-	4,130	-	539	2,338	-	-

	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
Periods	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
1953	-	-	4,359	-	3,088	-	-	-	9,019	5,820	-	759	-	-	-
1954	794	-	2,655	-	4,338	-	-	4,547	-	7,300	-	952	-	-	-
1955	-	3,278	-	-	-	575	-	5,128	-	-	-	-	-	1,481	-
1956	8,556	-	-	-	5,729	-	-	-	-	10,000	-	1,304	-	-	-
1957	-	-	8,556	-	-	801	-	4,794	-	1,271	-	166	-	202	-
1958	22,743	-	-	-	12,185	-	-	134	-	-	-	-	-	-	-
1959	-	1,003	3,616	-	1,627	1,478	-	1,469	-	-	-	-	-	51	-
1960	1,271	-	14,569	-	-	-	-	10,041	-	-	-	-	-	1,003	-
1961	-	4,826	-	-	-	389	-	-	-	-	2,090	-	-	2,500	-
1962	1,726	-	-	-	1,175	435	-	-	-	-	-	-	-	462	-
1963	7,639	-	-	-	4,083	-	-	-	-	-	-	-	-	-	-
1964	-	-	9,365	-	-	54	-	4,869	-	-	-	-	-	-	-
1965	2,181	-	-	-	2,031	335	-	-	-	-	-	-	-	-	-
1966	-	-	2,181	-	-	-	-	2,031	-	2,090	-	273	-	-	-
1967	21,833	-	-	-	10,787	-	-	-	-	-	-	-	-	-	-
1968	-	-	21,833	-	-	-	-	10,787	-	-	-	-	-	-	-
1969	10,704	-	-	-	14,626	-	-	-	-	3,310	-	-	4,103	-	-
1970	12,188	-	10,000	-	12,229	-	-	-	14,239	-	-	-	-	-	-
1971	816	-	186	-	1,772	1,108	-	1,428	4,351	-	-	-	-	-	-
1972	-	-	13,522	-	-	-	-	7,501	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	11,694	-	-	-	11,034	-	-	-	-	-	-	-	1,557	-	-
1975	10,823	-	5,458	-	6,937	-	-	-	7,606	-	-	-	-	-	-
1976	1,271	-	11,712	-	6,059	1,003	-	6,423	-	-	-	-	-	-	-
1977	-	6,618	-	-	-	3,139	4,400	1,459	-	-	7,500	-	-	2,500	-
1978	8,327	-	-	-	8,299	-	-	-	-	7,500	-	978	-	-	-
1979	-	-	8,327	-	-	-	-	8,299	-	-	-	-	-	-	-
1980	18,556	-	-	-	9,366	-	-	-	-	-	-	-	-	-	-
1981	-	3,278	15,278	-	-	1,186	-	8,180	-	-	-	-	-	870	-
1982	12,353	-	-	-	14,463	-	-	-	-	1,661	-	-	4,266	-	-

Periods	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
1983	22,743	-	8,729	3,624	15,285	-	-	-	14,463	-	-	-	3,444	-	-
1984	12,188	-	4,541	17,658	6,770	-	-	-	14,986	-	-	-	-	-	-
1985	198	-	12,447	-	109	-	-	6,912	-	-	-	-	-	-	-
1986	12,642	-	-	-	10,797	-	-	-	-	-	-	-	-	-	-
1987	-	6,338	-	-	4,050	3,321	2,398	1,614	-	-	-	-	-	-	-
1988	-	6,787	-	-	-	3,714	1,614	704	-	-	7,500	-	-	1,398	-
1989	816	-	-	-	7,087	-	-	-	-	-	-	-	-	1,102	-
1990	-	816	-	-	-	1,283	6,322	-	-	-	7,500	-	-	2,500	-
1991	-	-	-	-	138	-	121	-	-	-	7,500	-	-	2,500	-
1992	-	-	-	-	-	98	990	-	-	-	7,500	-	-	2,500	-
1993	7,371	-	-	-	6,606	-	-	-	-	723	-	94	-	-	-
1994	-	7,371	-	-	-	3,005	-	3,760	-	-	-	-	-	-	-
1995	8,989	-	-	-	9,488	-	-	-	-	10,000	-	1,304	4,266	-	-
1996	6,635	-	8,989	-	12,438	-	-	-	9,175	10,000	-	1,304	2,791	-	-
1997	-	-	6,635	-	10,847	-	-	-	12,529	9,277	-	1,210	1,632	-	-
1998	10,102	-	-	-	17,418	-	-	-	11,069	3,912	-	-	1,311	-	-
1999	10,368	-	4,432	3,317	5,661	-	-	-	16,125	-	-	-	-	-	-
2000	12,188	-	12,246	-	9,939	-	-	6,693	-	-	-	-	-	-	-
2001	-	9,646	-	-	-	3,169	-	7,031	-	-	-	-	-	362	-
2002	-	1,913	-	-	-	-	-	-	-	-	-	-	-	1,740	-
2003	-	1,104	-	-	3,120	-	-	-	-	-	177	-	-	-	-
2004	-	-	-	-	-	1,529	-	1,513	-	-	1,003	-	-	-	-
2005	17,191	-	-	-	8,832	-	-	-	-	-	-	-	-	-	-
2006	20,249	-	-	-	10,609	-	-	-	-	1,357	-	177	-	-	-
2007	5,820	-	17,863	-	5,273	-	-	8,759	-	-	-	-	-	-	-
2008	-	5,552	16,567	-	-	2,185	-	12,848	-	-	-	-	-	398	-
2009	-	3,278	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	1,000	-	-	-	-	-	-	-	-	-
2011	14,917	-	-	-	13,729	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	9,979	-	5,785	-	-	-	1,553	-	-	-	-

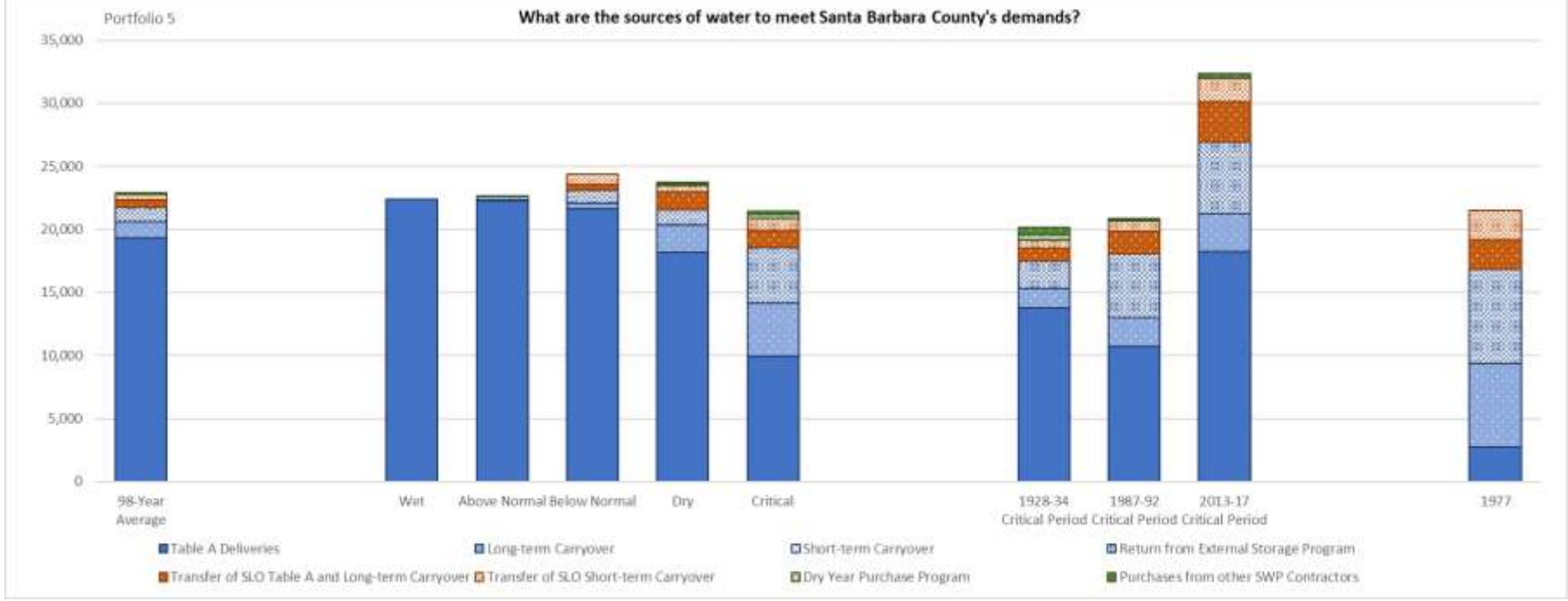
Periods	San Luis Reservoir Operations									External Storage/Exchange Program Operations					
	CCWA Use of San Luis Reservoir				SLOFCWCD Use of San Luis Reservoir					CCWA Use			SLOFCWCD Use		
	CCWA Total Carryover Deliver to San Luis Reservoir	CCWA Total Carryover Returned from San Luis Reservoir	CCWA Long-term Carryover sell to Others	CCWA Total Carryover Loss	SLOFCWCD Total Carryover Deliver to San Luis Reservoir	SLOFCWCD Total Carryover Return from San Luis Reservoir	SLOFCWCD Total Transfer of Carryover to CCWA	SLOFCWCD Total Sell of Carryover to Others	SLOFCWCD Total Loss	CCWA Put to External Program	CCWA Return from External Program	CCWA Leave Behind to External Program	SLOFCWCD Total Put to External Program	SLOFCWCD Total Return from External Program	SLOFCWCD Total Leave Behind to External Program
2013	-	-	-	-	4,849	-	13,271	-	-	-	7,500	-	-	2,500	-
2014	-	11,698	-	-	542	3,244	4,441	-	-	-	7,500	-	-	2,500	-
2015	-	3,219	-	-	-	1,664	694	-	-	-	7,500	-	-	2,500	-
2016	-	-	-	-	-	-	-	-	-	-	5,947	-	-	-	-
2017	2,005	-	-	-	11,765	-	-	-	-	-	-	-	-	-	-
2018	-	2,005	-	-	-	2,583	3,035	6,147	-	-	-	-	-	-	-
2019	-	-	-	-	2,479	-	-	-	-	-	-	-	-	-	-
Sum	417,438	120,474	267,737	29,227	422,216	51,642	64,559	163,593	137,774	129,477	114,260	15,217	40,805	39,501	1,304
Average	4,260	1,229	2,732	298	4,308	527	659	1,669	1,406	1,321	1,166	155	416	403	13
Water Year Averages															
Wet	10,392	-	2,266	974	9,569	48	-	52	4,592	2,521	-	273	1,141	-	15
Above Normal	5,781	79	1,676	-	4,372	57	-	1,145	-	2,080	244	271	150	33	20
Below Normal	974	450	4,220	-	1,918	494	808	3,022	-	295	1,000	39	49	238	6
Dry	399	2,146	4,009	-	1,387	591	1,195	3,302	-	870	1,217	113	160	797	21
Critically Dry	-	4,188	1,104	-	756	1,861	1,611	1,447	-	-	4,456	-	-	1,127	-
Critical Period Averages															
1928-34	1,351	1,526	-	-	2,499	1,021	1,137	358	-	-	2,138	-	128	372	17
1987-92	136	2,324	-	-	1,879	1,403	1,908	386	-	-	5,000	-	-	1,667	-
2013-17	401	2,983	-	-	3,431	982	3,681	-	-	-	5,689	-	-	1,500	-
Driest 1-Year															
1977	-	6,618	-	-	-	3,139	4,400	1,459	-	-	7,500	-	-	2,500	-

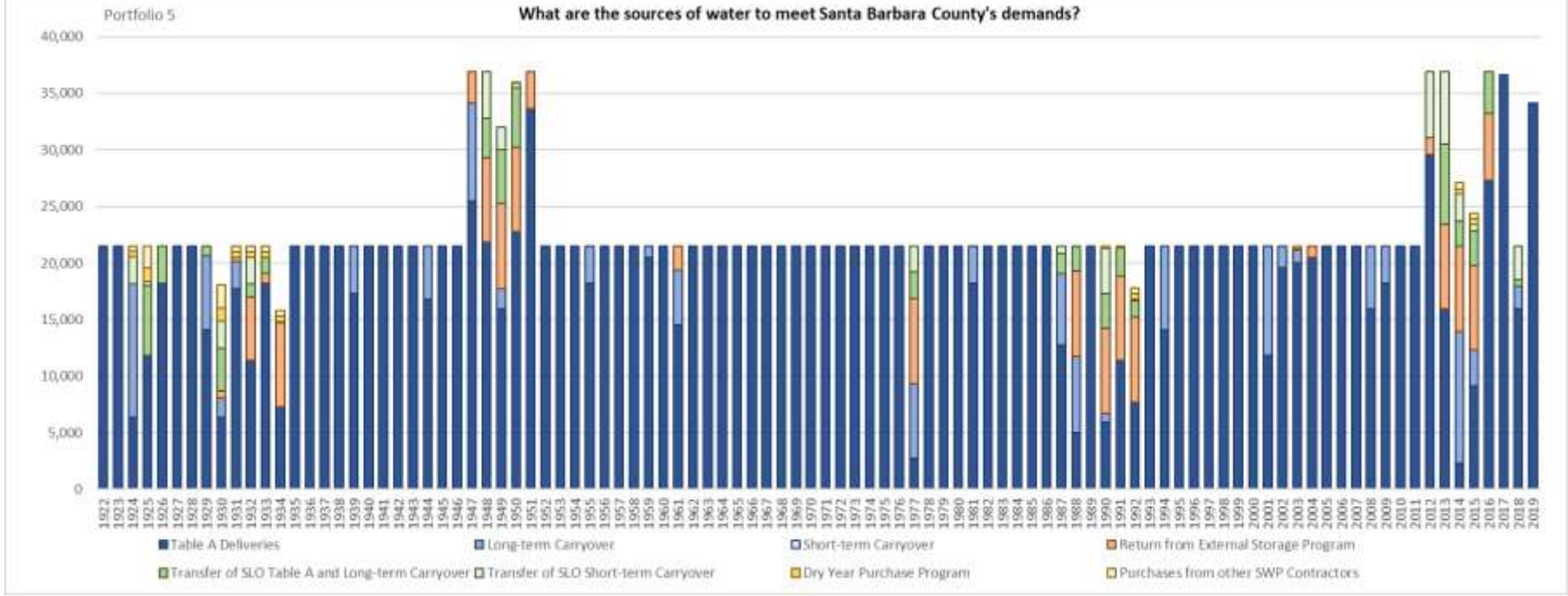
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCDPurchases from Others	SLOFCWCD Purchases from CCWA
1922	-	-	-	-	5,568	-	-	-	-	-
1923	-	-	-	-	-	3,681	-	-	-	-
1924	-	-	-	-	226	430	897	2,451	-	-
1925	-	-	-	6,150.0	-	-	3,098	6,548	760	-
1926	-	-	-	3,278.0	451	-	-	3,278	-	-
1927	-	-	-	-	9,879	-	-	-	-	-
1928	-	-	-	-	2,601	-	-	-	-	-
1929	-	-	-	802.0	-	2,509	-	802	-	-
1930	-	-	-	3,778.0	-	-	3,199	6,180	659	-
1931	-	-	-	-	104	-	980	-	-	-
1932	-	-	-	1,134.0	-	-	980	3,458	-	-
1933	-	-	-	1,434.0	-	-	980	1,434	-	-
1934	-	-	-	24.0	-	-	980	24	-	-
1935	-	5,372	-	-	11,715	-	-	-	-	-
1936	-	-	-	-	5,519	-	-	-	-	-
1937	-	1,733	-	-	10,558	2,146	-	-	-	-
1938	-	1,271	-	-	7,231	-	-	-	-	-
1939	-	-	13,915	-	5,496	8,306	-	-	-	-
1940	-	1,732	-	-	8,244	-	-	-	-	-
1941	-	10,000	-	-	-	-	-	-	-	-
1942	-	-	10,000	-	-	-	-	-	-	-
1943	-	-	4,661	-	5,339	-	-	-	-	-
1944	-	-	15,095	-	5,351	8,667	-	-	-	-
1945	-	5,257	-	-	8,499	-	-	-	-	-
1946	-	-	-	-	5,641	-	-	-	-	-
1947	-	-	-	-	3,993	4,783	-	-	-	-
1948	-	-	-	3,465.0	-	-	-	7,571	-	-
1949	-	-	-	4,787.0	1,531	-	-	6,757	-	-
1950	-	-	-	5,216.0	2,016	-	1	5,696	-	-
1951	-	-	-	-	12,229	-	-	-	-	-
1952	-	7,202	-	-	2,798	-	-	-	-	-

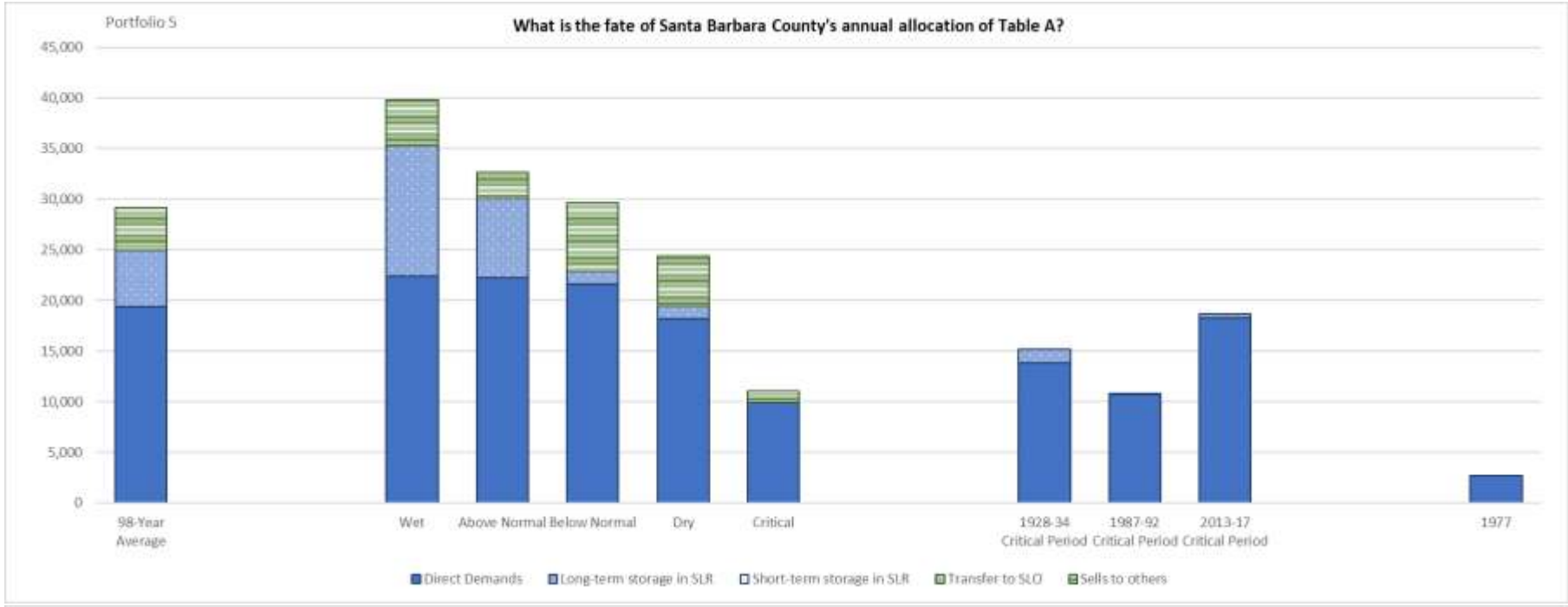
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCDPurchases from Others	SLOFCWCD Purchases from CCWA
1953	-	-	4,359	-	5,641	-	-	-	-	-
1954	-	-	2,655	-	5,641	4,547	-	-	-	-
1955	-	-	-	-	5,785	5,128	-	-	-	-
1956	-	-	-	-	10,000	-	-	-	-	-
1957	-	-	8,556	-	7,232	4,794	-	-	-	-
1958	-	1,271	-	-	6,544	134	-	-	-	-
1959	-	-	3,616	-	4,881	1,469	-	-	-	-
1960	-	-	14,569	-	7,232	10,041	-	-	-	-
1961	-	-	-	-	4,618	-	-	-	-	-
1962	-	-	-	-	6,201	-	-	-	-	-
1963	-	-	-	-	5,646	-	-	-	-	-
1964	-	5,365	9,365	-	8,533	4,869	-	-	-	-
1965	-	-	-	-	5,033	-	-	-	-	-
1966	-	8,733	2,181	-	11,479	2,031	-	-	-	-
1967	-	362	-	-	6,942	-	-	-	-	-
1968	-	6,729	21,833	-	9,229	10,787	-	-	-	-
1969	-	10,000	-	-	-	-	-	-	-	-
1970	-	-	10,000	-	-	-	-	-	-	-
1971	-	-	186	-	5,315	1,428	-	-	-	-
1972	-	7,639	13,522	-	9,729	7,501	-	-	-	-
1973	-	10,823	-	-	11,479	-	-	-	-	-
1974	-	6,862	-	-	3,138	-	-	-	-	-
1975	-	-	5,458	-	4,542	-	-	-	-	-
1976	-	-	11,712	-	1,173	6,423	-	-	-	-
1977	-	-	-	2,370.0	643	1,459	-	4,625	-	-
1978	-	-	-	-	5,930	-	-	-	-	-
1979	-	9,458	8,327	-	10,729	8,299	-	-	-	-
1980	-	-	-	-	6,363	-	-	-	-	-
1981	-	-	15,278	-	5,785	8,180	-	-	-	-
1982	-	10,000	-	-	-	-	-	-	-	-

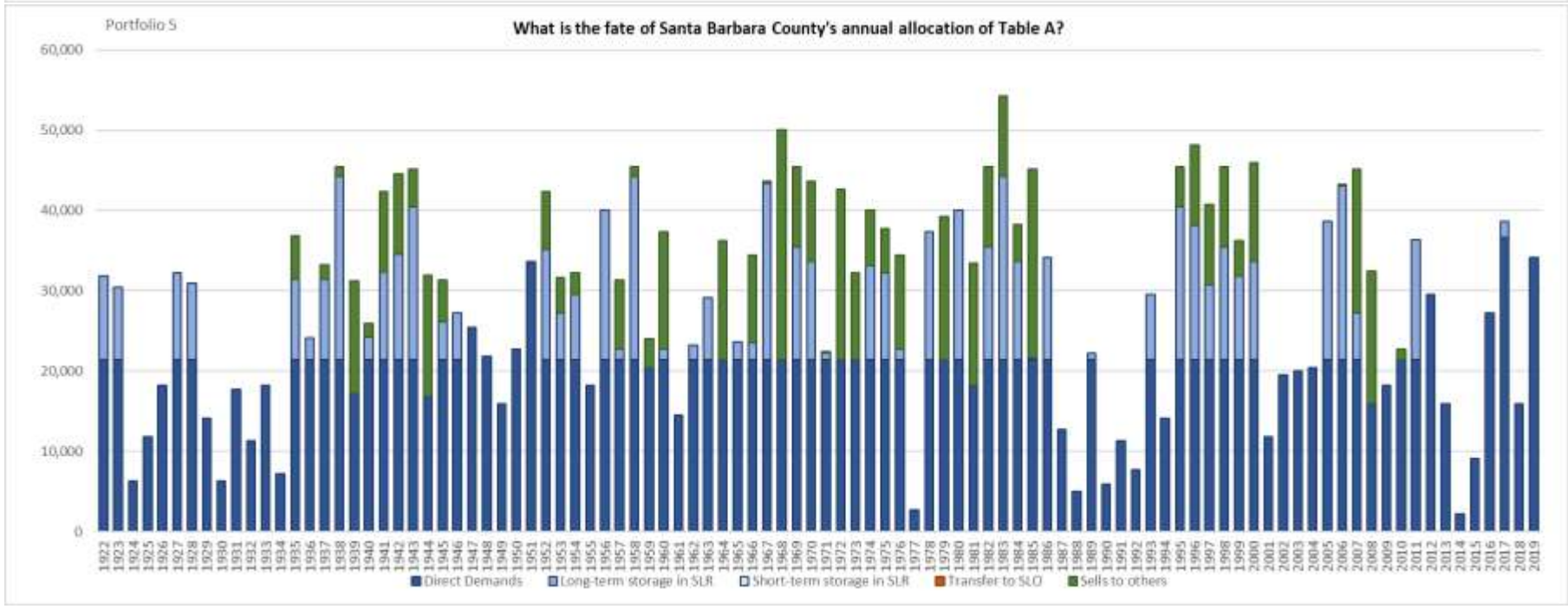
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCDPurchases from Others	SLOFCWCD Purchases from CCWA
1983	-	1,271	8,729	-	-	-	-	-	-	-
1984	-	-	4,541	-	5,459	-	-	-	-	-
1985	-	11,080	12,447	-	11,620	6,912	-	-	-	-
1986	-	-	-	-	1,682	-	-	-	-	-
1987	-	-	-	1,806.0	-	1,614	-	2,398	-	-
1988	-	-	-	2,182.0	1,023	704	-	2,182	-	-
1989	-	-	-	-	-	-	-	-	6	-
1990	-	-	-	3,052.0	-	-	159	7,084	-	-
1991	-	-	-	2,462.0	-	-	138	2,462	-	-
1992	-	-	-	1,429.0	-	-	980	1,567	-	-
1993	-	-	-	-	3,373	-	-	-	-	-
1994	-	-	-	-	4,484	3,760	-	-	-	-
1995	-	5,025	-	-	4,975	-	-	-	-	-
1996	-	1,011	8,989	-	-	-	-	-	-	-
1997	-	3,365	6,635	-	-	-	-	-	-	-
1998	-	10,000	-	-	-	-	-	-	-	-
1999	-	-	4,432	-	5,568	-	-	-	-	-
2000	-	-	12,246	-	2,290	6,693	-	-	-	-
2001	-	-	-	-	3,760	7,031	-	-	-	-
2002	-	-	-	-	6,219	-	-	-	-	-
2003	-	-	-	-	1,609	-	177	-	-	-
2004	-	-	-	-	6,508	1,513	-	-	-	-
2005	-	-	-	-	6,147	-	-	-	-	-
2006	-	134	-	-	6,870	-	-	-	-	-
2007	-	-	17,863	-	3,456	8,759	-	-	-	-
2008	-	-	16,567	-	5,062	12,848	-	-	-	-
2009	-	-	-	-	3,729	-	-	-	-	-
2010	-	1,271	-	-	7,229	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	5,785	-	-

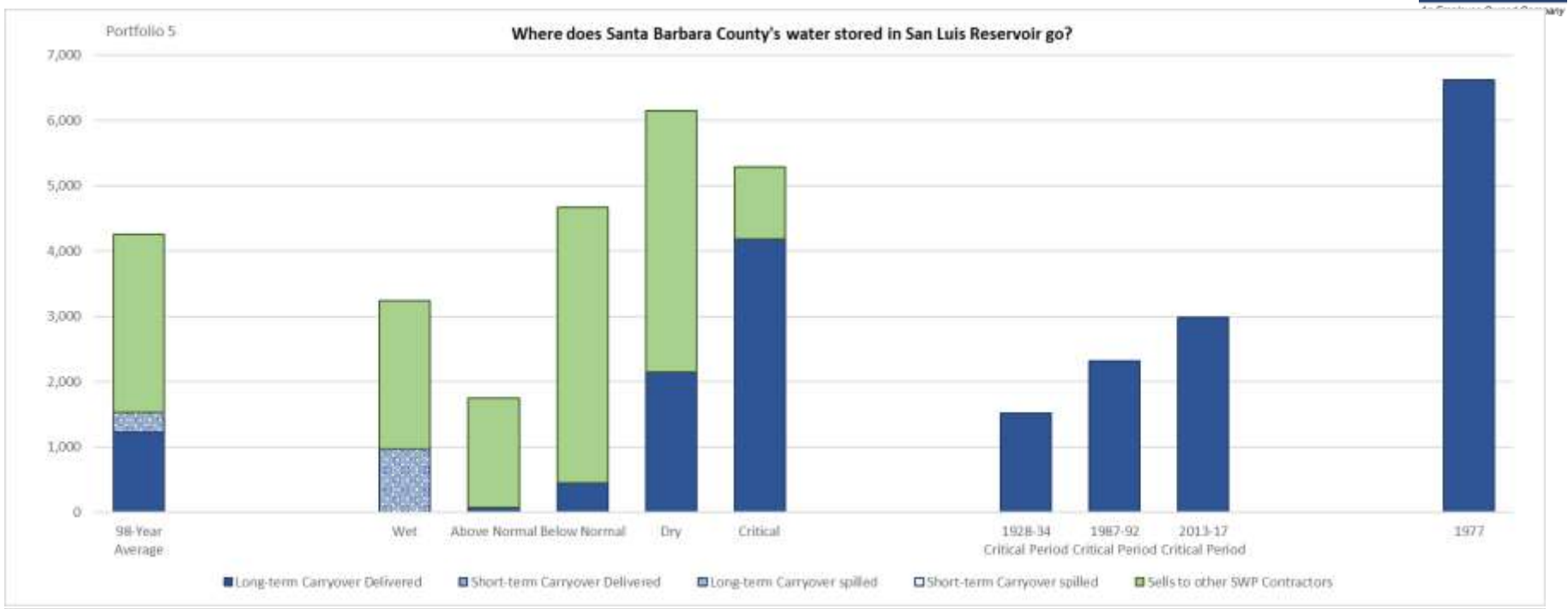
Periods	Sales to Others						Purchases from Others			
	CCWA			SLOFCWCD			CCWA		SLOFCWCD	
	CCWA Transfer to SLOFCWCD	CCWA sale of Table A to Other SWP Contractors	CCWA sale of Long-term Carryover to Other SWP Contractors	SLOFCWCD Transfer of Table A and Long-Term Carryover to CCWA	SLOFCWCD Sale of Table A to Other SWP Contractors	SLOFCWCD Sale of Carryover to Other SWP Contractors	CCWA Purchases from Others	CCWA Purchases from SLOFCWCD	SLOFCWCDPurchases from Others	SLOFCWCD Purchases from CCWA
2013	-	-	-	7,106.0	-	-	-	13,484	83	-
2014	-	-	-	2,246.0	-	-	980	4,622	-	-
2015	-	-	-	3,045.0	-	-	980	3,587	-	-
2016	-	-	-	3,665.0	5,064	-	-	3,665	-	-
2017	-	-	-	-	3,214	-	-	-	-	-
2018	-	-	-	614.0	4,550	6,147	-	3,547	-	-
2019	-	-	-	-	10,000	-	-	-	-	-
Sum	-	142,966	267,737	60,045	404,343	163,593	14,529	99,207	1,508	-
Average	-	1,459	2,732	612.7	4,126	1,669	148	1,012	15	-
Water Year Averages										
Wet	-	2,259	2,266	-	3,717	52	-	-	-	-
Above Normal	-	897	1,676	-	6,333	1,145	13	-	-	-
Below Normal	-	2,544	4,220	484.0	6,000	3,022	-	1,286	-	-
Dry	-	953	4,009	1,396.6	4,201	3,302	274	1,928	66	-
Critically Dry	-	-	1,104	1,345.3	769	1,447	537	2,287	-	-
Critical Period Averages										
1928-34	-	-	-	1,024.6	386	358	1,017	1,700	94	-
1987-92	-	-	-	1,821.8	171	386	213	2,616	1	-
2013-17	-	-	-	3,212.4	1,656	-	392	5,072	17	-
Driest 1-Year										
1977	-	-	-	2,370.0	643	1,459	-	4,625	-	-

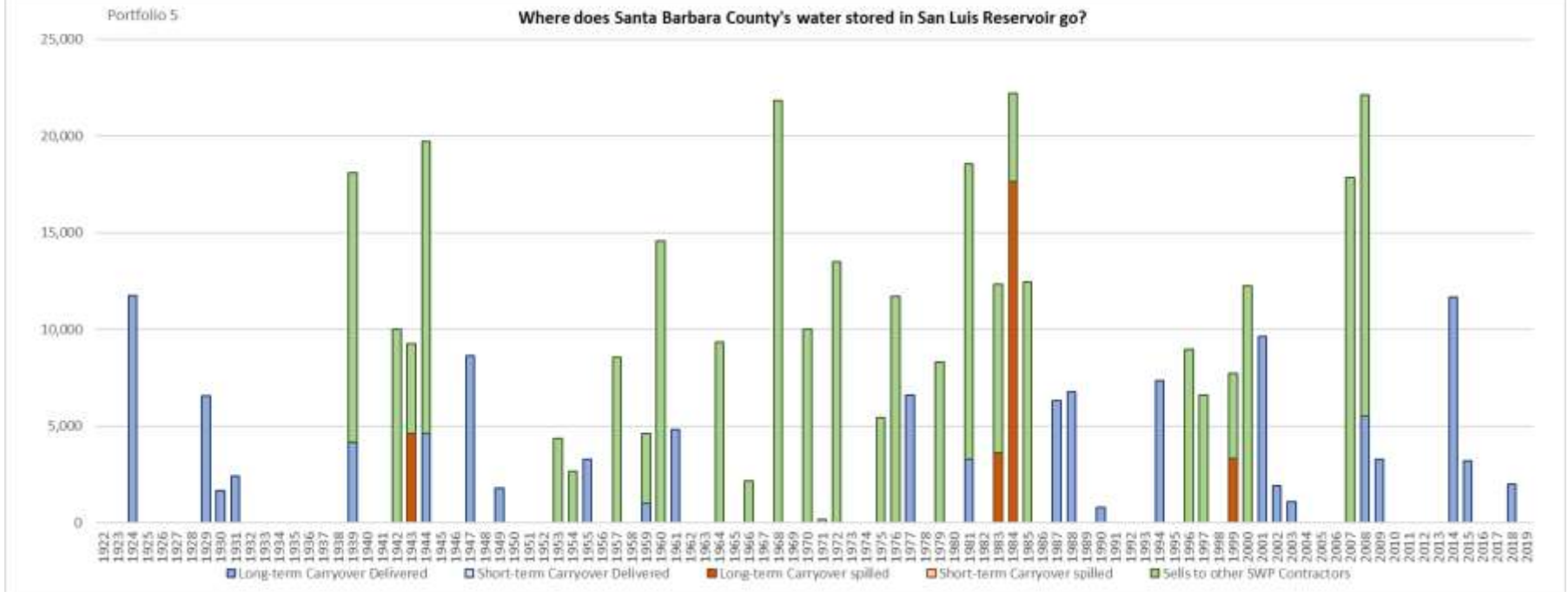

Portfolio 5
What are the sources of water to meet Santa Barbara County's demands?
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer of SLO Table A and Long-term Carryover
Transfer of SLO Short-term Carryover
Dry Year Purchase Program
Purchases from other SWP Contractors

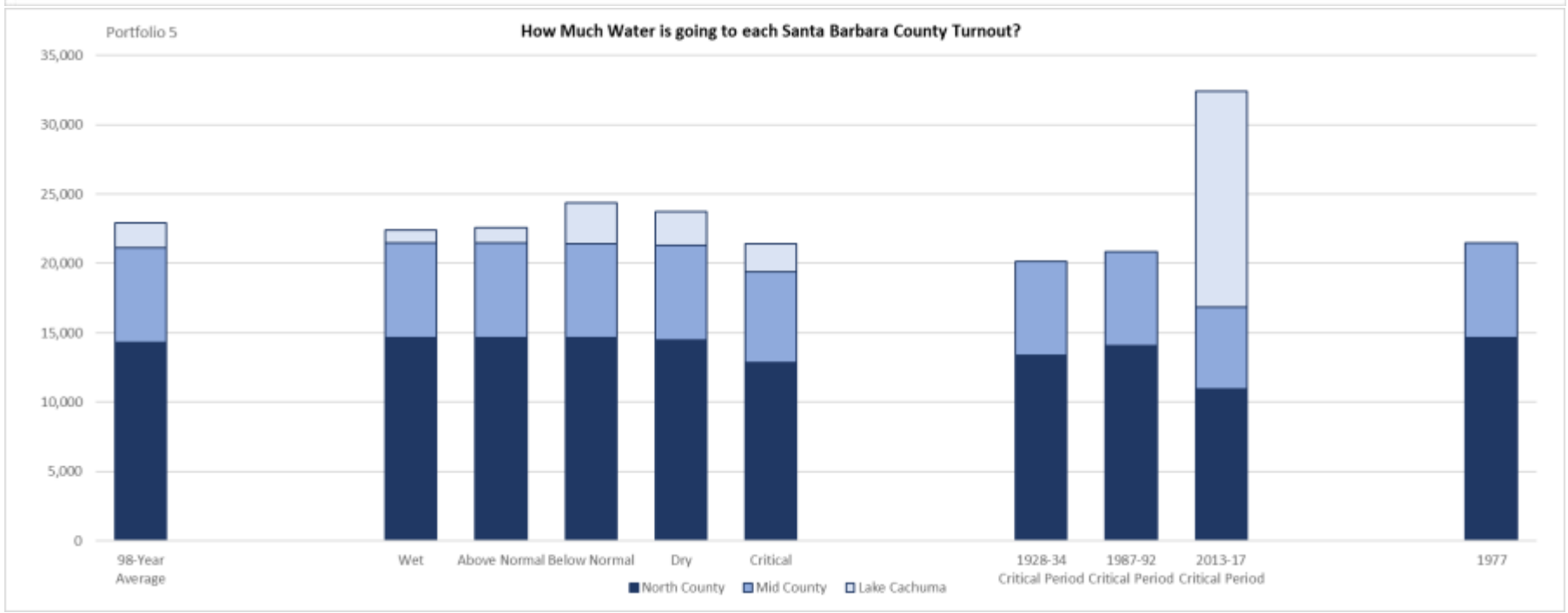

Portfolio 5
What are the sources of water to meet Santa Barbara County's demands?
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer of SLO Table A and Long-term Carryover
Transfer of SLO Short-term Carryover
Dry Year Purchase Program
Purchases from other SWP Contractors

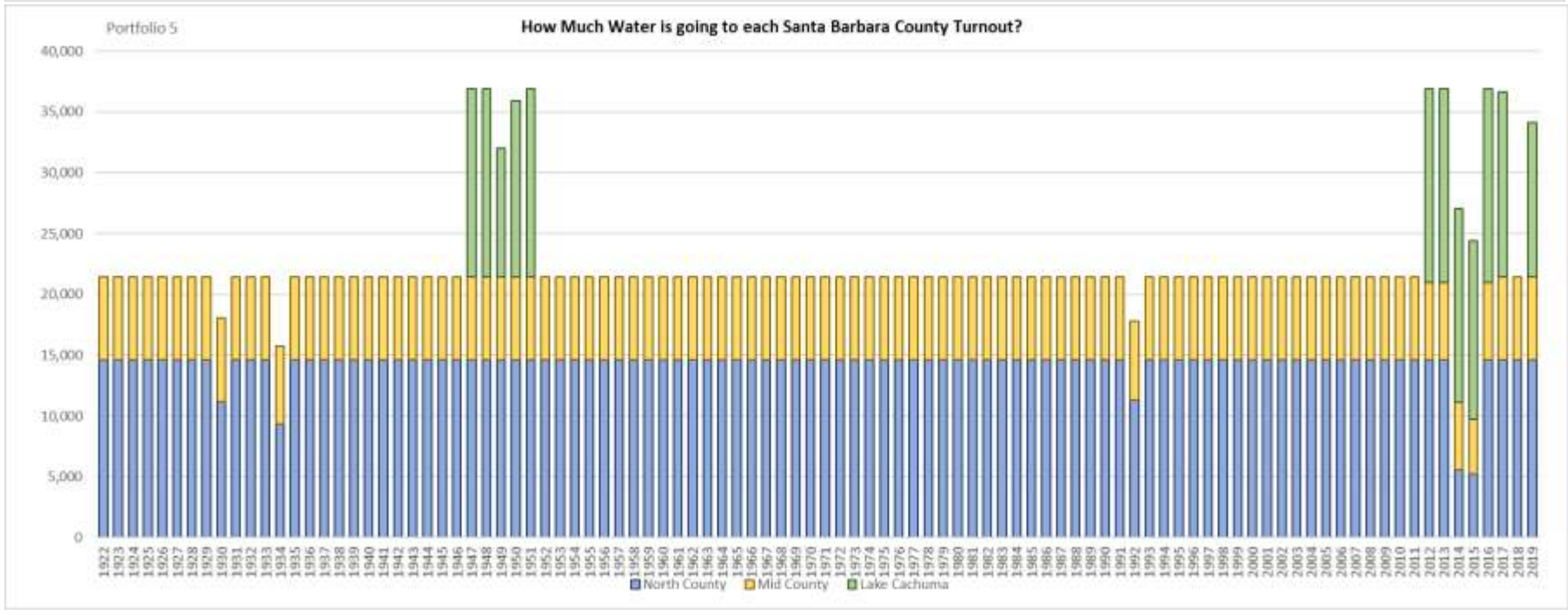

Portfolio 5
What is the fate of Santa Barbara County's annual allocation of Table A?
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Direct Demands
Long-term storage in SLR
Short-term storage in SLR
Transfer to SLO
Sells to others

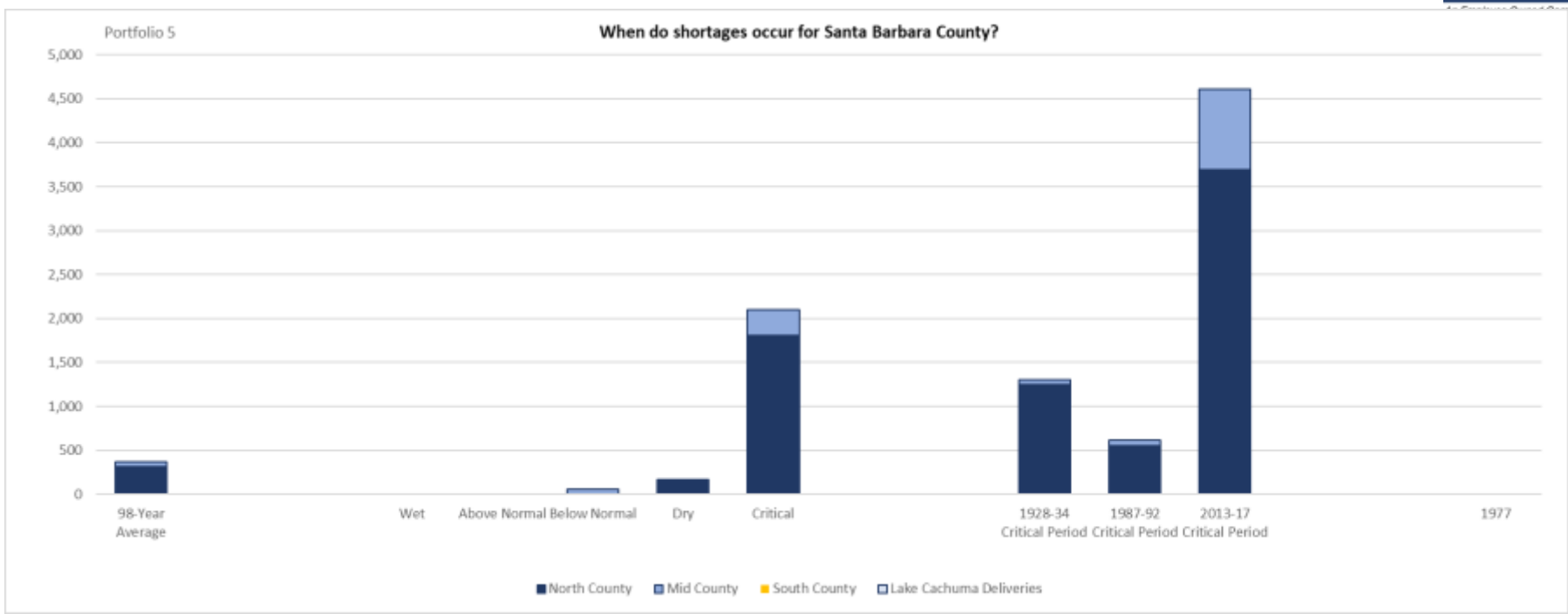

Portfolio 5
What is the fate of Santa Barbara County's annual allocation of Table A?
60,000
50,000
40,000
30,000
20,000
10,000
0
Direct Demands
Long-term storage in SLR
Short-term storage in SLR
Transfer to SLO
Sells to others

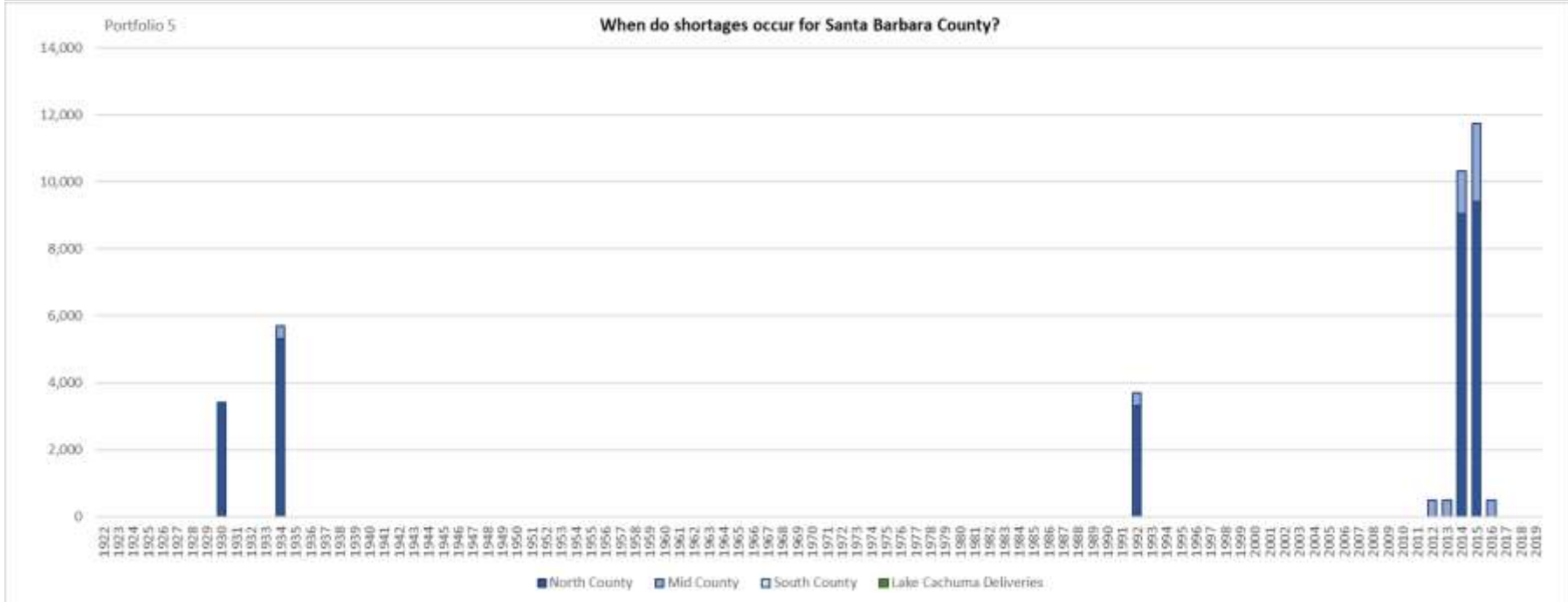

Portfolio 5
Where does Santa Barbara County's water stored in San Luis Reservoir go?
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Sells to other SWP Contractors

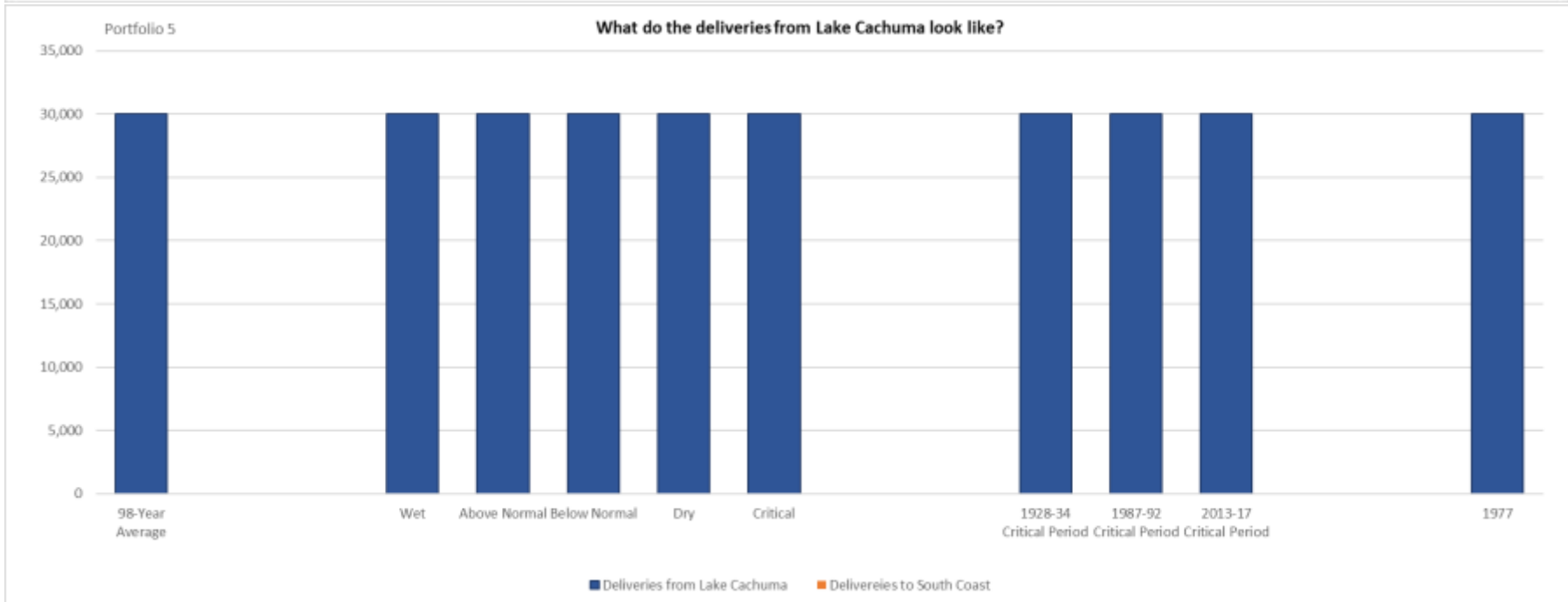

Portfolio 5
Where does Santa Barbara County's water stored in San Luis Reservoir go?
25,000
20,000
15,000
10,000
5,000
0
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Sells to other SWP Contractors

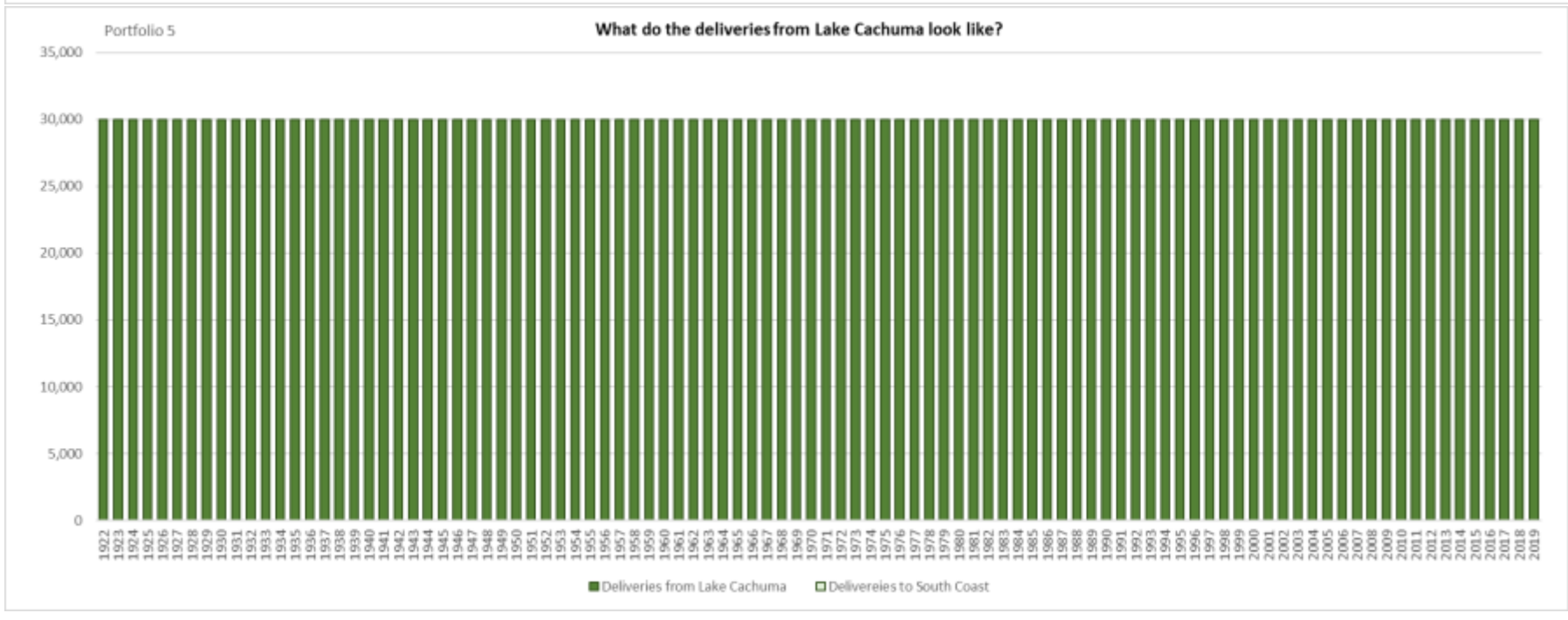

Portfolio 5
How Much Water is going to each Santa Barbara County Turnout?
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
North County
Mid County
Lake Cachuma

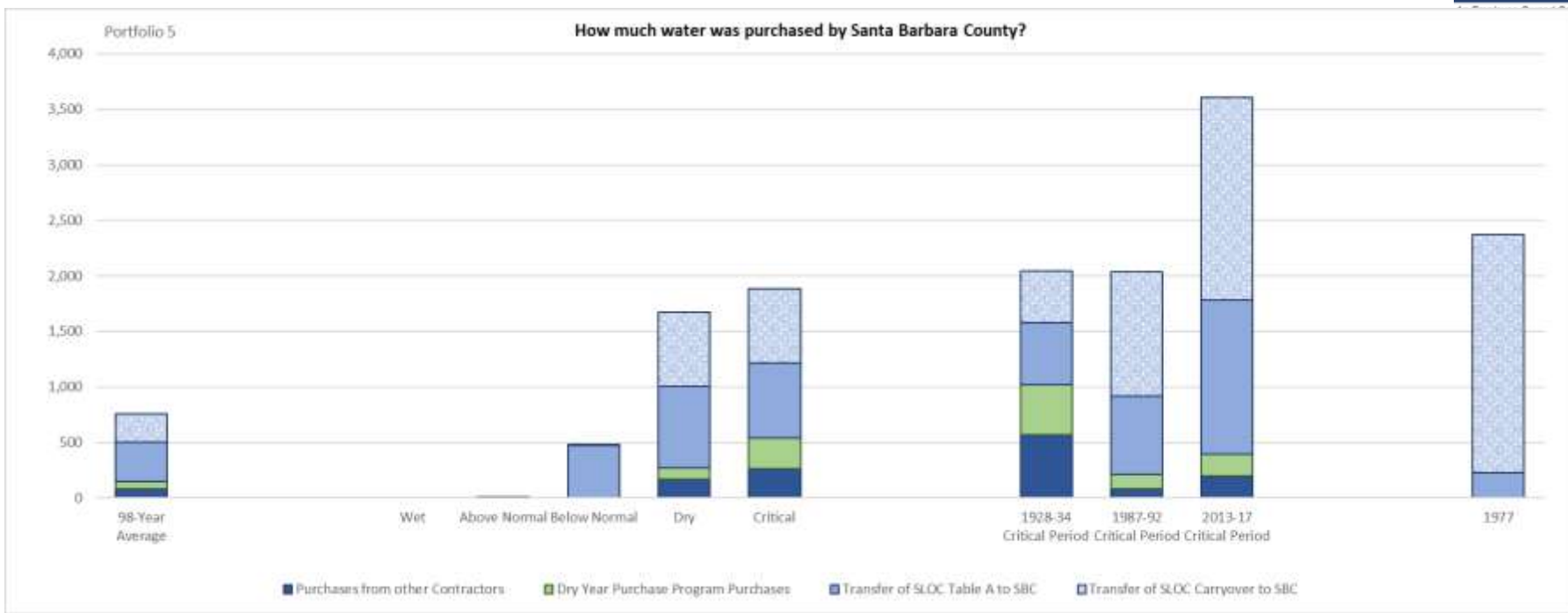

Portfolio 5
How Much Water is going to each Santa Barbara County Turnout?
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
North County
Mid County
Lake Cachuma

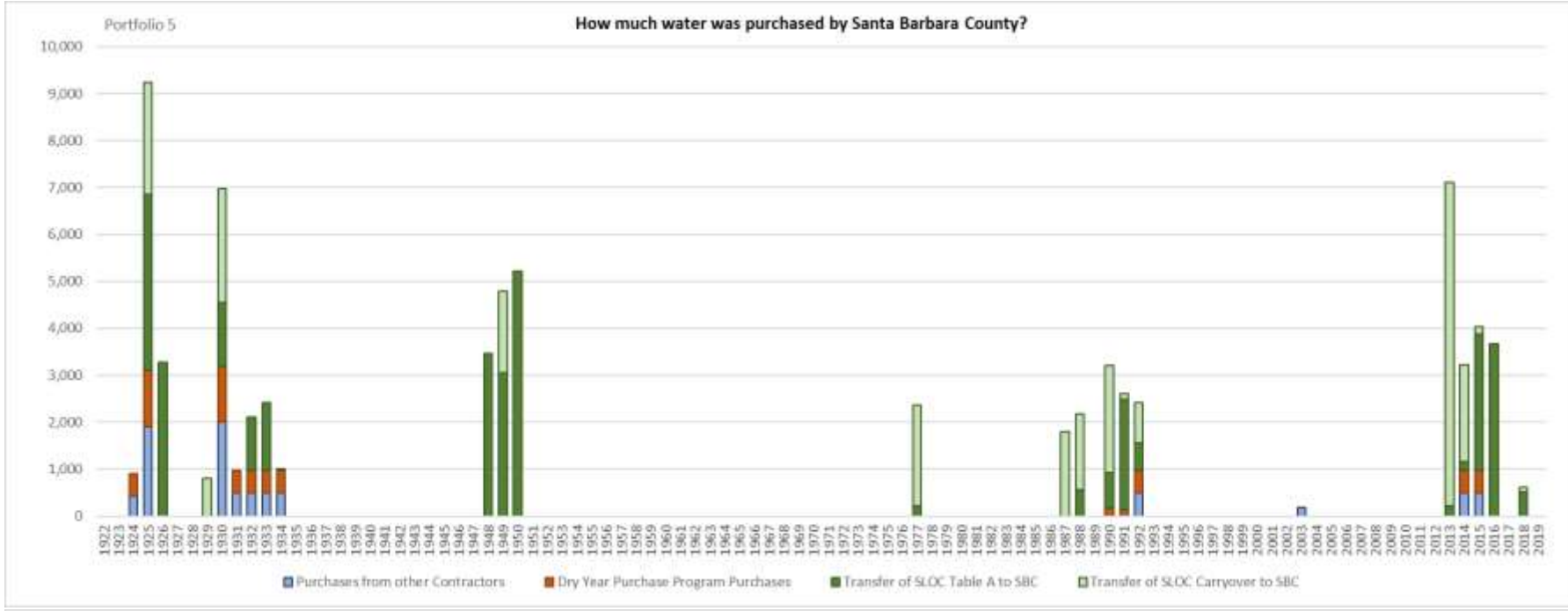

Portfolio 5
When do shortages occur for Santa Barbara County?
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
North County
Mid County
South County
Lake Cachuma Deliveries

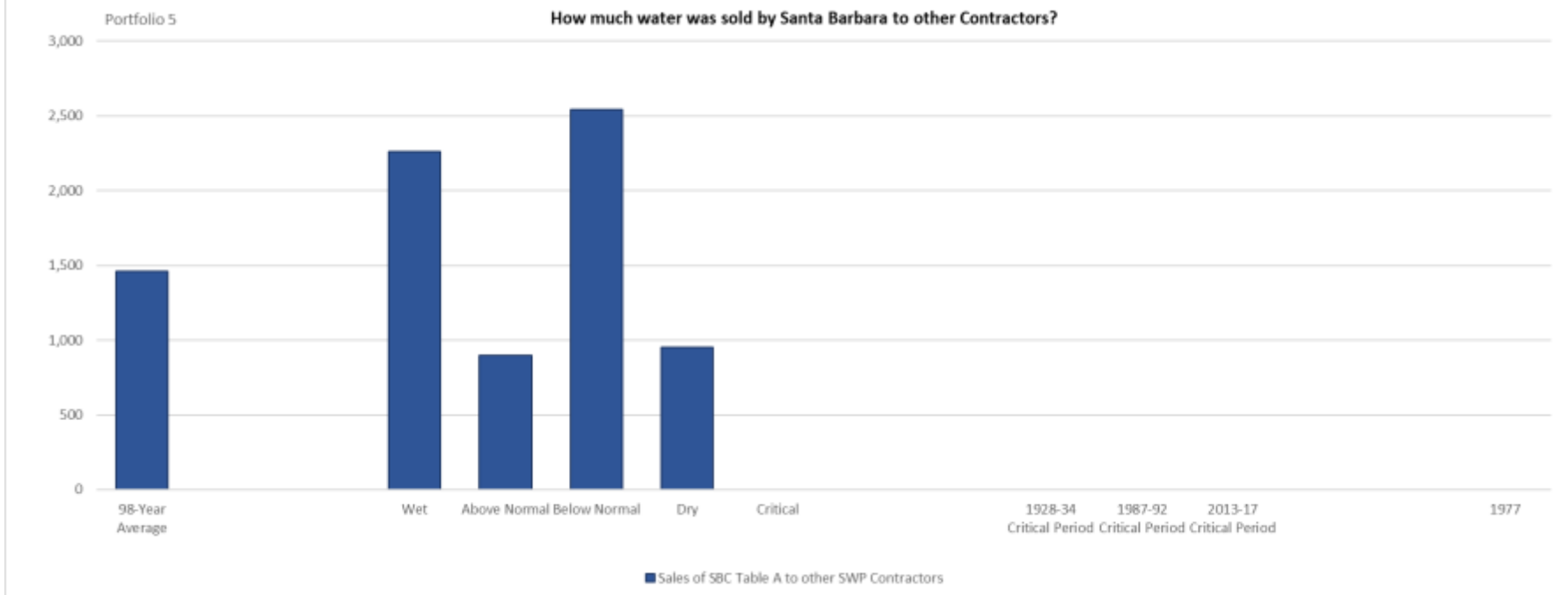

Portfolio 5
When do shortages occur for Santa Barbara County?
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
North County
Mid County
South County
Lake Cachuma Deliveries

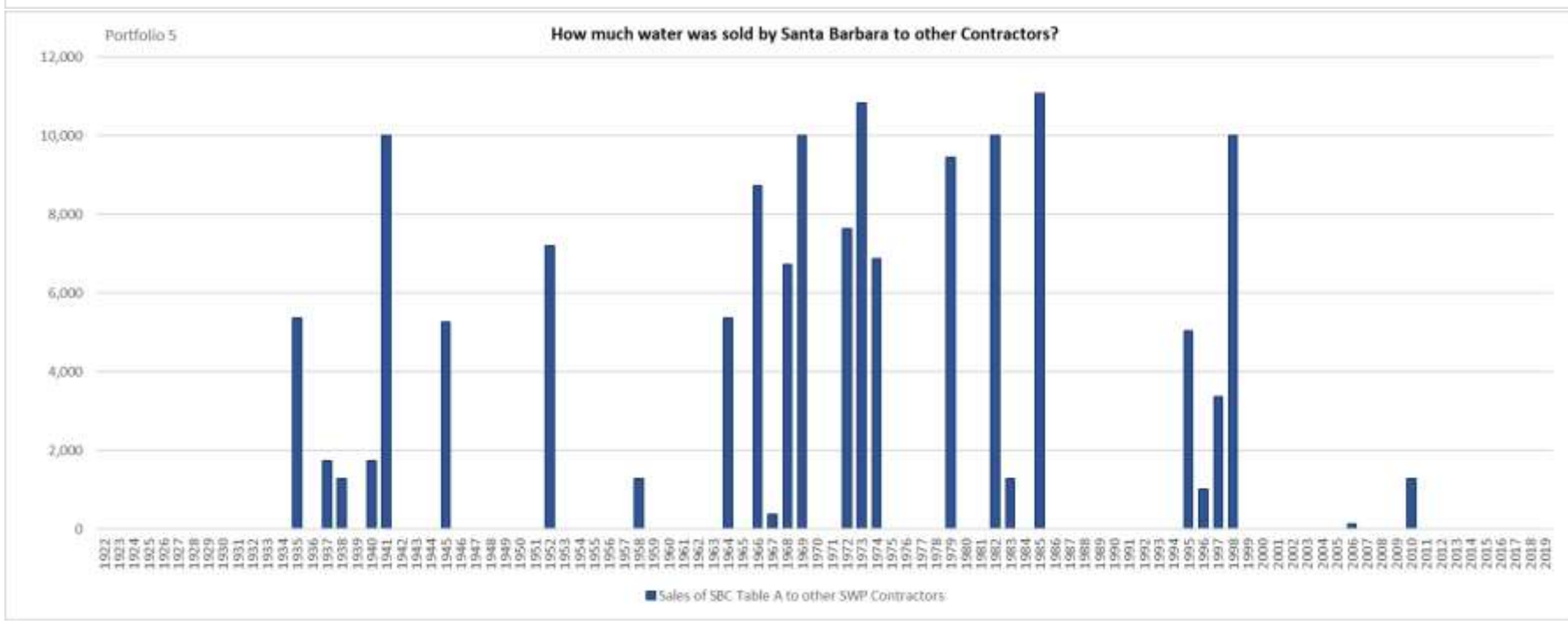

Portfolio 5
What do the deliveries from Lake Cachuma look like?
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Deliveries from Lake Cachuma
Delivereies to South Coast

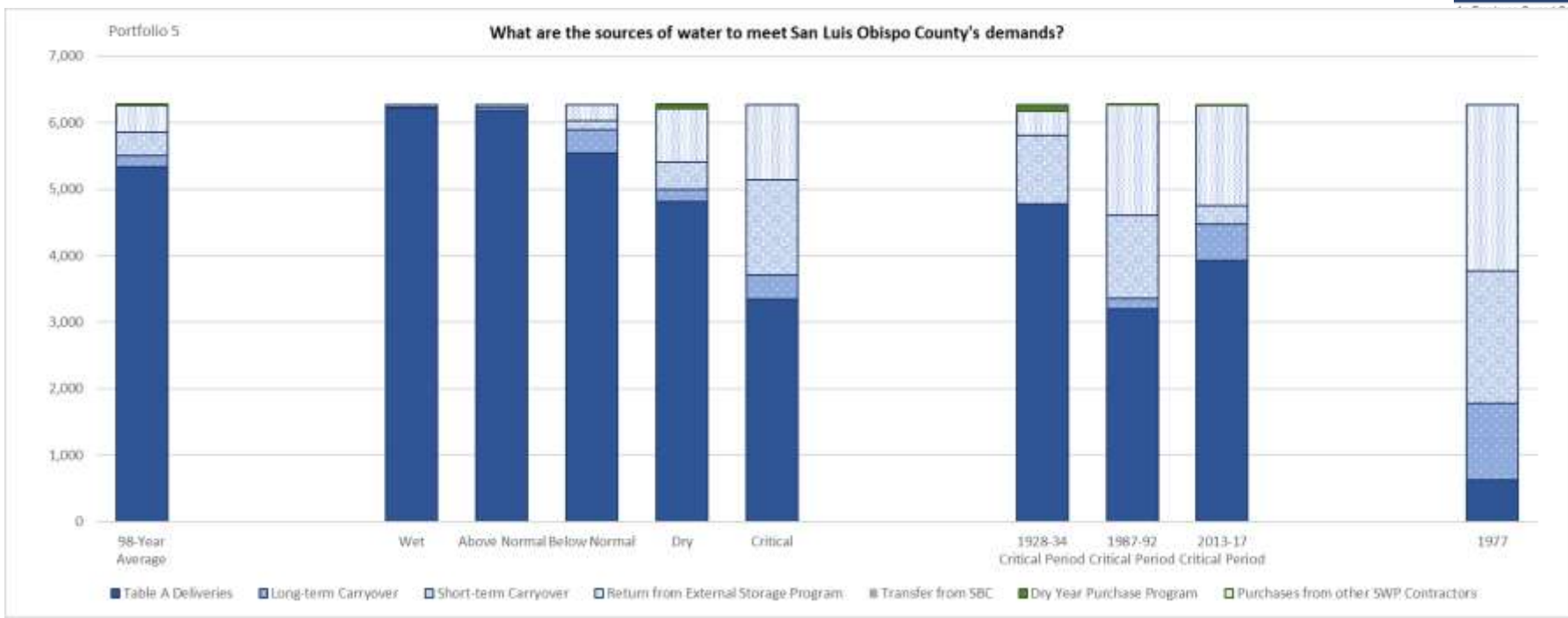

Portfolio 5
What do the deliveries from Lake Cachuma look like?
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Deliveries from Lake Cachuma
Delivereies to South Coast

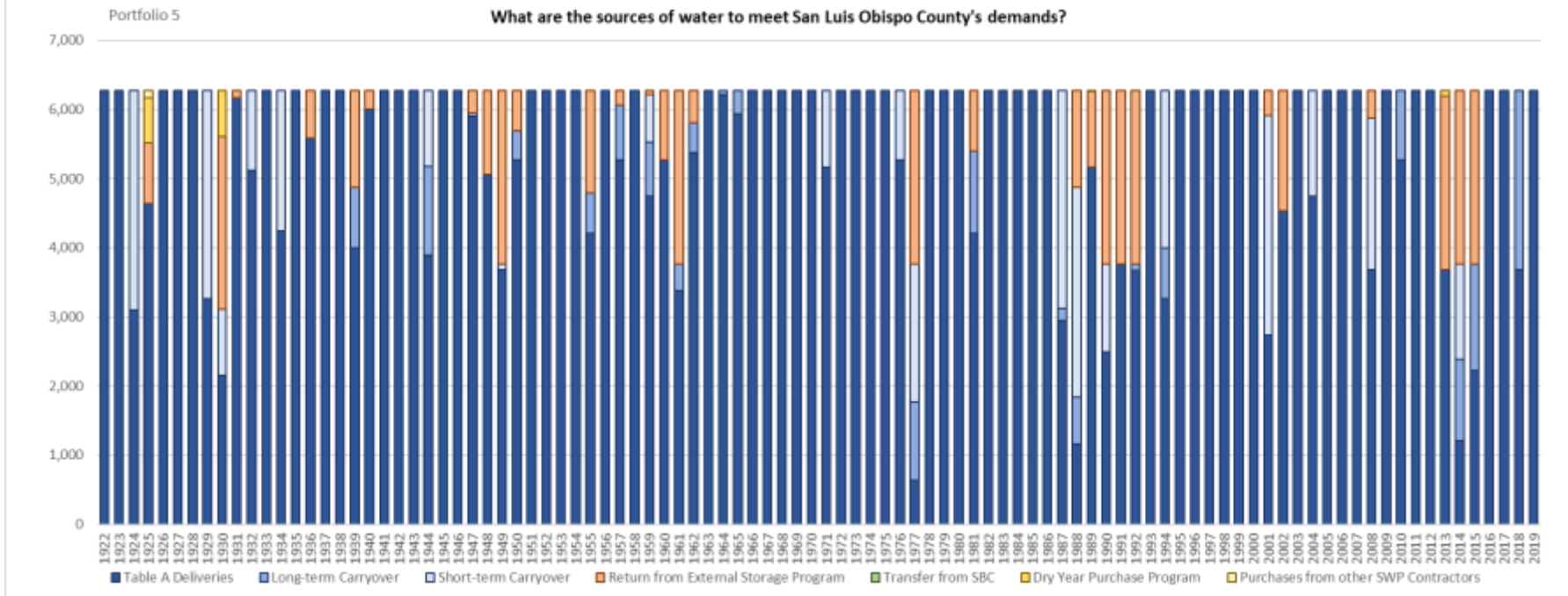

Portfolio 5
How much water was purchased by Santa Barbara County?
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Purchases from other Contractors
Dry Year Purchase Program Purchases
Transfer of SLOC Table A to SBC
Transfer of SLOC Carryover to SBC

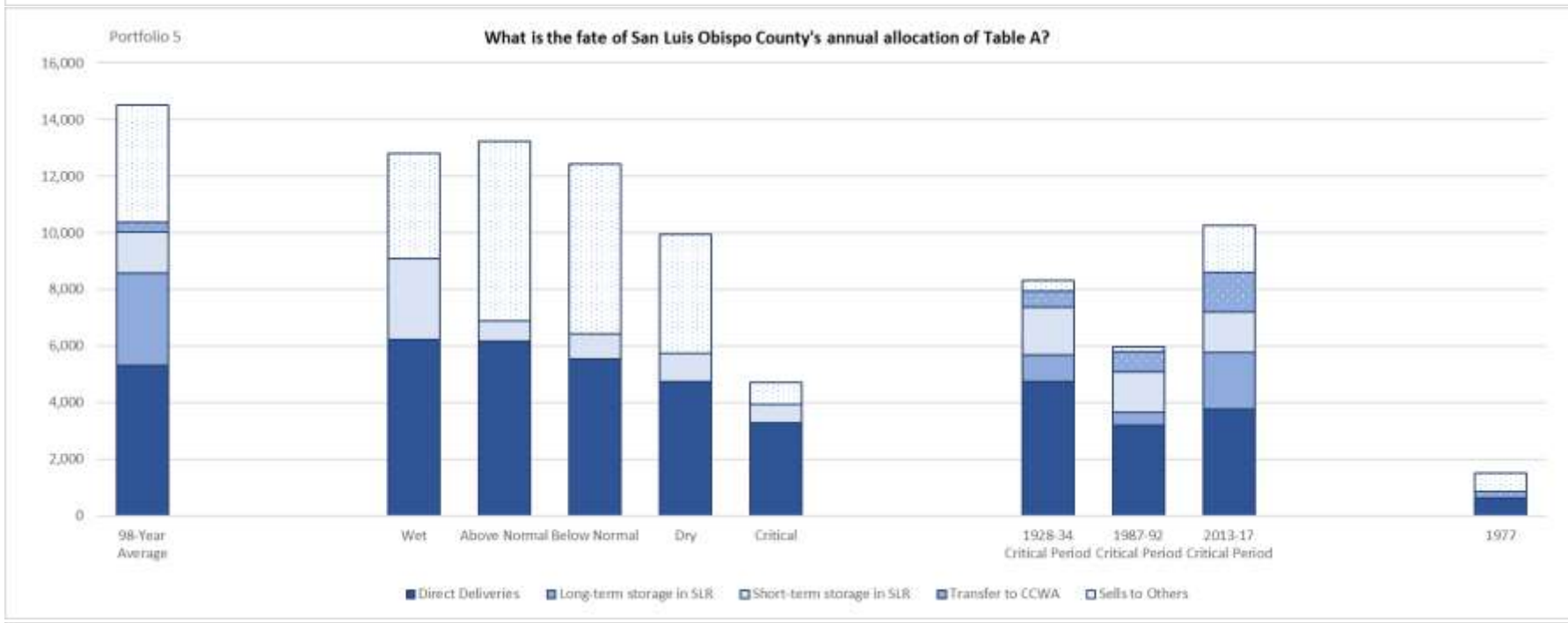

Portfolio 5
How much water was purchased by Santa Barbara County?
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Purchases from other Contractors
Dry Year Purchase Program Purchases
Transfer of SLOC Table A to SBC
Transfer of SLOC Carryover to SBC

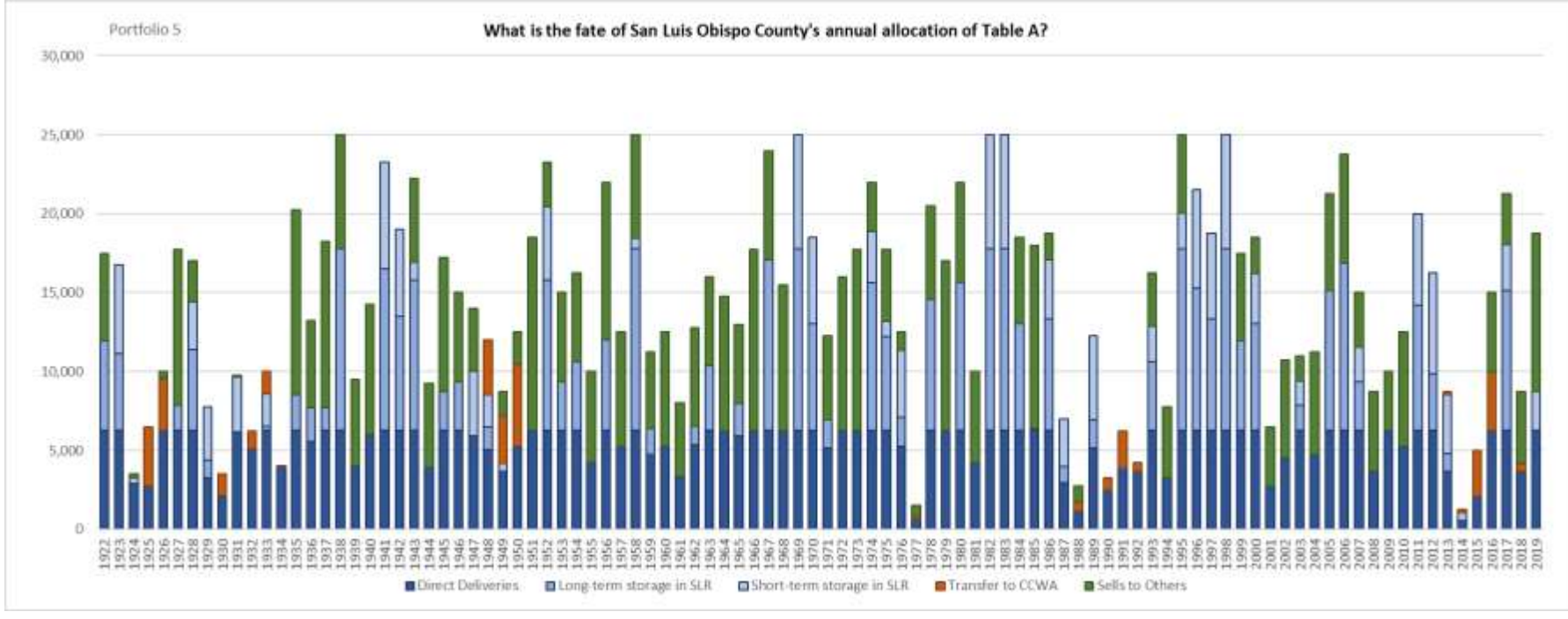

Portfolio 5
How much water was sold by Santa Barbara to other Contractors?
3,000
2,500
2,000
1,500
1,000
500
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Sales of SBC Table A to other SWP Contractors

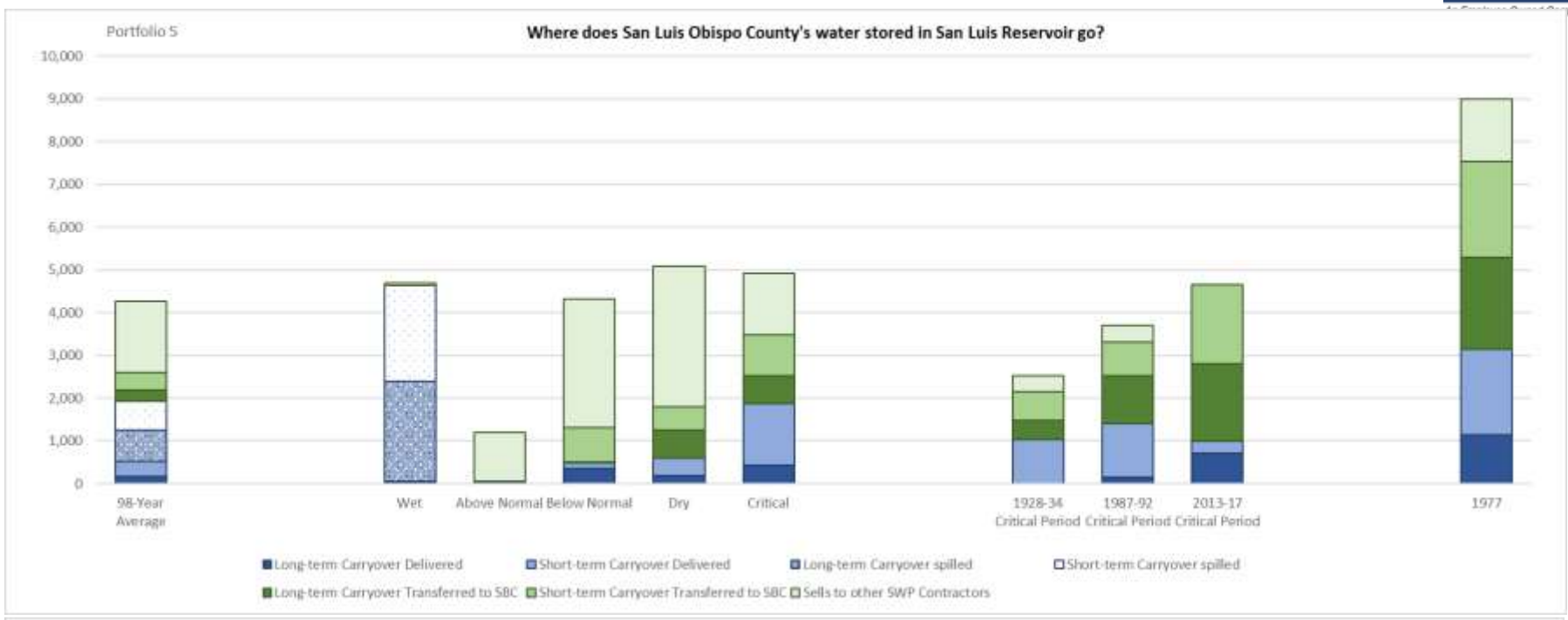

Portfolio 5
How much water was sold by Santa Barbara to other Contractors?
12,000
10,000
8,000
6,000
4,000
2,000
0
Sales of SBC Table A to other SWP Contractors

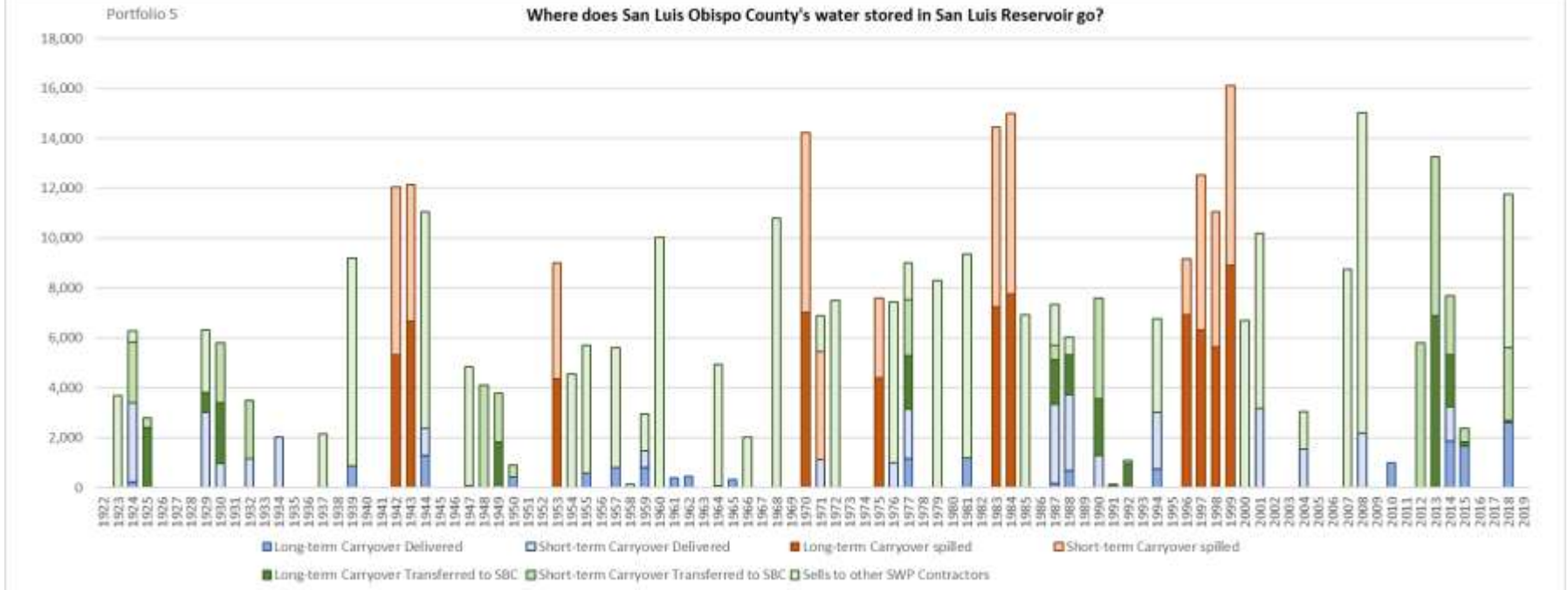

Portfolio 5
What are the sources of water to meet San Luis Obispo County's demands?
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer from SBC
Dry Year Purchase Program
Purchases from other SWP Contractors

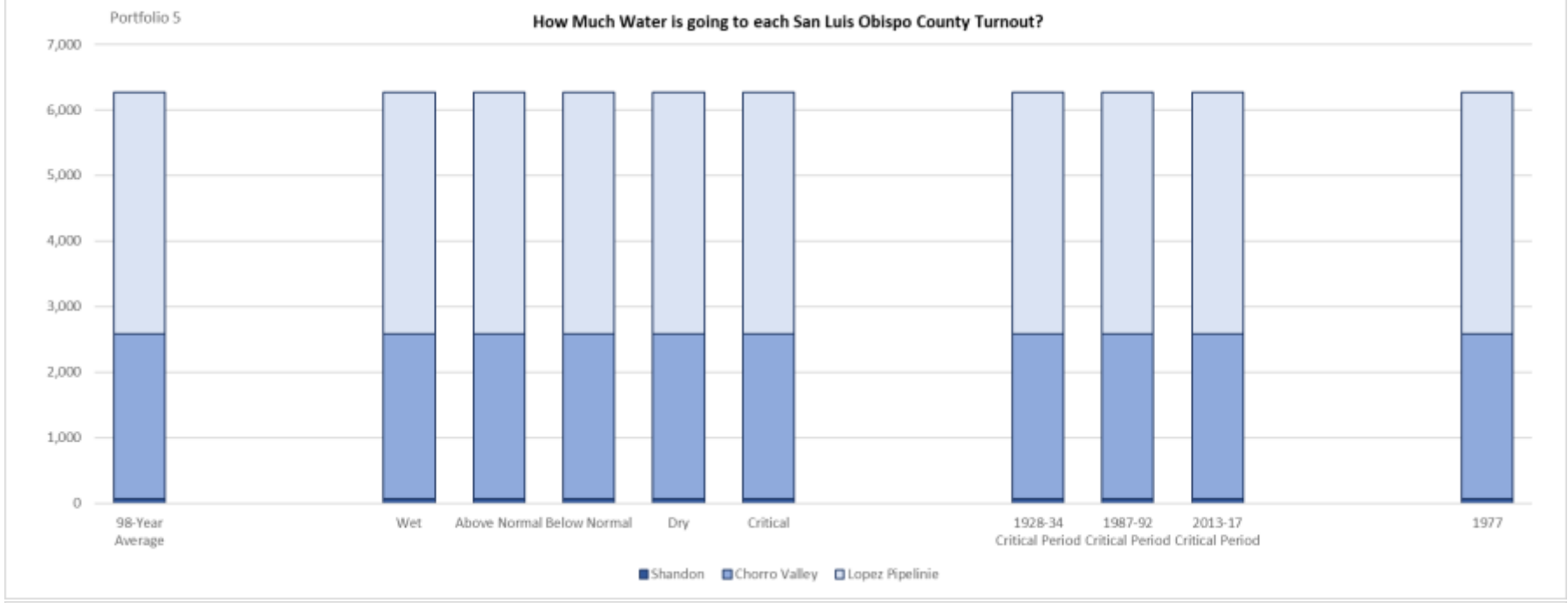

Portfolio 5
What are the sources of water to meet San Luis Obispo County's demands?
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Table A Deliveries
Long-term Carryover
Short-term Carryover
Return from External Storage Program
Transfer from SBC
Dry Year Purchase Program
Purchases from other SWP Contractors

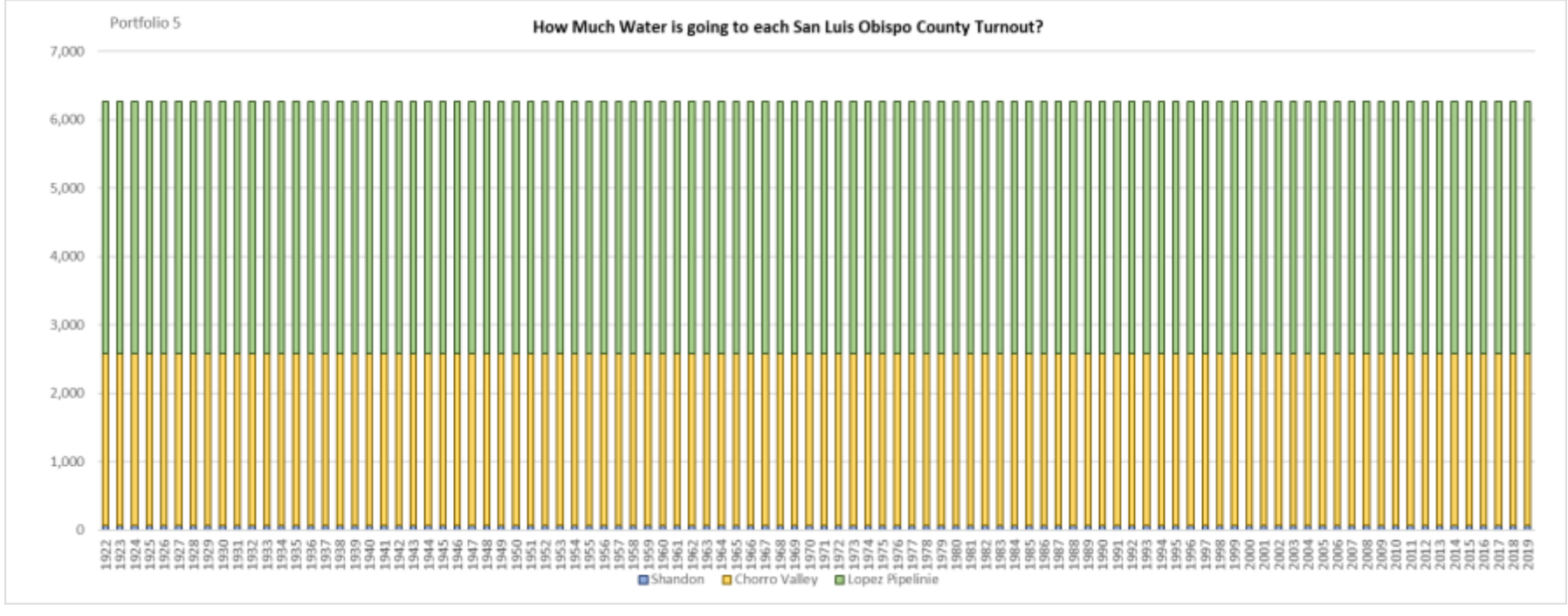

Portfolio 5
What is the fate of San Luis Obispo County's annual allocation of Table A?
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Direct Deliveries
Long-term storage in SLR
Short-term storage in SLR
Transfer to CCWA
Sells to Others

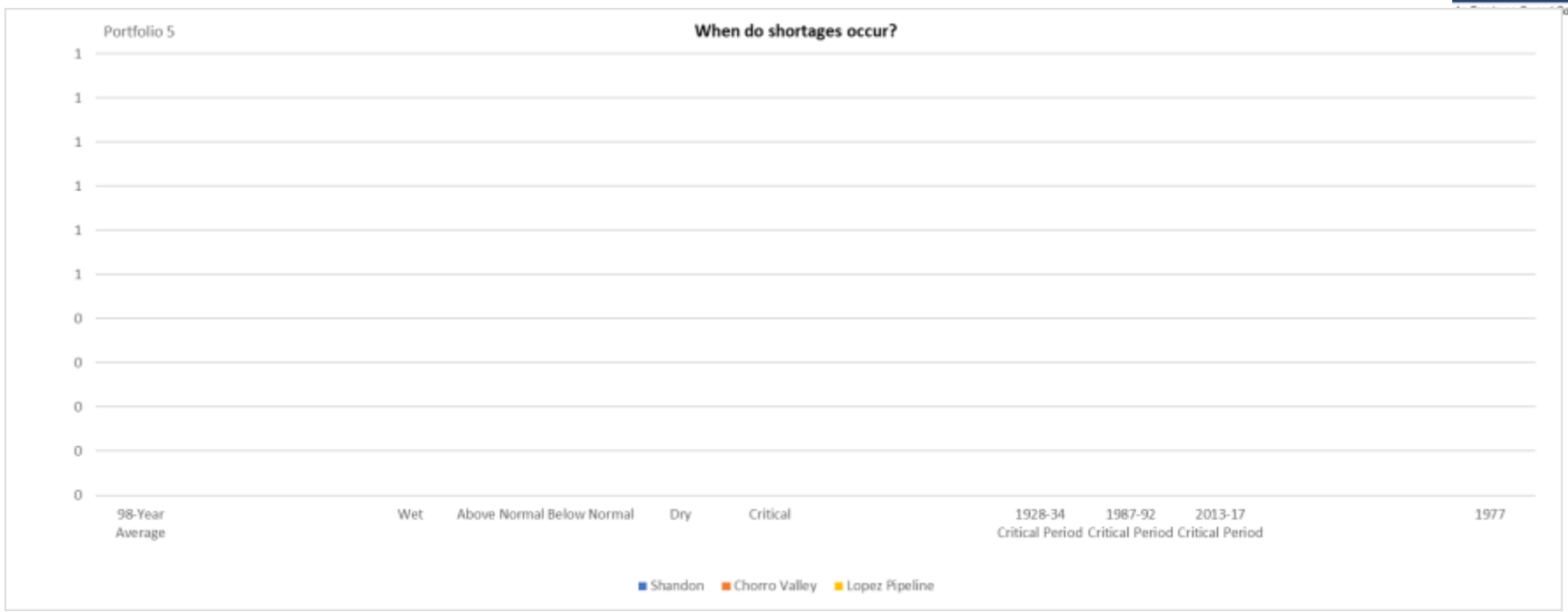

Portfolio 5
What is the fate of San Luis Obispo County's annual allocation of Table A?
30,000
25,000
20,000
15,000
10,000
5,000
0
1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Direct Deliveries
Long-term storage in SLR
Short-term storage in SLR
Transfer to CCWA
Sells to Others

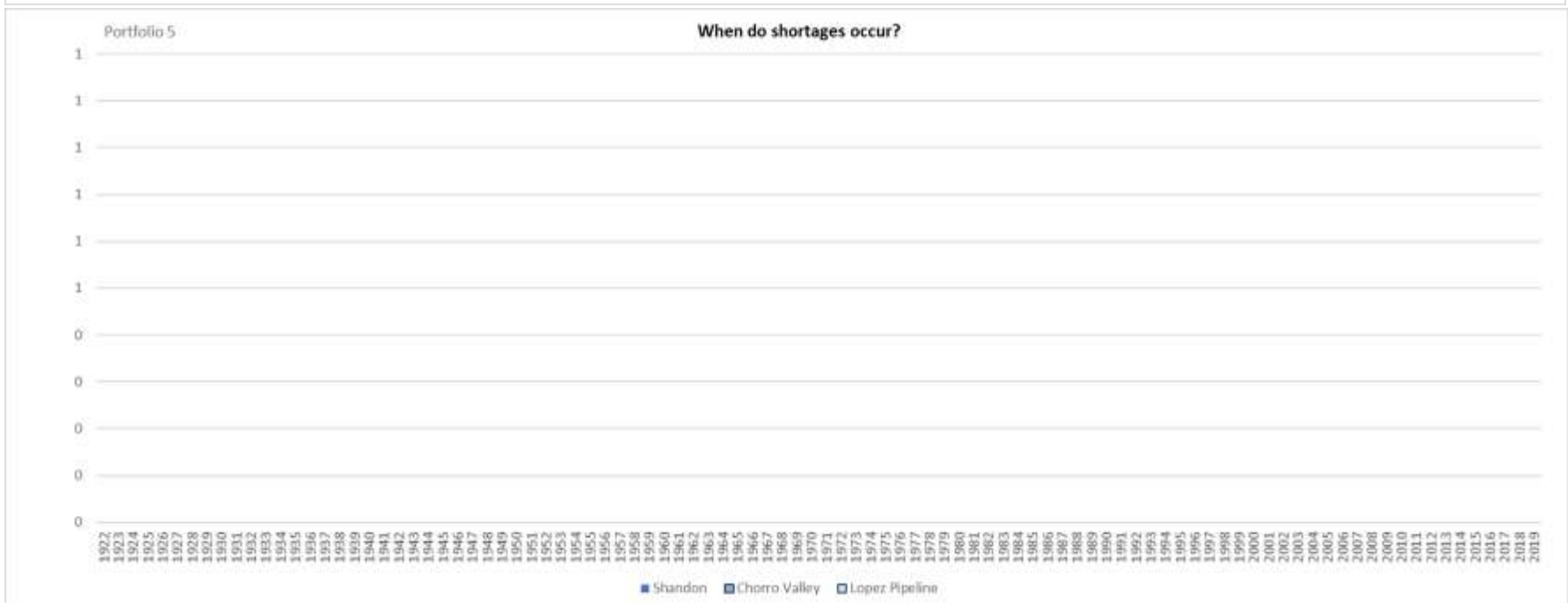

Portfolio 5
Where does San Luis Obispo County's water stored in San Luis Reservoir go?
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Long-term Carryover Transferred to SBC
Short-term Carryover Transferred to SBC
Sells to other SWP Contractors

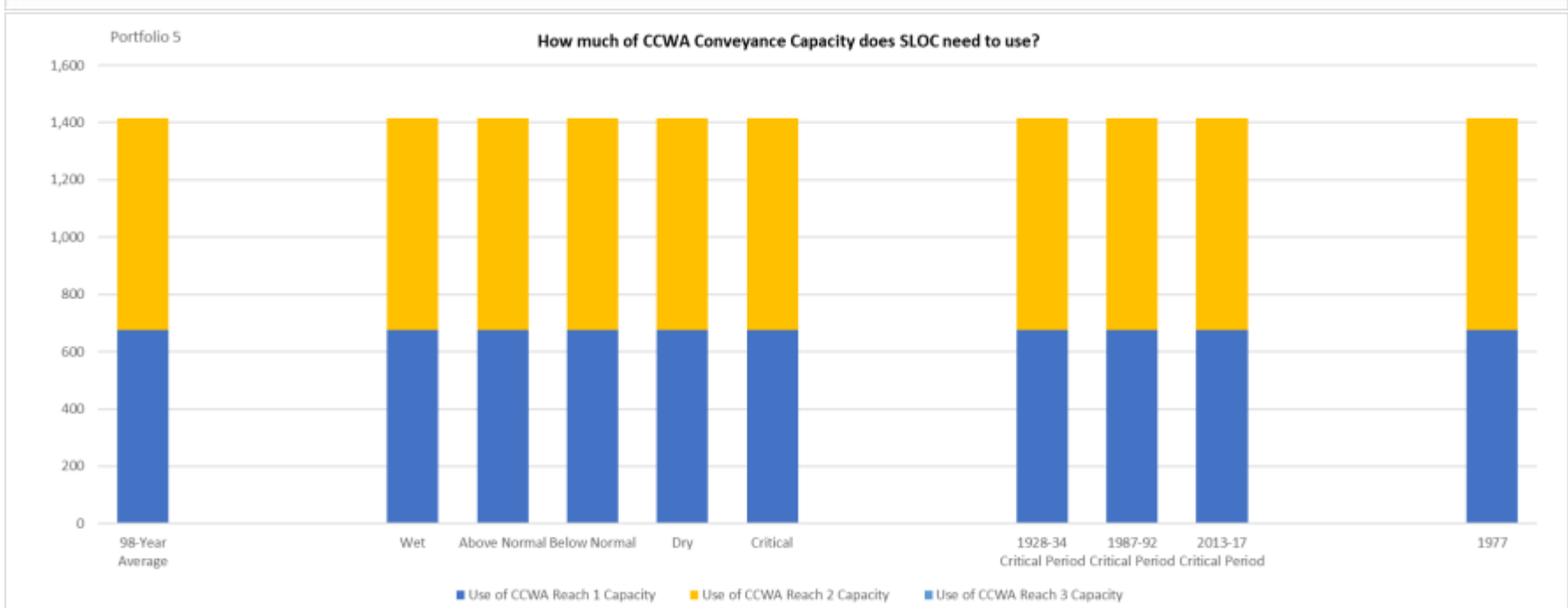

Portfolio 5
Where does San Luis Obispo County's water stored in San Luis Reservoir go?
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
Long-term Carryover Delivered
Short-term Carryover Delivered
Long-term Carryover spilled
Short-term Carryover spilled
Long-term Carryover Transferred to SBC
Short-term Carryover Transferred to SBC
Sells to other SWP Contractors

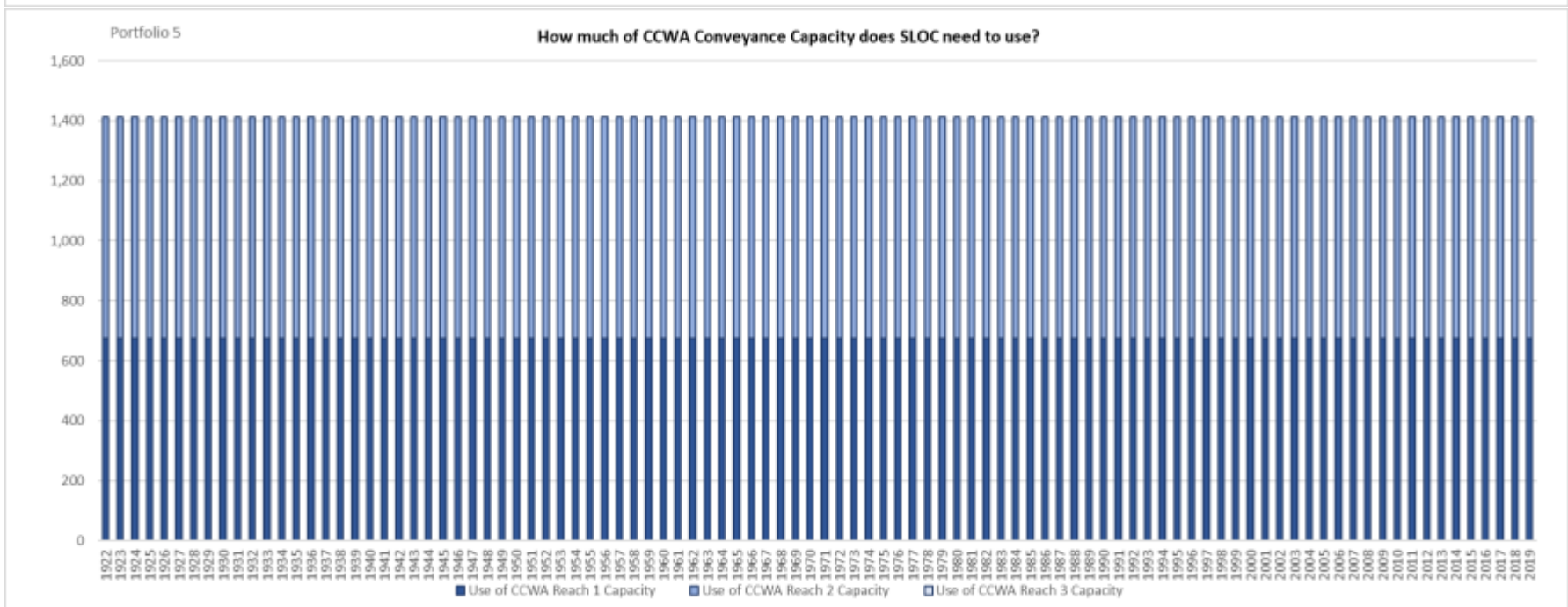

Portfolio 5
How Much Water is going to each San Luis Obispo County Turnout?
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Shandon
Chorro Valley
Lopez Pipelinie

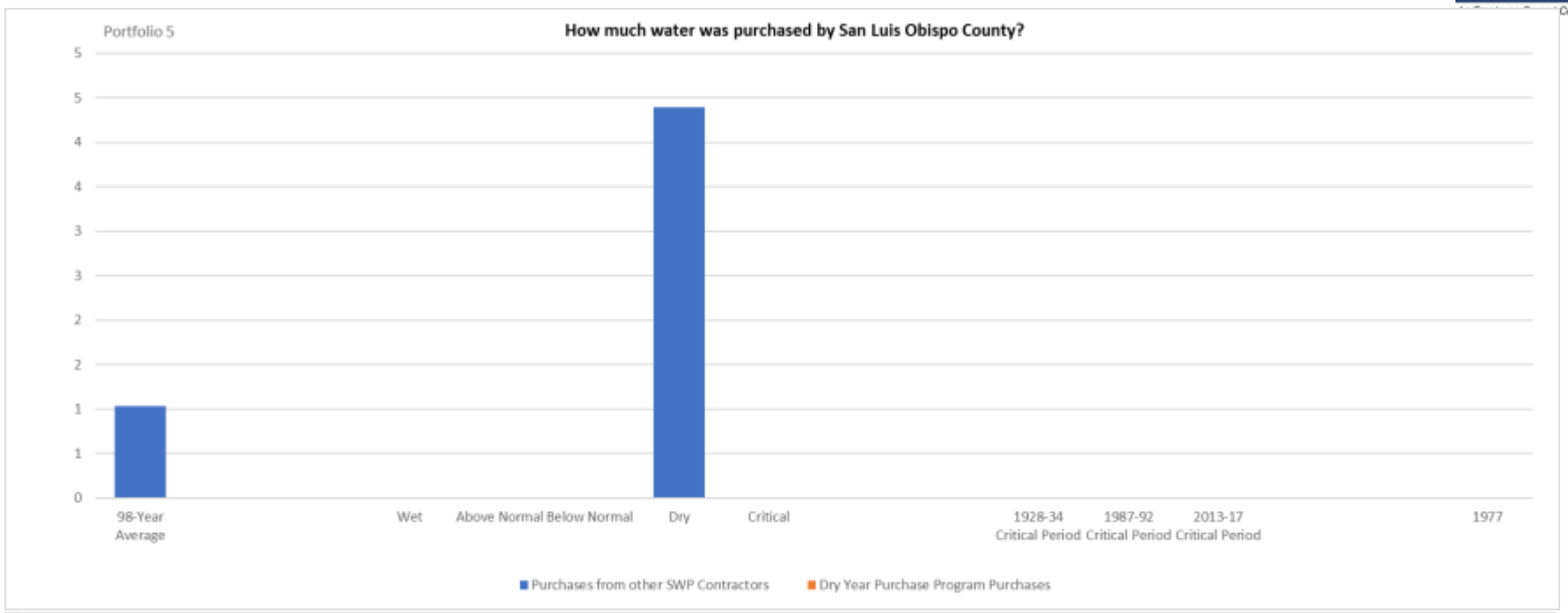

Portfolio 5
How Much Water is going to each San Luis Obispo County Turnout?
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Shandon
Chorro Valley
Lopez Pipelinie

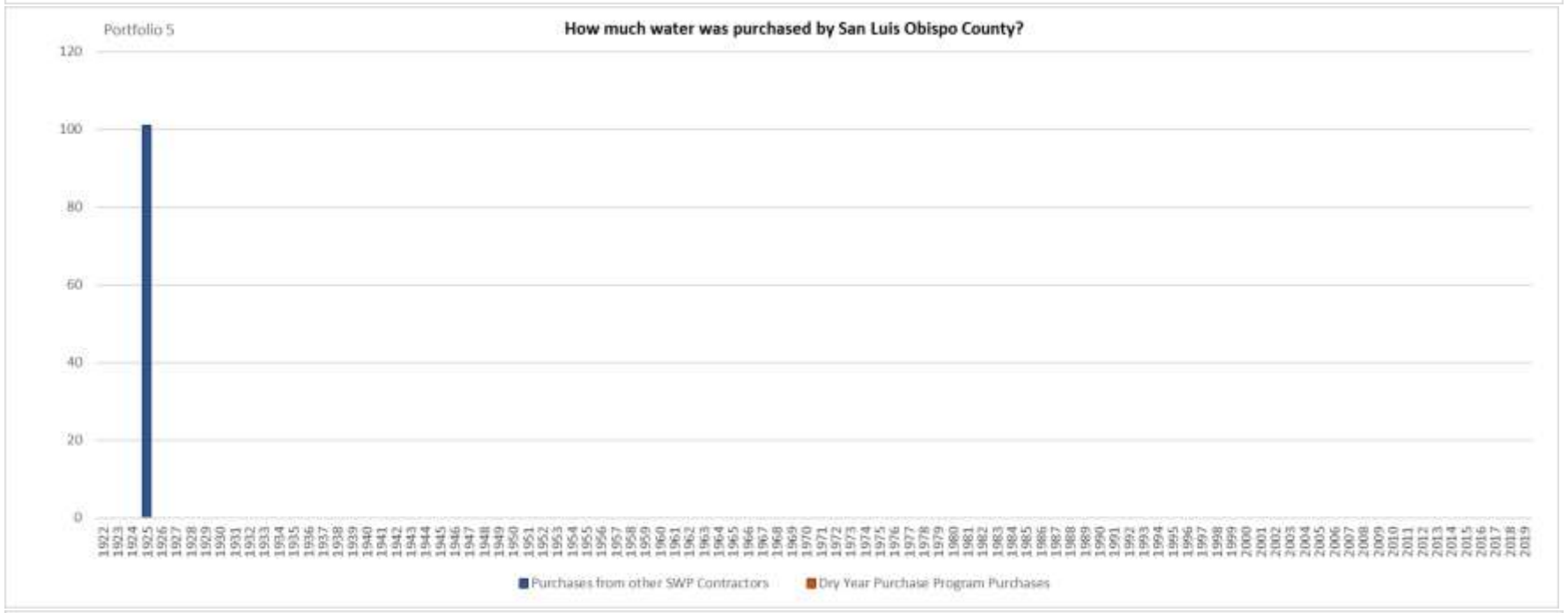

Portfolio 5
When do shortages occur?
1
1
1
1
1
1
0
0
0
0
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Shandon
Chorro Valley
Lopez Pipeline

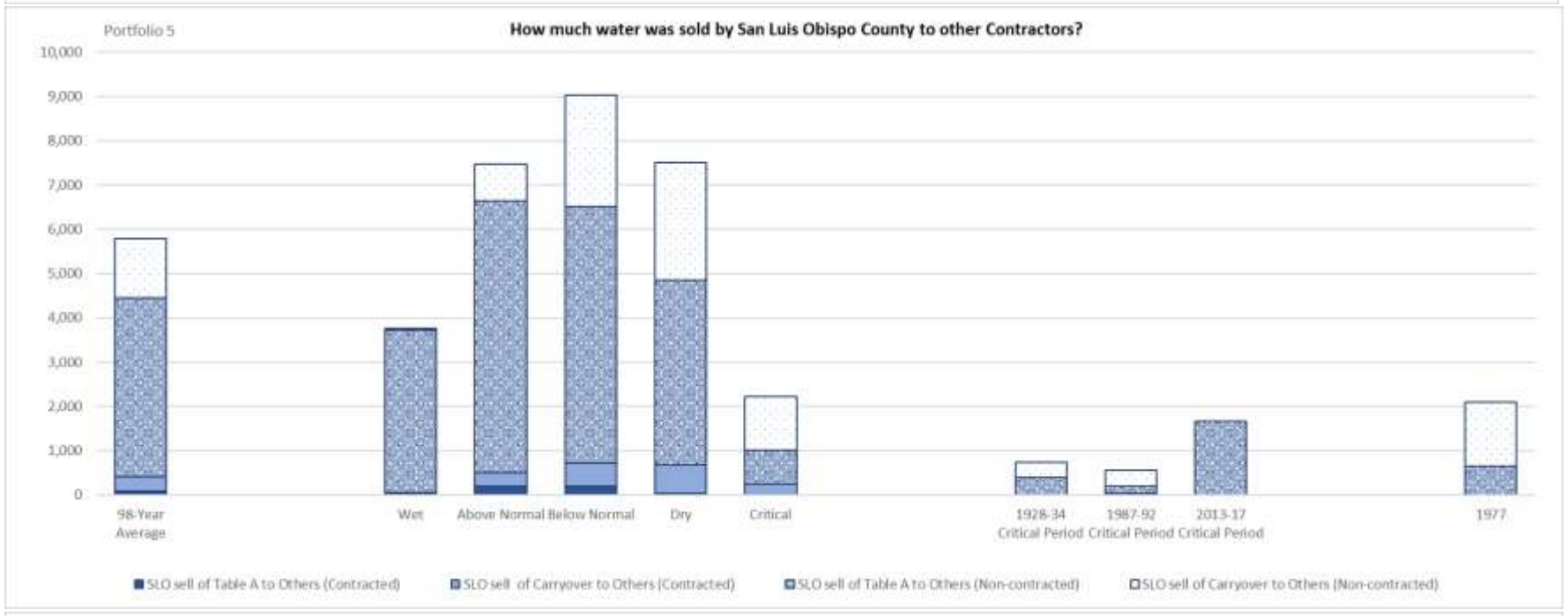

Portfolio 5
When do shortages occur?
1
1
1
1
0
0
0
0
0
Shandon
Chorro Valley
Lopez Pipeline

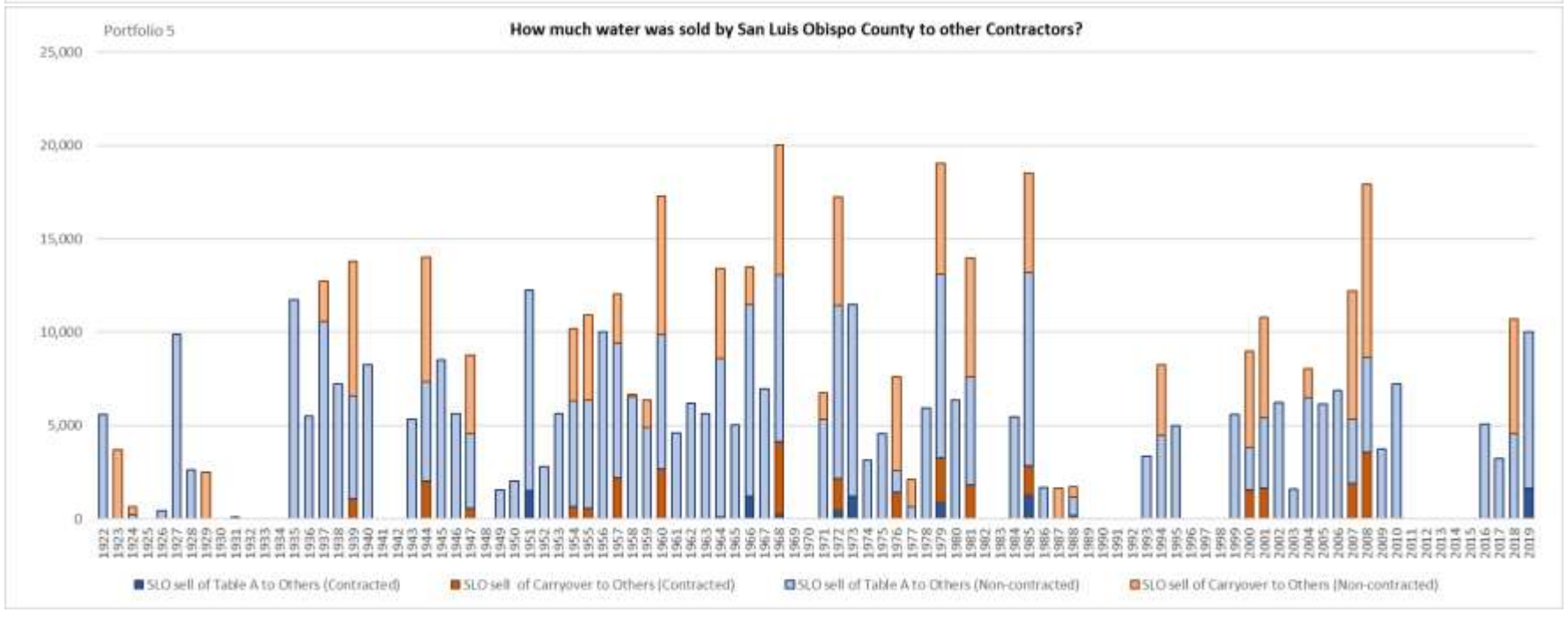

Portfolio 5
How much of CCWA Conveyance Capacity does SLOC need to use?
1,600
1,400
1,200
1,000
800
600
400
200
0
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Use of CCWA Reach 1 Capacity
Use of CCWA Reach 2 Capacity
Use of CCWA Reach 3 Capacity


Portfolio 5
How much of CCWA Conveyance Capacity does SLOC need to use?
1,600
1,400
1,200
1,000
800
600
400
200
0
Use of CCWA Reach 1 Capacity
Use of CCWA Reach 2 Capacity
Use of CCWA Reach 3 Capacity


Portfolio 5
How much water was purchased by San Luis Obispo County?
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
Purchases from other SWP Contractors
Dry Year Purchase Program Purchases


Portfolio 5
How much water was purchased by San Luis Obispo County?
Purchases from other SWP Contractors
Dry Year Purchase Program Purchases


Portfolio 5
How much water was sold by San Luis Obispo County to other Contractors?
98-Year Average
Wet
Above Normal
Below Normal
Dry
Critical
1928-34 Critical Period
1987-92 Critical Period
2013-17 Critical Period
1977
SLO sell of Table A to Others (Contracted)
SLO sell of Carryover to Others (Contracted)
SLO sell of Table A to Others (Non-contracted)
SLO sell of Carryover to Others (Non-contracted)


Portfolio 5
How much water was sold by San Luis Obispo County to other Contractors?
SLO sell of Table A to Others (Contracted)
SLO sell of Carryover to Others (Contracted)
SLO sell of Table A to Others (Non-contracted)
SLO sell of Carryover to Others (Non-contracted)