Chapter 31
Growth Inducement

This chapter describes the environmental setting, including the location of the project facilities, and addresses the direct and indirect growth inducement potential from implementation of the project alternatives as well as increased water supply reliability for the participating State Water Project (SWP) contractors.

31.1 Environmental Setting

This section addresses the growth inducement potential of the project alternatives. CEQA Guidelines Section 15126.2(e) directs a lead agency to:

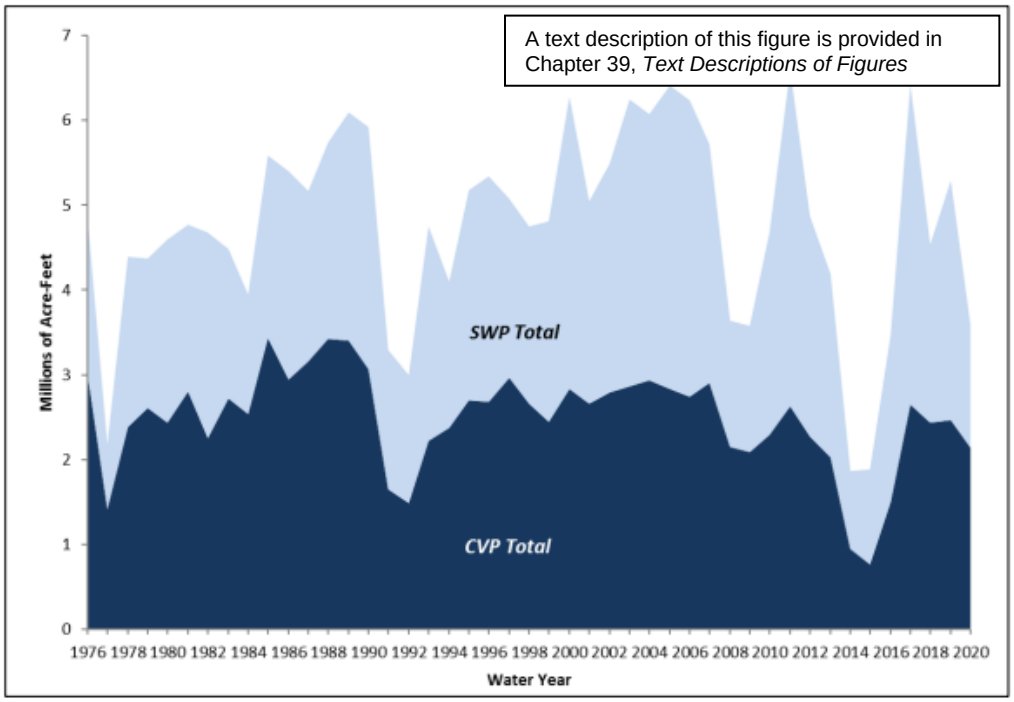
> Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

As indicated in CEQA Guidelines Section 15126.2(e), a project can have direct and indirect growth inducement potential, although most growth-inducing effects are characterized as indirect.

Growth induced by a project should generally consider adopted local or regional land use plans. A project that is not consistent with the land use and growth management plans and policies for the area (e.g., growth beyond that reflected in adopted plans and polices) may have additional adverse secondary effects of growth beyond those previously evaluated.

The Delta Conveyance Project area will be considered for direct growth inducement from jobs as well as indirect growth inducement from changes in water supply, the development of new access roads, and increased flood risk reduction. However, because the SWP and, as relevant to specific alternatives, Central Valley Project (CVP) contractors in the Sacramento River region receive their water downstream of the SWP and CVP reservoirs, but before the water travels through the Delta, these water deliveries would not be altered by the project alternatives. Therefore, the study area for the analysis of the indirect growth-inducing impacts associated with stabilized water deliveries will encompass the service areas of only south-of-Delta public water agencies receiving Delta exports. The study area will focus on those public water agencies that have approved of the Agreement in Principle (AIP) for Delta Conveyance because participating in this contract amendment is necessary to receive the additional water supply from the Delta Conveyance Project. It is expected that CVP contractors will utilize their supplemental water deliveries under the Delta Conveyance Project for agricultural water reliability, which would not affect or influence growth inducement. The participating SWP contractors are likely to utilize the supplemental water under the Delta Conveyance Project for residential use in Alameda, Santa Clara, Kern, Kings, Tulare, Santa Barbara, San Luis Obispo, Orange, Los Angeles, Riverside, San Bernardino, San Diego, and Ventura Counties. A discussion of existing conditions and No Project Alternative SWP water deliveries occurring within

the overall project footprint has been provided in Chapter 6, *Water Supply*. Figure 31-1 shows the combined SWP and CVP exports from the south Delta since 1976. SWP Delta exports have decreased since 2005, although the bulk of the change occurred between 2005 and 2009 and in 2019 (California Department of Water Resources 2020:12-13).



Source: Stren and Sheikl 2021:13.

Figure 31-1. SWP and CVP and Exports (exports in millions of acre-feet, 1976–2020)

There are several rules and operations agreements with which SWP and CVP must comply during operations. The SWP and CVP water deliveries must meet State Water Resources Control Board (State Water Board) specific water quality, quantity, and operational criteria. In addition, both SWP and CVP must follow rules promulgated through a variety of agency jurisdictions and authorities, including the state water rights, State Water Board permits and licenses, the Clean Water Act, the Porter-Cologne Act, the federal Endangered Species Act (ESA), and the California Endangered Species Act. Finally, SWP and CVP water deliveries must comply with the Coordinated Operations Agreement, SWP/CVP Coordinated Facilities and Operations, Biological Opinions issued by U.S. Fish and Wildlife Service and National Marine Fisheries Service for the coordinated long-term operations of the SWP and CVP, and the Incidental Take Permit issued by California Department of Fish and Wildlife. These rules and operational agreements often restrict or reduce the amount of water that can be delivered to contractors annually.

Annual average south-of-Delta SWP deliveries were compared to the total water supply (Table 31-1). The values in the table help place the amount of water delivered by the SWP into context with water supplied through other sources. The South Bay receives 33%, roughly 162,000 acre-feet, of its total annual water supply from SWP and 20%, or 96,000 acre-feet, from the CVP; the remaining 47% comes from groundwater, local utilities, reservoirs or surface water sources, and recycled water. The San Joaquin Valley receives approximately 33%, 950,000 acre-feet, of their water supply from SWP annually; the remaining 67% is supplied by other surface water or groundwater sources. The

Central Coast receives 47%, 28,201 acre-feet annually, of its total annual water supply from SWP with the remaining 53% coming from the Cachuma Project, groundwater, other surface water sources, desalinization, and recycled water. Finally, Southern California depends on SWP for roughly 30% of their water supply; the remaining 70% is provided from the Colorado River, groundwater, conservation and recycling, and other sources such as the Los Angeles Aqueduct (State Water Contractors 2019).

Table 31-1. Summary of Annual Average Water Delivery Volumes from SWP to South-of-Delta Area

Contractor Area	Total Water Supply (acre-feet)	SWP Delivery Amount (acre-feet)	Percent of Total Water Use Provided by SWP
South Bay Area	484,000	162,000	33%
San Joaquin Valley Area	2,878,788	950,000	33%
Central Coast Area	60,002	28,201	47%
Southern California Area	4,414,444	1,386,500	30%
Total	8,245,678	2,713,201	33%

Source: State Water Contractors 2019.

Historic population growth trends and totals from 1978 to 2020 were reviewed by county in the study area. Counties were grouped into service areas for purposes of analysis. Specifically, Alameda and Santa Clara Counties are in the South Bay area; Kern, Kings, Tulare, and San Joaquin Counties are in the San Joaquin Valley area; Santa Barbara and San Luis Obispo Counties are in the Central Coast area; and Orange, Los Angeles, Riverside, San Bernardino, San Diego, and Ventura Counties are in the Southern California area. From 1978 through 2020, population growth has steadily increased in all water contractor service areas. While Southern California has by far the largest population with the most historic growth, its population size has flattened in the last 2 years reviewed (Figure 31-2) (California State Association of Counties 2018; California Department of Finance 2021).

As shown in Figure 31-1 and 31-2, water deliveries or exports to the south of the Delta have varied over time, whereas population growth has steadily increased since 1978 in all water service areas. Therefore, there is no discernable link between the amount of water exported to the study area by the SWP (or the CVP) and population growth. This is supported in the February 2021 *Annual Report to the California State Legislature* for the Metropolitan Water District of Southern California, which shows population in the area has increased by 30% in the last 19 years while water demands have decreased by roughly 20%; this is partially due to water conservation measures such as increasing water use efficiency and recycled water where possible (Figure 31-3)(Metropolitan Water District of Southern California 2021:3).

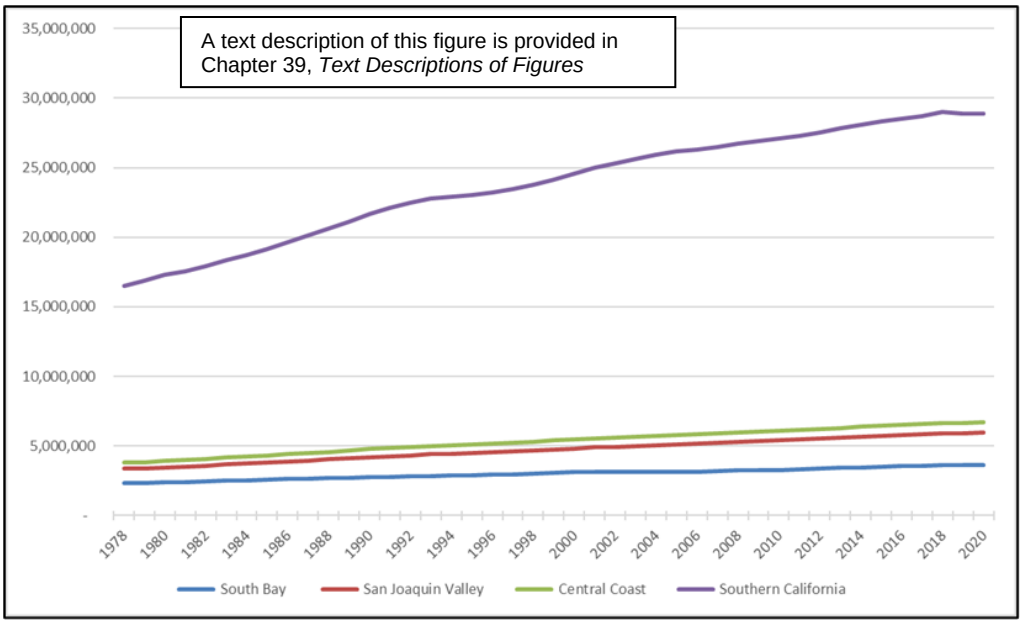
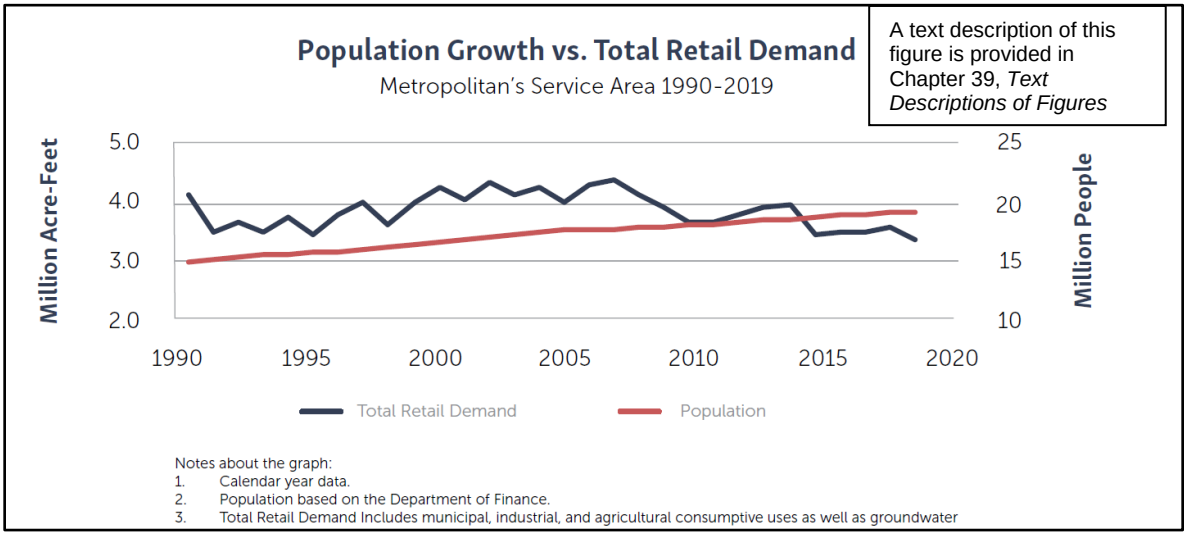


Figure 31-2. Population Growth across SWP South-of-Delta Contractor Areas



Source: Metropolitan Water District of Southern California 2021:3.

Figure 31-3. Population Growth vs. Total Demand for Water in the Metropolitan Water District of Southern California

Availability of water is only one of several factors upon which local and regional growth depend. These other factors include the following.

- Cost of housing.
- Employment opportunities.
- Capacity of other public services (i.e., schools, health services, wastewater treatment facilities, availability of transportation services, etc.).

- Local land use policies.
- Use constraints such as floodplains, sensitive habitat areas, and seismic risk zones (Public Health Notes 2021:3).

In conclusion, based on historic data, there is not a strong link between the volume of water exported and changes in the rate of population growth, especially when considering other potential factors and elements that affect the rate of growth in a region.

31.2 Environmental Impacts

This section describes the potential for direct and indirect growth inducement that could result from project construction and operation and maintenance, including increased water supply reliability.

31.2.1 Methods for Analysis

The project and each of the project alternatives would involve the construction and operation of water conveyance facilities. However, neither the project nor any project alternative would include the expansion of the SWP and CVP service area. The analysis of direct growth inducement potential (below) evaluated whether the project alternatives could foster economic or population growth or the construction of additional housing directly in the surrounding environment (CEQA Guidelines § 15126.2(d)). The analysis compared the number of construction and permanent operations and maintenance jobs associated with the project alternatives with the labor force located in the Delta vicinity. The analysis then evaluated the capacity of the local labor force to meet project-generated employment demand. Alternatives were evaluated for their potential to stimulate additional housing development and the need for services by (1) construction of new access roads in the vicinity of project facilities, thereby removing lack of roadway infrastructure as an obstacle to development and enabling growth; (2) reducing the risk of flooding, thereby removing flood risk as an obstacle to development; and/or (3) increasing water deliveries to participating water contractors to a volume that could remove restrictions to additional population in their service areas. Specific to the third point, the analysis considered the estimated increases in water deliveries from the SWP to the 18 public water agencies that have approved of the AIP for the SWP Contract Amendment for Delta Conveyance. As stated in Chapter 3, *Description of the Proposed Project and Alternatives*, water supply reliability refers to the ability of the SWP to deliver water in compliance with regulatory limits and SWP contractual agreements.

The project's potential to induce growth focuses on the net increase (or decrease) in annual average deliveries; all information on water deliveries in this chapter is for average annual CVP and SWP deliveries for the 87 years included in the CalSim 3 modeling (Chapter 6, *Water Supply*). Because north-of-Delta contractors would not be affected by the project, the changes in SWP deliveries utilized modeling from the south-of-Delta SWP water deliveries. The analysis of Alternatives 1, 3, and 5 (6,000 cubic feet per second [cfs] design capacity) focused on the increased water delivery and percentage to the 18 participating public water agencies from the project. The analysis of Alternatives 2a and 4a (7,500 cfs design capacity) considered the 18 participating public water agencies as well as a qualitative consideration of the growth-related impacts of a small increase in deliveries within the CVP service area.

31.2.2 Thresholds of Significance

The project would be considered to have a significant effect if it would result in the condition listed below.

- Induce substantial unplanned population growth in an area, either directly or indirectly, such that additional facilities would need to be established to support such growth.

31.2.3 Impacts and Mitigation Approaches

31.2.3.1 Direct Growth Inducement

Construction Jobs

Based on the highest projected employment needs across all alternatives during the peak construction period, construction of the project would require approximately 3,914 construction workers (Chapter 17, *Socioeconomics*, Table 17-24). Construction would take place between Sacramento and Tracy. It is expected that 85% of the required construction jobs, approximately 3,327 workers, would be drawn from the labor force of the five Delta counties—Contra Costa, Sacramento, San Joaquin, Solano, and Yolo (Chapter 17). This would total approximately 5% of 71,000 construction jobs reported in 2019 in four of the five counties (Sacramento, San Joaquin, Solano, and Yolo) (California Employment Development Department 2021). Given the percent of project construction jobs in relation to the area industry, it is not expected that a substantial influx of workers would be required to fill the peak workforce of 3,914 expected construction jobs because the existing labor force in the five Delta counties would be adequate for the project.

Based on Chapter 17, *Socioeconomics*, it is estimated that up to 15% of the 3,914 workers would come from outside of the five-county study area and reside in the vicinity temporarily. This would mean approximately 587 workers may come from outside of the five-county Delta region during the peak construction year. As stated in Chapter 17, *Socioeconomics*, if needed, an estimated 79,000 vacant housing units are available to accommodate workers from outside the region who may choose to commute on a workweek basis or who may choose to relocate temporarily or permanently. This is enough to accommodate the estimated peak of 587 workers and their families who may temporarily or permanently relocate to the five-county region from outside of the area. Given the availability of housing in the project vicinity, out-of-state workers would be readily accommodated by existing facilities; therefore, the influx of workers during project construction would not induce substantial new housing development.

Permanent Jobs

As discussed in Chapter 17, *Socioeconomics*, there would be a very small increase in regional economic activity as a result of operating and maintaining the project. The estimated number of workers required would be similar across the alternatives. These workers are anticipated to live in the Delta region and would represent a very small percentage of the total regional employment (the least amount being 41 workers under Alternative 2b and the greatest being 53 workers under Alternatives 2a and 5). It is likely this small number of new jobs would readily be filled by the local labor force and would not induce additional growth in the area. Assuming some or all jobs were specialized and required workers from outside the local labor pool, given the availability of housing in the project vicinity, these workers would be readily accommodated by existing housing;

therefore, the influx of these workers during project operation would not induce substantial new housing development.

31.2.3.2 Indirect Growth Inducement Associated with Facility Construction and Operation

Access Roads within the Plan Area

Project alternatives would involve construction of new permanent access roads at locations within the project work area to provide access to conveyance structures and other project facilities (see Chapter 3, *Description of the Proposed Project and Alternatives,* for more detail). In general, construction of roads in relatively undeveloped areas has the potential to induce growth by facilitating access to such areas—removing lack of roadway infrastructure as an obstacle to growth. Permanent access roads would remain and largely be located on agricultural or open space lands. The existing roads, including Interstate 5, Byron Highway, and State Routes 12 and 4, are close to much of the proposed alignments and facility sites, with the majority of the permanent access roads being short segments providing a direct route between an existing road and a given project facility. Therefore, new permanent roads would not provide access to substantial areas of agricultural or undeveloped lands not already served by area roads, and the relatively limited segments of permanent access roads would not induce urban development.

Flood Risk Reduction

Project activities are not anticipated to have any substantial impact or change on potential for flooding in the study area and downstream areas (Chapter 7, *Flood Protection*). It is not anticipated there would be any indirect impact of flood risk reduction on growth under any project alternative because no project alternative would substantially alter levees in the study area and reduce the potential for study area flooding (Chapter 7, *Flood Protection*). Specifically, levee modifications on Bouldin Island and Lower Roberts Island would not change land use as to increase residential or commercial developments in those areas because the ring levee at the Twin Cities Complex would be removed after construction, and levees modified near the intake structure would not increase flood protection to adjacent properties. All project facilities would be designed to be protected from the 200-year flood event and sea level rise in year 2100. Furthermore, as shown in Chapter 14, *Land Use*, levee modifications would not result in conflicts with any existing land use plans.

31.2.3.3 Indirect Growth Inducement Effects Associated with Stabilized Water Deliveries

The following sections highlight changes in SWP and CVP deliveries associated with the project alternatives based on modeling conducted using CalSim 3. Changes to SWP and CVP deliveries to contractor areas relative to existing conditions and the No Project Alternative reflect increased water demands and climate change effects on precipitation and snowpack and sea level rise (Chapter 6, *Water Supply*). As stated in Chapter 6, no construction or modification to SWP or CVP facilities or operations would occur under the No Project Alternative. Foreseeable conditions include continuing uncertainty of SWP/CVP south Delta exports, increasing vulnerability in the south Delta to long-term reductions in water quality due to sea level rise that could be expected to occur with or without the project, and continuing vulnerability resulting from a major seismic or levee failure event that could cause salinity intrusion that would temporarily halt export operations. Because the

No Project Alternative results in similar or lower SWP and CVP contracted deliveries, it would not cause any indirect growth inducement effects as compared to the existing conditions, as water supply reliability would decrease.

Table 31-2 summarizes the south-of-Delta SWP deliveries, south-of-Delta CVP deliveries, and changes in south-of-Delta SWP and CVP deliveries for each alternative compared to existing conditions deliveries (adapted from Chapter 6, Table 6-5). Figure 31-4 shows the projected growth from 2025 through 2060 in the study area.

Table 31-2. CalSim Modeling Results for Average Annual CVP and SWP Water Supply for Alternatives (thousand acre-feet per year)

Alternative	SOD SWP Deliveries [a]	Alternative Percent Increase Compared to EC	SOD CVP Deliveries [a]	Alternative Percent Increase Compared to EC	SOD CVP + SWP Deliveries Changes from Existing
EC	3,509	–	2,161	–	–
Alts 2b, 4b	3,918	12%	2,188	1%	436
Alts 2c, 4c	4,001	14%	2,204	2%	535
Alts 1, 3	4,046	15%	2,210	2%	586
Alts 2a, 4a	4,037	15%	2,257	4%	624
Alt 5	4,050	15%	2,209	2%	589

Source: CalSim modeling results, from Chapter 6, *Water Supply*, Table 6-5.
Alt = alternative; CVP = Central Valley Project; EC = existing conditions; SOD = south-of-Delta; SWP = State Water Project.
[a] Long-term average annual for the CalSim 3 period October 1921–September 2015.

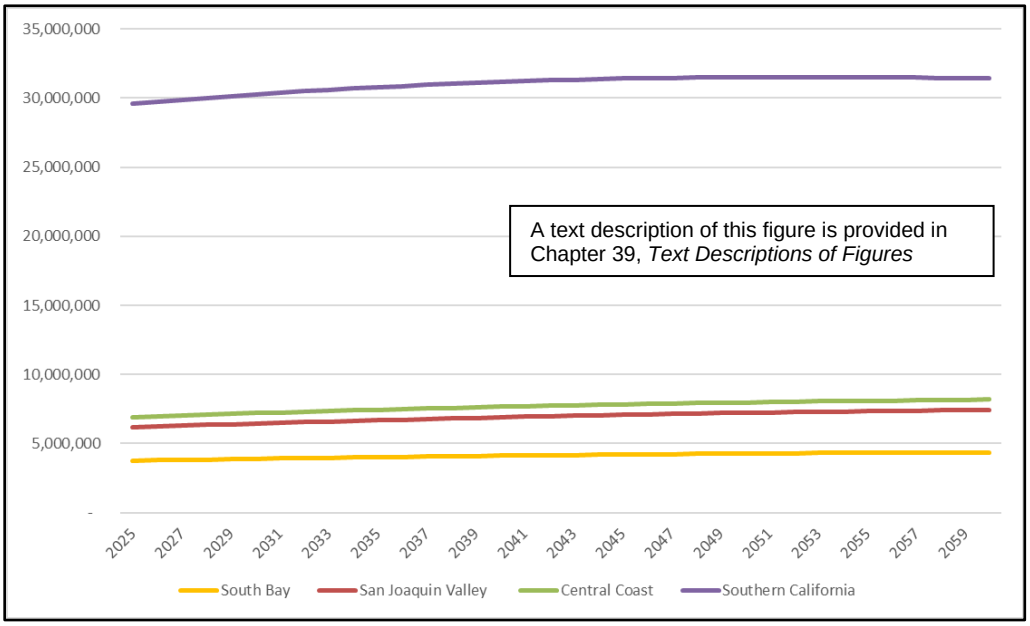


Figure 31-4. Projected Population Growth across South-of-Delta SWP Contractor Areas

The upper increase of SWP water delivery annual average to the south-of-Delta service area would be an estimated 16% more than the existing SWP water deliveries. The projected population growth

throughout most of the study area is charted to be slight to none through 2060 (Figure 31-4, California Department of Finance 2021). Based on this pairing, there does not appear to be a correlation between water delivery amount and the population growth rate within the growth study area. Furthermore, the increase in potential SWP annual average water supply would act as a water stabilization source rather than a water surplus that could induce growth, as it would restore previously contracted amounts. When taken in consideration of the reliability of all water sources available to the participating agencies, the amount of water that may be delivered under each of the alternatives is more likely to result in an increase in the reliability of the total existing water portfolio for each participant than an absolute increase in water supply over the life of the project. The modest change in water supply that may be provided by the Delta Conveyance Project when considered in the context of total water portfolios as well as other factors affecting growth within the service area, as described in Section 31.1 above, suggest that the project alternatives would not be a substantial factor in fostering growth within the study area.

For Alternatives 1, 3, and 5 (6,000 cfs design capacity), the estimated annual increase in SWP water deliveries would be shared between the 18 participating public water agencies. As shown in Table 31-2, the estimated SWP deliveries would increase by 15% when compared to existing conditions. These 18 participating public water agencies have been grouped into the associated SWP contractor areas for easier comparison in Table 31-3. This table also compares potential Delta Conveyance Project water supply increase to the current total water supply use for each area.

Under Alternatives 2a and 4a (7,500 cfs design capacity), the south-of-Delta deliveries would also have the same average annual increase as Alternatives 1, 3, and 5 in their SWP delivery contracted water supply (Chapter 6, *Water Supply*). The allocation across the participating 18 public water agencies would remain the same as Alternatives 1, 3, and 5 because the additional 1,500 cfs would be allotted to CVP contractors. The additional water deliveries are expected to be used mostly for agriculture but also possibly municipal and industry uses. This increase may expand water reliability but would not be at the scale needed to facilitate new or expanded agricultural production or municipal and industry developments. Therefore, it is not expected to induce indirect growth.

Table 31-3. Summary of Agreement in Principle Participating SWP Contractors Water Delivery Volumes by Area and Comparison to Total Water Supply

Contractor Area	Percent Share of Potential DCP Water Supply Increase [a]	Percent Compared to Total Water Supply [b]
South Bay Area	8%	9%
San Joaquin Valley Area	14%	3%
Central Coastal Area	1%	7%
Southern California Area	78%	10%

DCP = Delta Conveyance Project.

[a] Percent of potential DCP water supply average annual increase was calculated based on percentage of funding by DCP participating water agencies. Percent is rounded; a percent more than 0.5 has been rounded to 1. May result in a percent total over 100%.

[b] Source: State Water Contractors 2019.

Table 31-3 shows that though 78% of the potential Delta Conveyance Project annual average water supply increase may go to the Southern California area, it would result in an approximate 10% increase in their total annual water supply. All other areas would experience roughly an increase of

9% or less in their total annual water supplies.[1] So, while the project could increase the potential SWP annual average delivery of water in the study area, the amount of water available to the individual participating public water agencies would be small compared to their total water supply portfolio. As stated above, this increase in potential SWP annual average water supply would act as a water stabilization source, by restoring amounts that agencies have previously received that have been reduced due to regulatory requirements, rather than a water surplus that could induce growth. In addition, SWP annual deliveries could be much less during certain hydrologic conditions and are subject to change over time (Chapter 6, *Water Supply*). Finally, as mentioned previously, the availability of water is only one of several potential factors that local and regional growth depend upon. These other factors include availability of affordable housing, available jobs, public services bandwidth, lack of environmental constraints such as seismic risk zones and floodplains local, and land use policies.

Cities and counties are the primary authorities over land use decisions within their respective jurisdictions. Under the Urban Water Management Planning Act (California Water Code § 10610 *et seq*.), urban water suppliers are required, as part of their long-range planning activities, to make every effort to ensure the appropriate level of reliability in their water service sufficient to meet the needs of their various categories of customers during normal, dry, and multiple dry water years. In addition, DWR does not require water be used for specific uses once it is delivered to water service contractors and has no oversight on local and regional planning. Legal and regional planning activities and decisions on how water is provided by the project are made at the local level and are not the responsibility of the DWR.

In conclusion, while the project would increase the potential SWP annual delivery of water south of the Delta under all alternatives when compared to existing conditions, the total volume of additional water would not significantly induce population growth. Rather, increased water supply is likely to be used to provide improved supply reliability and restore amounts that agencies have previously received that have been reduced due to regulatory requirements. Further, increased delivery may simply restore average contract deliveries that have been affected because of regulatory rules and operational agreements or could be used to supplement or reduce groundwater use under the Sustainable Groundwater Management Act. Finally, as noted earlier, there is not a strong discernable link between water deliveries and rate of population growth, and there are several factors outside of water delivery, such as housing and employment, that influence and drive population growth.

[1] The allocations to each public water agency participating in the Delta Conveyance Project could change as agreements between DWR and the participating public water agencies are finalized and/or if additional public water agencies choose to participate in the Delta Conveyance Project. Deliveries to each of the participating water agencies could decrease if new agencies agree to participate in the project and could increase if some agencies decide not to participate in the project.