

9. RELIABILITY OF WATER SUPPLIES AND GROWTH

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9.1 INTRODUCTION

Each contractor's SWP contract contains a Table A, which identifies the amount of water that contractor has contracted for with the State with an amount listed for each year the contract is in effect. For each contractor, Table A amounts were initially low, to match the low demands when the contracts were signed, and then built up over the years as its demands were projected to increase. Table A amounts for most contractors reached a maximum in 1990. The Table A amount in any year is used to indicate the maximum amount of dependable SWP water that the State agrees to make available for delivery to a contractor during the year. The State and SWP contractors also use Table A amounts to serve as a basis for allocation among the contractors of available water when supplies are limited, and of some SWP costs. (See Section 2.5.1 for a detailed discussion of Table A.)

When the SWP was originally conceived, water planners envisioned that the SWP would deliver the full Table A amount in most years, with additional facilities constructed as contractors' Table A amounts increased. However, the planned SWP yield was constrained by planned facilities that were never built, as well as by more stringent water quality requirements and new environmental regulations. As a consequence, in recent years the SWP is able to deliver full Table A amounts only in wetter years. In some wet years, the SWP can deliver more than the Table A amounts. In drier years, SWP deliveries can be substantially less than full Table A amounts.

The plaintiffs in *PCL v. DWR* argued that urban planning agencies might overestimate the amount of water available to support urban growth by basing planning decisions on the contractual Table A amount of an SWP contractor and not on a more realistic expectation of annual SWP water deliveries. The Court of Appeal noted that "There is certainly the possibility that local decision makers are seduced by contractual entitlements and approve projects dependent on water worth little more than a wish and a prayer."¹ The possibility of decision-makers approving urban developments that would not have been approved if they had a more realistic idea of water availability from the SWP was termed a "paper water" problem because reliance is arguably placed on water that exists only on paper in the SWP long-term water supply contracts.

The plaintiffs in *PCL v. DWR* argued that the proposed project's elimination of Article 18(b) eliminated the possibility of a downward adjustment of the Table A amounts to be more reflective of the SWP's actual capability to deliver water. In other words, the plaintiffs argued that without Article 18(b), the original Table A amounts would be maintained causing the "paper water" problem to persist by affecting planners' urban growth decisions.

The purpose of this chapter is to explore whether planners in the SWP service area relied on full Table A amounts in the SWP long-term water supply contracts and, if so, whether that SWP "paper water" problem could be ameliorated if Article 18(b) were retained and invoked.

9.1.1 Analytical Method

There are several factors that would have to coincide to create SWP “paper water” problem. First, the local planning process must rely on the SWP water supply contracts and use them in determinations of whether to approve development projects. Secondly, the water supply information derived from the SWP contracts must lead to unrealistic assumptions about SWP water deliveries, such as assuming full Table A deliveries every year. Lastly, these unrealistic SWP supply assumptions must be one reason the project was approved.

To explore the possibility of a “paper water” problem, documents that are or could be used by local planning entities to plan and approve growth were reviewed. These included General Plans, Specific Plans, Urban Water Management Plans (UWMPs), EIRs, and public documents published by the California Department of Water Resources (Department), including the recent State Water Project Delivery Reliability Report. Particular attention was given to how development decisions relied upon these documents and how they described SWP delivery capabilities or reliability. In addition, recent legislation and other factors were examined to determine whether they might affect any possibility that SWP “paper water” might influence urban planning in the future.

9.2 PERTINENT LAWS, REGULATIONS, AND PLANNING PRACTICES

Land use planners in California employ various procedures and practices to evaluate if adequate water supplies and other utilities are available to support urban growth. The procedures and practices have evolved over time in response to growing concern that urban growth might be outpacing the available water supply. They are described below.

9.2.1 California Department of Water Resources Publications and Communications

The Department continually provides SWP and other water related information to the SWP contractors and the public. Since 1963, the Department has published an annual bulletin (Bulletin 132) that provides information on the planning, construction, financing, management, and operations of the SWP. The Department also prepares and publishes the California Water Plan (Bulletin 160) approximately every 5 years. The plan includes projections of future water demand and supply constraints of the SWP and the State’s other water resources, and options for meeting future water demands. In addition, since the beginning of SWP operation, the Department has annually notified and updated its contractors on the amount of Table A water available for delivery in the coming year. Since 1996 the Department has also posted this information on its web site to provide regular updates on water availability in the coming year based on stream flow measurements, snow surveys, and storage in SWP reservoirs. The notices are provided so that SWP contractors, other water agencies, local planners, and the public are able to remain abreast of water conditions and events that affect deliveries by the SWP.

The Settlement Agreement provisions include new procedures for disclosure of SWP delivery capabilities and replacement of the term “entitlements,” as Table A amounts were previously referred to in the SWP contracts, with the term “Table A amounts,” so that land use planning agencies would be less likely to misinterpret the supplies that would be made available under the SWP long-term water supply contracts. Also as part of the Settlement Agreement, the Department agreed to publish *The State Water Project Delivery Reliability Report*, to update the report every two years, and to distribute the report to all SWP contractors and all city, county, and regional planning departments within the SWP service area. The purpose of the report is to

provide current information to SWP contractors and to planning agencies regarding the overall delivery capability of the existing SWP facilities under a range of hydrologic conditions and supply availability to each contractor in accordance with other provisions of the contractors' contracts. The Department published *The State Water Project Delivery Reliability Report* in 2003. The updated report for 2005 was published in June 2006.

9.2.2 Urban Water Management Plans

In 1983, the California Legislature enacted the Urban Water Management Planning Act (California Water Code [CWC], Division 6, Part 2.6, Sections 10610 - 10656). The Act requires every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 AF of water annually, to prepare and adopt an UWMP and update it every five years. The purpose of the plan is to assist water suppliers in carrying out long-term planning to ensure adequate water supplies to meet existing and future demands for water. The Act describes the required contents of an UWMP, as well as how urban water suppliers should adopt and implement their plans. The first round of UWMPs was prepared in 1985, and successive editions must be produced every 5 years. Updated UWMPs from most urban water agencies were required to be completed in December 2005.

The Act recognizes that water is a limited and renewable resource subject to ever increasing demands and that conservation and efficient use of urban water supplies is a statewide concern. By directing urban water suppliers to prepare UWMPs, the Legislature established a clear policy direction for local water agencies to actively pursue conservation and efficient use of water to protect both the State's people and its water resources. The Act has been amended several times, most recently in 2004, to clarify and expand the content of the UWMPs. Current provisions of the Act require water agencies to describe ongoing and planned water conservation measures, provide a water shortage contingency analysis, describe the availability and potential use of recycled water, and provide an assessment of water supply reliability 20 years into the future under various hydrologic conditions. The Act also requires water agencies to hold a public hearing prior to UWMP adoption, with notification to all cities and counties within their service area, and to then provide copies of the adopted UWMP to those cities and counties.

9.2.3 Senate Bills 610 and 221 and Water Supply Assessments

Senate Bill (SB) 610 and SB 221 were enacted and became effective on January 1, 2002. These laws reflect the desire to incorporate water supply and demand analysis in the planning process. SB 610 amends portions of the CWC, including the sections enacted as the Urban Water Management Planning Act (Section 10610 - 10656), and Public Resources Code Division 13, which includes CEQA. SB 610 requires the preparation of a Water Supply Assessment (WSA) during the CEQA process for all projects that include: more than 500 residences; mixed-use projects that would have a water demand equivalent to the demand of 500 residential units; non-residential uses that would employ more than 1,000 persons or more than 250,000 square feet of floor space; a proposed hotel or motel, or both having more than 500 rooms; a proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; or a mixed-use project that includes one or more of the projects specified.

SB 610 is designed to expand the information typically contained in an UWMP, and the amendments to CWC Section 10631 were designed to make the two processes consistent. A key difference is that UWMPs must be revised every five years, in years ending with either zero

or five, while WSAs pursuant to SB 610 are required as part of the environmental review process for each individual qualifying project. As a result, the minimum 20-year planning horizons for each type of document may cover slightly different periods. Water Supply Assessments must “describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for (1) an average year; (2) a single dry year; and (3) multiple dry years.”

Under SB 221, approval by a city or county of residential subdivisions of 500 units or more, as defined by California Government Code Section 66473.7(a)(1), requires an affirmative written verification of sufficient water supply. SB 221 is designed as a mechanism to ensure that collaboration on finding the needed water supplies to serve a new, large subdivision and existing and planned future uses for the next 20 years occurs again at the tentative tract map approval stage. This verification must also include documentation of historical water deliveries for the previous 20 years, as well as a description of reasonably foreseeable impacts of the proposed subdivision on the availability of regional water resources. As a result of the information contained in the written verification, the city or county may attach conditions to assure the water supply as part of the subdivision map approval process.

9.2.4 City and County General Plans

The General Plan Guidelines for the State of California² describe the contents of general plans, which by law must contain seven required elements (Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety). An optional water element may be incorporated, but most General Plans typically are organized by only the required elements. Within the contexts of Conservation, Open Space, and Safety, there are several opportunities to discuss water and the Guidelines do identify optional suggestions to address water resources and demand on water resources. The EIR prepared in conjunction with the General Plan typically provides some assessment of the adequacy of water resources to accommodate housing and other development being planned to accommodate projected population growth.

With respect to planning development to accommodate population growth, the State Planning and Zoning Law provides that the housing element of General Plans may not be constrained by the lack of all needed government services. This includes public water service. The housing element is required to plan for the housing allocated to a given city or county pursuant to Government Code section 65584. To the extent that governmental services, like a public water supply, are not available to fully meet a city’s or county’s housing allocation, Government Code section 65583(c)(3) requires the city or county to “remove the governmental constraints” to the development of the housing described in the General Plan. This approach furthers the State General Plan policy declaring that “the availability of housing is of vital statewide importance, and the early attainment of decent housing and a suitable living environment for every California family is a priority of the highest order” that “requires the cooperative participation of government and the private sector in an effort to expand housing opportunities and accommodate the housing needs of Californians of all economic levels.” (Gov’t Code section 65580.) While future build-out of housing and other population-accommodating development planned at the General Plan level may exceed presently available water supplies, this is not inappropriate at the General Plan level, and recent State Legislation (SB 610 and SB 221) ensures that specific housing and other development projects are not approved and constructed without a demonstrated, adequate water supply.

SB 610 and 221 and UWMP requirements have introduced more disclosure and communication on water supply and demand among cities, counties, and water agencies as part of the planning

and project approval process. In addition, prior to the adoption or substantial amendment of a General Plan, the planning agency must send a copy of the proposed plan or amendment to any public water system with 3,000 or more service connections that serves water to retail customers within the area covered by the proposal. The public water system has at least 45 days to comment on the proposed plan and must provide a copy of its most recent UWMP and other water supply information to the city or county.

9.2.5 Will Serve Letters

To approve a specific development, the lead agency (i.e., the agency with responsibility to approve or carry out the project) must comply with CEQA. This involves an assessment of the potential for the proposed project to result in significant impacts to various environmental resources, including utilities and public services. Often some evaluation of the adequacy of water supply to support the project is included in the assessment. In the past, the preparation of many CEQA documents resulted in a request to the local water agency for a “will serve” letter. Typically this letter stated that the water agency had adequate water supplies and sufficient distribution system capacity to serve the project site, and therefore the relevant water agency indicated that they “will serve” the proposed project. Usually, water agencies responded affirmatively, except in certain special circumstances (e.g., chronic water shortages, periods of extended drought, or where infrastructure limitations made the provision of water service uneconomical to the service provider).

9.3 RESULTS OF SURVEYS AND LITERATURE REVIEW

9.3.1 General Plans

To assess the role that water supply and availability have in influencing land use planning decisions in general, two surveys were conducted, one by EIP Associates in 2004,³ and the other by LSA Associates in 2003.⁴ Together, these surveys covered most of the SWP urban service area. The surveys reviewed general plans and growth projections to determine the extent to which water supply availability and reliability are taken into consideration during their preparation. The General Plans analyzed in the surveys were chosen to provide a representative sample of cities in the state, including those located in Northern California, the San Francisco Bay Area, the San Joaquin Valley, the Central Coast, and Southern California, including MWDSC’s service area. The selected plans include large, medium, and small cities (with a population of between 100,000 and 400,000, between 50,000 and 100,000, and less than 50,000, respectively). However, due to the generally smaller population of cities outside Southern California, cities in all three categorical sizes could not be identified for each of the regions studied. Also, plans or plan elements that were being updated at the time of these surveys were generally excluded from the analysis because the updates had not been finally adopted. The LSA Study also examined Specific Plans for large-scale development projects, UWMPs and water system Master Plans for the Southern California region.

Between the two studies, 60 General Plans (and other plans) were reviewed to determine which plan elements contained information regarding water supply, particularly the Land Use, Open Space/Conservation, and Public Services Elements. The General Plans were also evaluated to determine whether they contained information about existing water use, identified water use by land use type, included statements indicating that future water demand could be met, or provided evidence that the land use plan had been, or may need to be, adjusted in response to water availability.

Based on the two surveys, General Plans in the SWP service area prepared in the last decade typically have not analyzed water supply and demand to determine how much development could be supported by existing water supplies, nor did they evaluate the reliability of existing water supplies. Of the General Plans surveyed, they typically do not treat water supply as a constraint on the development of land. Many General Plans include a policy requiring developers to demonstrate that water facilities are available to serve proposed developments; however, these policies typically address the adequacy of the water distribution system rather than the adequacy of the water supply itself.

A few recent plans include policies that suggest future growth may be limited by water availability, e.g. County of San Luis Obispo and City of Calistoga. However, these plans are the exceptions to the general rule that long-term growth decisions predicated on analyses in the General Plans do not consider water supply a constraint to growth. These recent plans, however, may reflect an emerging trend of increased attention to water supply issues at the General Plan level, which is discussed later in this chapter.

At the project development level, the LSA Study found that all Specific Plans and associated EIRs for the large-scale developments surveyed assessed water supply availability, but to varying degrees and based on varying sources of water supply information. But none of those documents surveyed relied on or even cited the Table A amounts of the SWP contracts.

Based on the limited sample size of General Plans surveyed, and the even smaller number of Specific Plans surveyed, it is impossible to conclusively show that no developments in the SWP service area had ever been approved in reliance on the contractual Table A amounts. In fact, a case involving SWP water from Castaic Lake Water Agency (*Santa Clarita Organization for Planning the Environment v County of Los Angeles (2003) 106 Cal. App. 4th 715, 722*), a court of appeal found that an EIR for a county-approved residential and commercial property development inadequately relied on a discussion of “entitlement” that made “no attempt to calculate or even discuss the differences between entitlement and actual supply” and that contained “no estimates from the DWR, the agency that manages the SWP...”. See also *California Oak Foundation v Santa Clarita (2005) 133 Cal.App.4th 1219, 1236*.

However, to the extent that this situation had occurred in the past, it is almost certain not to occur in the future. With passage of SB 610 and SB 221, formal consideration of water supply availability is now required at the EIR and tentative tract map stages of development approval. And as a result of Settlement Agreement provisions of the proposed project, a wider and more concise dissemination of information on SWP reliability data by the Department will help minimize any unrealistic assumptions of SWP availability.

9.3.2 Urban Water Management Plans

UWMPs are fundamental water supply documents required by California law, and water supply information they contain could be used by planners and other public agencies to understand their local water supply situations. If UWMPs indicated that the SWP delivered full Table A amounts every year, and if land-use planners in areas receiving SWP water referred to these reports when making planning decisions or approvals, then a “paper water” problem may have been created. To assess this potential issue, the UWMPs of several M&I contractors were surveyed to assess how they reported the projected availability of SWP supplies.

Most UWMPs of M&I contractors included discussion of the variability of SWP supplies. The sophistication of information in each contractor’s UWMP varied, but all surveyed acknowledged

that the SWP cannot deliver full Table A values in all years. Table 9-1 presents the results of a survey of some M&I contractors' UWMPs.

All of the UWMPs of the larger M&I contractors surveyed present SWP supply information that indicates the inherent fluctuations in SWP deliveries to them. While the UWMPs vary in their presentation of SWP data, there may be several reasons for this variability, including differing assumptions regarding the reliability of the SWP supply available to them, and differences in each contractor's need for SWP water. For example, most of the surveyed UWMPs reported that SWP water availability is greatly affected by hydrology. In addition, each contractor's need

Agency	Source	Reported SWP Average Deliveries	Reported SWP Dry Delivery	Reported SWP Critically Dry Delivery
Mojave WA	1994 Regional Water Management Plan	79%	n/a	n/a
Castaic Lake WA	2000 Urban Water Management Plan	60%	n/a	39%
Alameda County WD	2001-2005 Urban Water Management Plan	74%	43%	15%
San Geronio Pass WA	2003 Technical Memorandum - Supply and Demand Forecast Summary	81%	n/a	n/a
Santa Clara Valley WD	2001 Urban Water Management Plan	74%	47%	11%
Palmdale WD	2000 Urban Water Management Plan	87%	52%	23%
MWDSC	2000 Urban Water Management Plan	(1)	(1)	(1)
Desert WA	2000 Urban Water Management Plan	82%	n/a	n/a
Antelope Valley-East Kern WA	2000 Urban Water Management Plan	72%	50%	30%
Alameda County WD	Urban Water Management Plan	74%	43%	15%
Solano County WA	Urban Water Management Plan	n/a	45%	30%
Solano County WA	2000 Urban Water Management Plan	74%	n/a	n/a
Note: 1. MWDSC did not specifically indicate SWP expected deliveries by year type, and instead used the full range of SWP expected reliability published by California Department of Water Resources in Bulletin 160-98.				

for SWP water depends on demands within its service area and the mix of water supplies available to it. The UWMPs included those from large M&I contractors including the MWDSC, Alameda County WD, Zone 7 WA, Santa Clara Valley WD, San Gabriel Valley Municipal WD, Mojave WA, Castaic Lake WA, and others. None of these M&I contractors indicated in their UWMP that they would receive full Table A amounts from the SWP in every year or even most years.

The data regarding SWP delivery that was published by M&I contractors in their recent UWMP did not present an unrealistic expectation that full SWP deliveries would be received every year. A person reviewing these UWMPs would have gained an understanding of the complexity of the SWP and its susceptibility to annual California weather patterns. It is highly unlikely that data in these UWMPs contributed to a situation where urban planners in these M&I contractors' service

areas approved development based on unrealistic assumptions of full Table A deliveries from the SWP in most years. It is more likely that information such as that contained in the UWMP surveyed increased awareness of water supply challenges and the need to continually support additional supply development and conservation projects. This survey of UWMP did not attempt to evaluate the accuracy of the information included in individual EIRs. Some of them may be subject to challenge with regard to whether the plan adequately discloses specific reliability questions. For example, in 2004, the Castaic Lake Water Agency Urban Water Management Plan was found inadequate for not adequately describing the reliability of its groundwater supplies because it did not address timing issues related to the treatment of groundwater contamination – its discussion of SWP supplies was not found to be inadequate (*Friends of the Santa Clara River v. Castaic Lake Water Agency* 123 Cal.App. 4th 1, 12).

The UWMPs discussed in this section were plans that predate the 2005 UWMP updates. Current plans are likely to be more complete with regard to the variability and reliability of water deliveries. To the extent that the varying presentations of SWP data in M&I contractors' UWMPs were a function of inconsistent assumptions regarding SWP availability rather than a function of varying supply mixes and needs, that variability will likely be less given the information and direction provided by the State Water Project Delivery Reliability Report since its initial publication in 2003.

9.3.3 Department Publications

SWP contractors, urban planning agencies, and members of the public may also have sought information regarding SWP delivery capability from documents published by the Department itself. As the State agency charged with operating and maintaining the SWP, the Department has continually published reports concerning the operation and management of the SWP. Some of these documents have regularly included information regarding SWP delivery capabilities. A brief review of some of these publications revealed that the Department has discussed the delivery potential of the SWP in many of them, and that the Department has openly acknowledged that the SWP can not deliver full Table A amounts, or the original minimum SWP yield of 4.2 million AF, every year. In contrast, these publications have sought to present a realistic picture of what the SWP can be expected to deliver and what factors affect SWP deliveries.

The annual Bulletin 132 series, "Management of the State Water Project" has been a standard Department publication since the beginning of the SWP. Each edition of Bulletin 132 reports on the operations and management of the SWP for a particular calendar year. Bulletin 132 routinely discussed the actual delivery capability of the SWP. For instance, Bulletin 132-83 indicated that the firm yield of the SWP at that time was 2.5 million AF per year, but that it would decrease to near 2.0 million AF by year 2000 (page 3). Bulletin 132-90 projected the firm yield of the SWP facilities as 2.4 million AF per year (page 86). In fact, most annual editions of Bulletin 132 presented SWP delivery capability information indicating that the SWP would not deliver 4.2 million AF.

As directed by the California Legislature, the Department also has the duty of publishing the California Water Plan every 5 years. The California Water Plan, or Bulletin 160, is intended to be the chief statewide water planning document. A review of past Bulletin 160s indicates that the yield of the SWP has been realistically presented in those publications as well. Bulletin 160-87 (published November 1987) states that "dependable water supplies from the SWP are now about 2.3 million AF per year," (page 24). Bulletin 160-93 indicates that "the seven-year average dry-period yield of the SWP with its current facilities operating according to Water Right

Decision 1485 requirements is about 2.4 million AF per year,” (page 63). Similarly, Bulletin 160-98 includes information regarding the probability of the SWP delivering particular quantities of water in any year. It specifies that “existing SWP facilities have only a 65 percent chance of making full deliveries under 1995 level demands” and “under a 2020 level demand scenario, existing SWP facilities have less than a 25 percent chance of making full deliveries,” (page 3-33).

The State Water Project Delivery Reliability Report discussed in great detail the ability of the SWP to deliver water. The *2005 State Water Project Delivery Reliability Report* defines water reliability as “...how much one can count on a certain amount of water being delivered to a specific place at a specific time”. Factors that contribute to water reliability include the availability of the water from the source, availability of the means of conveyance, and the level and pattern of water demand in the delivery service area (destination).⁵ The 2005 State Water Project Delivery Reliability Report identifies that the total of all contractors’ maximum Table A amounts is 4.173 million AF. Under 2005 conditions average Table A delivery from the Delta is 2.818 million AF and average Article 21 delivery is 260,000 AF.⁶

Public planning agencies, water providers, or members of the public had access to the information in the surveyed Department Bulletins (Bulletins 160 and 132). As with the results of the survey of UWMPs, it appears that information regarding SWP deliveries was not presented in a simplistic, one-dimensional fashion wherein full deliveries were assumed in every year regardless of hydrology. Instead, Department publications like Bulletins 132 and 160 attempted to explain the complexity of water delivery projections and the many confounding factors that increase or decrease SWP deliveries. Planners reading this information would have gained an appreciation for the inherent fluctuations and unpredictability of SWP supply availability, as well as the inability of the SWP to deliver full Table A amounts as originally planned when the SWP was constructed. These publications, then, provided realistic SWP delivery information, and neither local agencies nor the public were led to believe that SWP deliveries up to the full contract amounts were available in all years. The State Water Project Delivery Reliability Report provides even more detailed information.

9.4 CONCLUSIONS

9.4.1 SWP Water Supply and Urban Planning in the Past

The surveys of General Plans indicate that land use planners and local jurisdictions did not in the past typically consider water availability as a constraint to growth. Local jurisdictions generally develop their General Plans for future growth to accommodate the expected housing needs. Water supply and infrastructure is then planned in response to the General Plan growth levels. Thus land-use planners appear to assume that local water agencies will obtain the supply necessary to meet the long-term water demand that results from planned growth at the General Plan level. Although planners may have considered various sources of information on water availability during plan formulation (e.g., Department publications, SWP contracts, UWMPs, etc.), general plans do not typically make reference to them or include detailed information on water supplies. Even if planners were concerned about water availability, they may not have focused their attention on SWP delivery capabilities because SWP water is not the primary water source within most contractors’ service areas – it is a supplemental water source. For example, SWP water constitutes only 22 percent of total current water use within the MWDSC service area.

The fact that land use planning historically did not view water supply as part of the planning process is probably attributable to historical factors, especially the building in California of very large water projects that provided sufficient supply for populations fifty or more years into the future. At the time these projects were built, California urban areas were experiencing booming growth and expected these trends to continue. Water projects, much like highways and sewage treatment plants, are often built on a large scale because of the high cost and difficulty of completing them, and the difficulty or inability to expand them. Additionally, the large capital investment and the various funding mechanisms used to build large water projects like dams, reservoirs, and canals are usually only approved periodically. When such a large investment in infrastructure is made, it is more economical and politically feasible to expend a small amount of additional funding at that time to build a larger project, than to build several independent, additional projects later. For example, San Francisco's Hetch Hetchy system, Los Angeles' Owens River/Mono Basin system, the CVP, the Colorado River water system, and the SWP were designed to meet water demands for many years into the future when they were built. As a result, in the past, planners did not have to be very concerned that urban growth might be limited by water availability. Water availability has become a concern in some local jurisdictions more recently as a result of local elected decision makers and/or local voters deciding to limit or retard growth and using water availability as the implementing mechanism. Examples include the Monterey Peninsula, parts of Marin County, and the Santa Barbara area. In addition, water supply is generally considered at the development level, but prior to passage of SB 610 and 221, to varying degrees of sophistication.

Because land use planners and decision-makers have paid little attention to water availability in general, it follows that they have been influenced very little or not at all, by the Table A amounts in the SWP contracts or any other information on the delivery capabilities of the SWP. Whether the Table A amounts gave planners a false impression of the SWP's delivery capability becomes moot. Thus, based on the planning documents surveyed, the water supply capability of the SWP was not considered in making urban development decisions.

While it appears that past growth and development decisions in many jurisdictions may have been made without thought of water supply limitations, it is also apparent that there is no widespread misunderstanding or misreporting of SWP delivery information. If local planners or the public had considered water supply issues and consulted documents reporting SWP supply information such as an UWMP or Department publications and website postings, they would have received realistic information regarding SWP supplies and could not have reasonably believed that the SWP delivered full Table A amounts in every year or even most years.

The UWMPs reviewed presented a realistic picture of how SWP deliveries fluctuate based on the amount of precipitation in a year or series of years. These UWMPs included those of the largest M&I contractors that provide water to urban areas. It is unlikely that planners in these areas would have assumed full SWP Table A deliveries every year, or in most years, when public documents prepared by their local SWP M&I contractors and the Department itself all indicated that SWP deliveries were not full contractual Table A amounts every year. If they did so, then their assumptions were not founded on any of the publications reviewed. The review of documents presented here indicates that the Department and M&I contractors have provided a realistic picture of the SWP's delivery capability and its constraints.

9.4.2 SWP Water Supply and Urban Planning in the Future

In the future, although the Table A amounts in the SWP contracts are greater than the average annual delivery capability of the SWP, it is unlikely that land use planners and decision-makers

would base their decisions only on the Table A amounts in the SWP long-term water supply contracts. The vast majority of public water supply documents that discuss the SWP include a realistic discussion of the SWP's delivery capability. Furthermore, with the passage of Senate Bills 610 and 221, and the biennial publication of the *State Water Project Delivery Reliability Report* by the Department, it is almost certain that future land use and water supply planning will be more closely linked than they have been in the past. Lastly, planners are more likely to base water availability assumptions on the UWMPs and the State Water Project Delivery Reliability Report than on SWP contract documents.

A recent survey of land use agencies⁷ suggests that in the last year or two many of California's cities and counties have begun to link decisions on land-use and water resources. The passage of SB 221 and SB 610 appear to have "...generated considerable new activity at the local level. ...It is also possible that some communities with local policies have increased the rigor of their review process since the enactment of the new state laws."⁸ Although the survey also noted that "...it is not possible to comment on the depth or quality of the planning and review activities undertaken by local governments..."⁹ it noted that some city and county departments responsible for land-use decisions now participate in the planning activities of their local water utilities.

The "paper water" problem is really a question of whether local planners recognize the limitations on the reliability of SWP supplies. In the early years of the SWP, the total Table A amount as it ramped up to maximum Table A amounts was important because this number was also intended to be the firm yield of the SWP. In recent years, for operations and planning purposes, the concept of firm yield has been replaced with water delivery reliability curves which show the likelihood of water deliveries by the SWP in any year given the range of historical hydrologic events. Table A amounts now serve primarily as a way of allocating certain SWP costs and water shortages and surplus among the contractors. Reducing the Table A amount through invocation of Article 18(b) is not relevant given current day operations and planning based on water delivery reliability curves.

The surveys and literature review undertaken as part of this EIR show little evidence that a "paper water" problem was created by the contractual SWP Table A amounts or that it affected urban growth decisions. However, even if a "paper water" problem did arise from land use planners relying on the Table A amounts, the passage of SB 610 and 221 and the State Water Project Delivery Reliability Report have led to better information dissemination to local planners regarding the reliability of SWP supplies. Thus, the elimination of Article 18(b) by the proposed project would not have an effect on urban growth and would not create a continued "paper water" problem because planners either do not consider SWP water supplies when approving growth at the General Plan level, or have more detailed, realistic, and readily available SWP delivery information available to them to consider at the development approval level.

ENDNOTES

1. PCL vs. DWR.
2. California Office of Planning and Research, *General Plan Guidelines*, 2003.
3. EIP Associates, *Evaluation of Planning Entitlement and Water Supply Availability within the State Water Project Service Area*, February 2004.
4. LSA Associates, *Evaluation of Water Supply and Growth Planning in Southern California*, prepared for MWDSC, 2003.
5. California Department of Water Resources, *2005 State Water Project Reliability Report*, page 3, June 2006.
6. California Department of Water Resources, *2005 State Water Project Reliability Report*, Tables 5-2 and 5-3, pages 17 and 18, June 2006.
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