

Adequacy of Municipal Water Supplies To Support Future Development In the City of Santa Cruz Water Service Area



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1. INTRODUCTION

Is there enough water available to support more development in Santa Cruz? Doesn't more growth mean there will be even less water to go around when the next drought comes along? How much longer can the City and County continue to approve permits for homes and businesses before the existing water system is over tapped?

These are questions people have grappled with for years, with no satisfactory answer. The issue usually comes up in public hearings for new development projects or when a shortage of water looms. The debate dies down again later once projects are approved or when the rains return. Meanwhile, the fundamental question of how much more growth the water system can sustain remains elusive and unanswered.

This report examines the interrelated subjects of water supply and community development in Santa Cruz. It provides current information on the ability of the system to deliver water and offers possible approaches that could be used by policy makers, who have the responsibility to plan future growth, to integrate local land use decisions with long-term water supply availability.

Background

In 2001, the California Legislature passed and the Governor signed into law two bills linking land use decisions to available water supplies. The intent of these two bills, SB 610 (Costa) and SB 221 (Kuehl), was to strengthen the process by which local agencies determine whether the water supplies of a region are adequate to satisfy the demands of new large-scale development projects.

The legislation was prompted by a study undertaken by East Bay Municipal District that revealed a previous law adopted in the mid 1990's, SB 901, failed to improve the level of information and analysis about water supply availability in environmental impact reports for major new developments. With the population of California growing by approximately 600,000 people per year - expected to approach 50 million by 2020 - and no new major water storage projects being pursued at the state level, the Legislature enacted SB 610 and SB 221 to require that the subject of water supply be given more thorough consideration in urban land use decisions and to ensure there is enough water available for planned growth without jeopardizing existing users.

The two bills integrate land use and water planning at different stages of project approval. SB 610 requires the preparation of a detailed water supply assessment by the responsible water agency early on when major projects subject to the California Environmental

Quality Act undergo environmental review. SB 221 prohibits local land use agencies from later approving tentative maps or developer agreements for large subdivisions unless an adequate, reliable water supply has been verified (see Figure 1). The bills also differ in the types of development projects that are affected. SB 610 applies to major new development projects, including proposed residential developments of more than 500 dwelling units, commercial office building of more than 250,000 square feet, and a new hotel with more than 500 rooms, whereas SB 221 applies mainly to residential subdivisions of more than 500 dwelling units.

Since new development in the Santa Cruz City water service area is generally much smaller in scale than that covered by SB 610, it is unlikely that these new laws will change how decisions are made locally. Even so, the policy directives embodied in SB 610 and SB 221 are just as relevant to this area as to the rest of California. Santa Cruz is experiencing slow but steady population growth, is faced with the problem of periodic water shortages, and has not historically coordinated land use decisions which ultimately shape demand for water with information about adequacy of water supply to support community growth in any systematic or consistent way.

Purpose

A number of future land use planning documents, including local housing elements, regional population projections, City and County general plans, and University long-range development plans are actively undergoing revision or are due to be updated in the near future. These documents have the potential to change current policies and allow greater density or facilitate infill development, conversion, or redevelopment to meet the pressing need for housing, particularly affordable housing. The decisions and policies that are ultimately adopted involving land use and housing will have lasting implications on the water supply system.

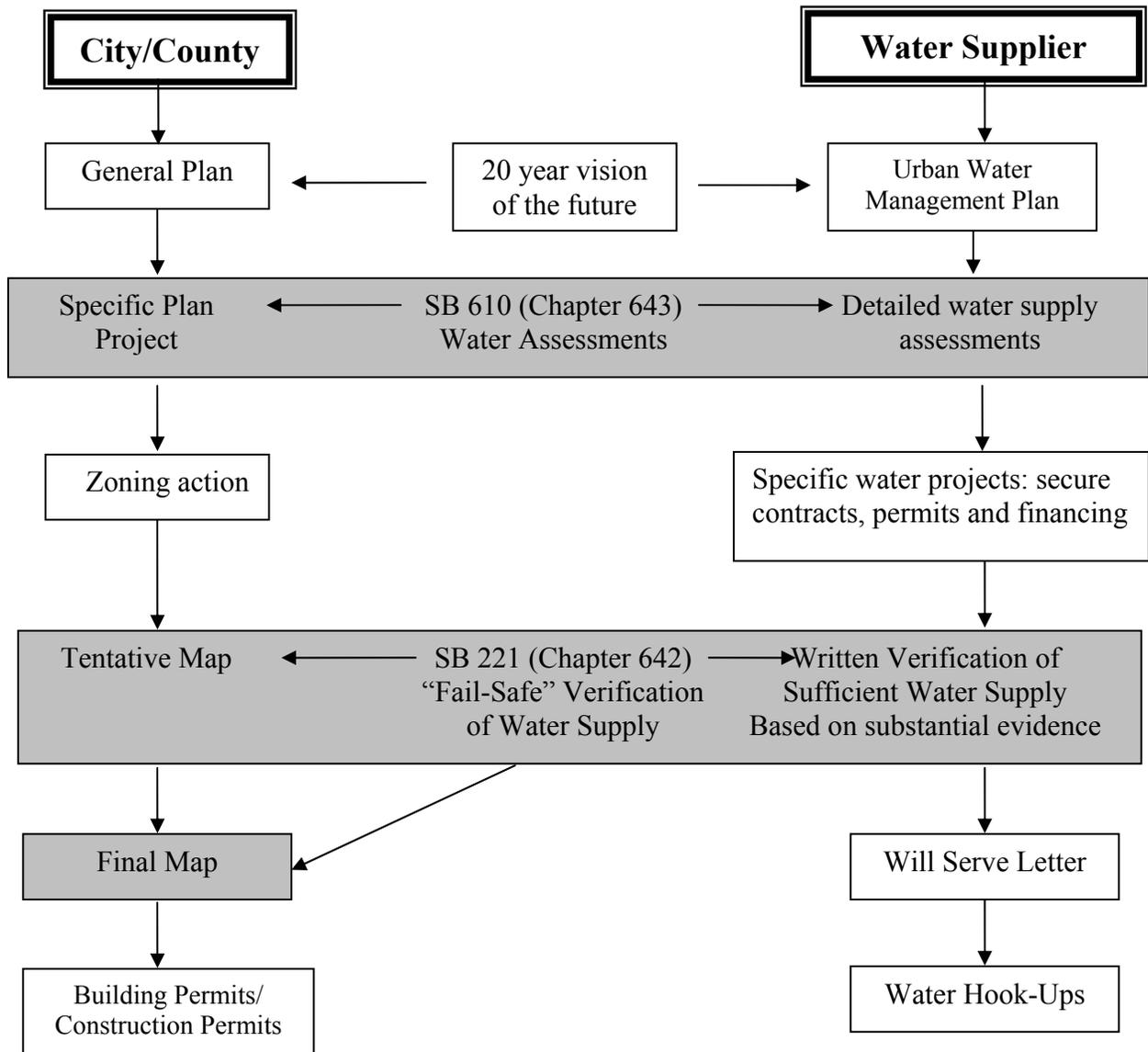
The purpose of this report is to inform that discussion by providing a broad assessment of the adequacy of the Santa Cruz water system, which is widely acknowledged as already at risk of shortage in dry years, to continue to support the type and amount of future development being envisioned in these land use plans, without impairing the ability of the City to serve its existing population and businesses. The specific the objectives of this report are to:

1. Provide a brief assessment of the current vulnerability to water shortages and describe the planning process the City is pursuing to reduce drought year shortages and provide a reliable supply that meets the community’s long-term water service needs.

Figure 1. Senate Bill 610 and Senate Bill 221

Two laws that integrate land use and water planning

The following chart illustrates the relationship between a local land use agency and a water supplier in their planning processes. The General Plan, prepared by a City or County Planning Department, and the Urban Water Management Plan prepared by a Water Supplier are the critical source documents used to substantiate the information required by **SB 610** and **SB 221** at the local level.



For additional information on either the *California Environmental Quality Act* or General Plan Guidelines, please refer to the publications available from the Governor's Office of Planning and Research at: www.opr.ca.gov. For information and guidance related to the *Urban Water Management Planning Act*, please refer to the Department of Water Resources, Office of Water Use Efficiency available at: <http://www.owue/>.

2. Examine current growth trends, policies, and issues related to serving future development, and explore the causes for the historical disconnect between land use planning and water supply availability.
3. Propose possible approaches for decision makers to periodically review the water supply and demand conditions independent of individual land use decisions and to consider relevant information that would determine how much longer into the future additional growth would be permitted based on either an acceptable level of risk of a future water shortage or by the constraints posed by the City’s existing water rights.

2. WATER SUPPLY AND AVAILABILITY

The basic question to be assessed by water agencies under SB 610 is whether the total projected water supplies available during normal, single dry, and multiple dry years will meet the projected demand of the proposed project, in addition to the water supplier's existing and other planned future uses, for at least 20 years.

In any water system, there are several factors that dictate how much water is available for use in an urban service area.

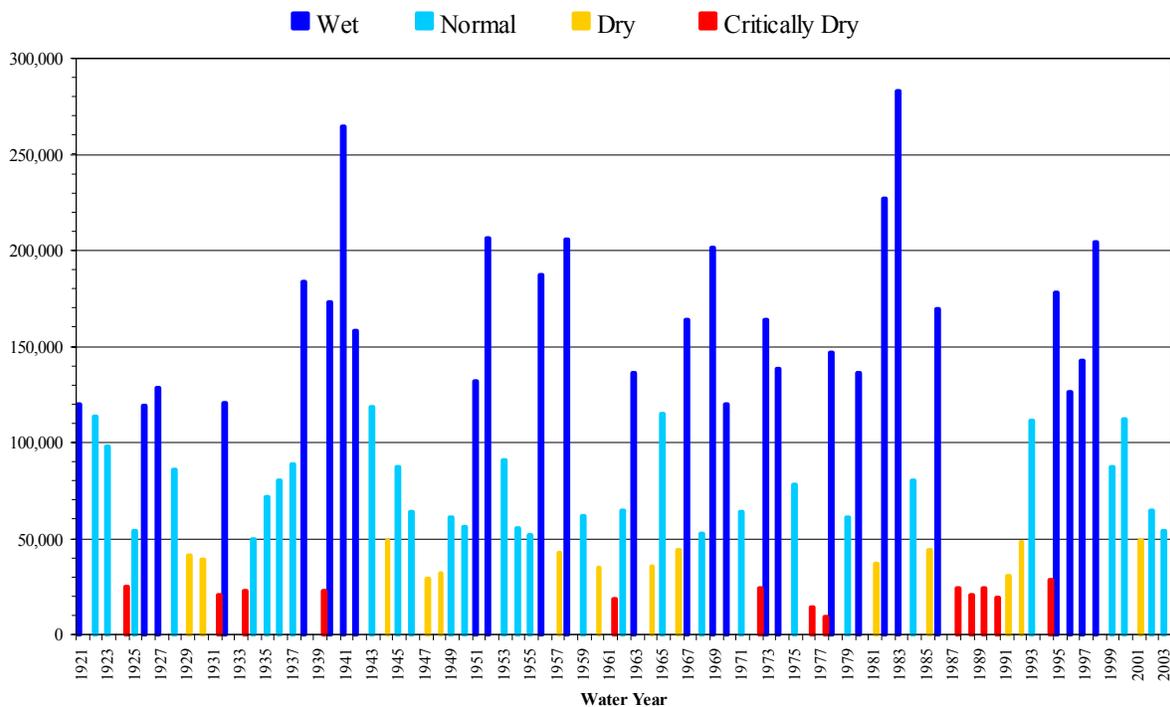
1. **The yield of the surface and groundwater supplies at the source.** Availability of water from a stream or reservoir varies depending on the amount and timing of rainfall and runoff. Some years there is more water available than others due to the natural variability in weather patterns and hydrologic conditions.
2. **The physical components of the system and limitations of infrastructure capacity.** This refers to the size and condition of pipes, pumps, reservoirs, and other facilities that serve to capture, store, treat, and convey water according to the daily and seasonal demands of customers, and the operating constraints attendant to these facilities.
3. **The management of the utility.** This includes the policies, procedures, and legal restrictions that control the operation of the water system. One example is the manner in which various sources are dispatched, which can affect how much water is retained in storage at the end of a season for use in the following year. Water rights are another example that governs how much water can be diverted from a stream, or stored and withdrawn from a reservoir at any given time.
4. **The level of demand exerted by the existing customers,** under average and peak conditions.

All these factors together ultimately determine the total amount of water available, which can change from one year to the next. For the purpose this report, however we are primarily concerned with the first and last factors. While the City faces a number of expensive infrastructure problems related to age and transmission capacity, in general, the infrastructure is adequate, at least for now, to meet the service needs of the present population in terms of flow, pressure, and water quality. Where it is not, the City has the ability to address the problem through the annual budgetary process and capital improvement program. Moreover, the system is presently managed optimally to make

the most of flowing sources and to retain the maximum amount of water held in storage to safeguard against a future drought.

The most significant variable to the City affecting water supply availability is the wide range in the yield of surface water sources from year to year. This variation in yield is a direct reflection of the natural hydrologic conditions common to the California, which cannot be predicted, and over which the City has no control. Figure 2 illustrates the tremendous variation in total annual runoff in the San Lorenzo River – the City’s most important source – over the past 82 years.

Figure 2. Total Annual Runoff in San Lorenzo River (ac-ft)



The next most important factor affecting water supply availability after the yield of sources is the level of demand on the system. The higher the overall demand, the closer the system comes to bumping up against its infrastructure constraints and water rights limitations, even in plentiful water years. However, the changes in total annual demand are generally very slight and far more predictable in comparison with the dramatic changes in timing and distribution of winter rainfall and runoff that ultimately shape the available supply in the subsequent dry season.

Profile of the Santa Cruz Water System

The water system is comprised of four main sources of supply:

1. North Coast sources (including Laguna, Majors and Reggiardo Creeks, and Liddell Spring),
2. San Lorenzo River (including Tait Street Diversion and Felton Diversion),
3. Loch Lomond Reservoir, and
4. Live Oak Wells.

The system relies entirely on rainfall, runoff, and groundwater infiltration occurring within watersheds located in Santa Cruz County. It is completely isolated in that there are no facilities in place to transfer water to the City system from adjacent water districts, nor is any water purchased or imported to the region from outside the Santa Cruz area.

On average, about 75 percent of the City's annual water supply needs are met by surface diversions from the coastal streams and the San Lorenzo River. The yield of these flowing sources in any given year is directly related to the amount of rainfall received and runoff generated during the previous winter season. Water stored in Loch Lomond Reservoir is used mainly in the summer and fall months when the flows in the coast and river sources drop off and additional supply is needed to meet higher daily demands in the peak season. It accounts for only about 20 percent of the City's annual supply, with the remaining 5 produced from the Live Oak Wells.

In normal and wet years when rainfall and runoff are abundant, base flows in the coast and river sources are restored by winter rains and storage in Loch Lomond is typically replenished to full capacity with runoff from the Newell Creek watershed. Under these weather conditions, the water supply system is capable of meeting the community's total annual water requirements.

The system is highly vulnerable to shortage in drought years, however, when the San Lorenzo River and coast sources run low. In dry years, the system relies more heavily on water stored in Loch Lomond to satisfy demand, which draws down the reservoir level lower than usual and depletes available storage. In critically dry or multi-year drought conditions, the combination of very low surface flows in the coast and river sources and depleted storage in Loch Lomond reservoir reduces available supply to a level which cannot support average dry season demands. Compounding the situation is the need driven by prudent management to reserve some amount of storage in Loch Lomond in the event drought conditions continue into the following year.

Past Water Shortages

The City experienced severe water supply deficiencies in both the 1976-77 and 1987-92 droughts. In 1977, the City imposed severe water rationing in response to a critical shortage of water. During the 1987-92 drought, a water supply emergency was declared and either usage restrictions or rationing was imposed each year for five consecutive years. The 1976-77 event has since been established as the most severe drought of record, and is used by the City as a benchmark for assessing system reliability.

Since 1993, water conditions have been mostly normal to wet, with only two years out of the last ten classified as dry or critically dry. No shortage of water has been experienced over this period.

Integrated Water Plan

The most recent effort to address the City’s water supply situation is the 2003 Integrated Water Plan. The scope of this project involved the development of a computer model of the water system, which simulates the operations of the existing water system over a 59-year historical hydrologic period, under both current and future demand conditions. The model was used to characterize the system’s vulnerability to drought and to examine the tradeoffs of supplemental supply alternatives.

The output of this modeling effort showed that the City’s water supply system is grossly inadequate to meet current demand under severe drought conditions. Specifically, it concluded that:

“With current supplies and facilities, if a drought comparable to the 1976-77 event occurred today, the City would experience a 45% peak season shortage in the second year of that event.”

On the other hand, the model showed that the probability of occurrence of a supply deficiency, at the current level of demand, is relatively low. Based on the 59 years of hydrologic record, the water system would perform as summarized in Table 1 below:

Table 1. Expected Frequency and Magnitude of Water Shortages

Number of Years out of 59	System Shortfall (%) ¹
41	No shortage
11	<10
3	10-20
3	20-30
1 ²	>30

Stated another way, the system is able to meet 100 percent of existing water demand in about 7 out of every 10 years, and at least 90 percent of today’s demand, in about 9 out of every 10 years. A significant shortage occurs on average about one year out of every ten.

All this means, qualitatively, is that most of the time there is sufficient water available to meet the existing needs of City water customers. Some of the time, there are minor shortages. Once a great while, the system is at risk of experiencing an extreme water shortage. When it does happen again, the economic and social consequences could be extensive.

In the future, the operations model indicates that the supply problem will be potentially worse as demand grows. Moreover, small shortages of less than 10% are likely to be experienced much more frequently, even under average weather and water conditions.

A key recommendation set forth in the IWP was to plan for limiting any future shortage to 25% or less as a way to protect the customer base from undue hardships associated with water rationing. This planning objective was then used to guide decisions about sizing and timing of alternatives aimed at reducing the City’s potential worst case deficit from 45% to 25% or lower, and to maintain at least that level of water supply reliability through the year 2030.

Over the next five to ten years, however, while the recommended desalination project is in the process of being designed, reviewed, approved, financed, and constructed, the City and its customers remain subject to this ever present risk of water shortage.

¹ Unmet system demand during the peak season period, from April through October, expressed as percent.

² This event corresponds with the worst case 1977 drought.

Part of the difficulty in determining whether the water system is sufficient for allowing new development in the face of this risk stems from the infrequency with which the City is confronted with shortages. Literally years can pass by between one shortage event and the next, and so long as water continues to flow at the tap, few perceive that a real water supply problem even exists. If the situation were such that the City had a chronic water shortage, even in average rainfall years, there would be little difficulty concluding that the community's water supply was insufficient to allow additional growth, but that is not the case, at least now, in Santa Cruz.

Another aspect/dimension to this problem is the inability to predict what the future weather conditions will be in the coming year, or the year after that, much less twenty years out. Drought is a gradual phenomenon, and one can never be certain when the next drought will occur or how long it will last. It can only be assumed that future weather patterns will be similar to those in the past, and that dry and critically dry periods will occur with the same overall magnitude, frequency, and duration. Of course this assumption could be mistaken in light of emerging theories about climate change in California, or tree ring studies documenting epic drought periods that are thought to be even more severe and more prolonged than those witnessed in the relatively brief historical record.

Seasonal Availability of Water

For the time being, it would appear that there is somewhat more water available in most years than the amount being used by the present population. However, it is important to note that, **even in normal water conditions, three of the four major sources are presently being utilized at maximum capacity for a significant portion of the year.**

North Coast Sources: From about June through about November, all the available water flowing from the north coast sources is diverted for use by City customers. There is no additional water available to support future growth from this source in the summer and fall seasons.

San Lorenzo River: From about May through October, the system diverts the maximum amount of water allowed under the City's appropriative water rights. There is no additional water available to the City to support future growth from this source in the summer and fall seasons.

Live Oak Wells: the wells are currently operated at their maximum pumping capacity in the summer months. Until the capacity of the well field that existed prior to the Loma

Prieta earthquake has been fully restored, there is no additional water available from this source. In addition to infrastructure constraints, ground water supply now may be limited by basin-wide over pumping.

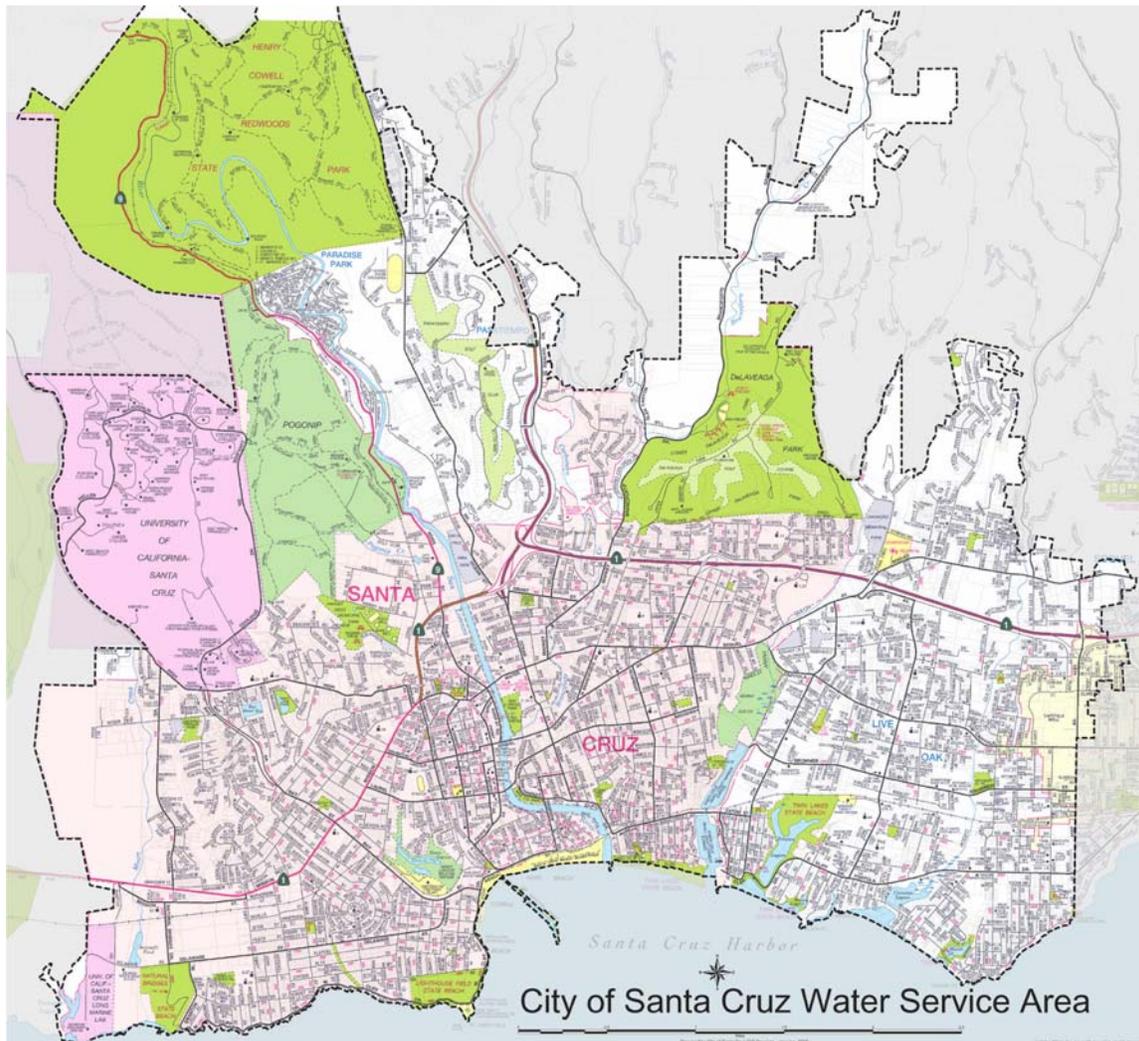
What this means operationally is that any future increase in seasonal or annual demand for water will be felt through greater and greater withdrawals from Loch Lomond reservoir. Under its current water rights, the City is legally limited to withdrawing no more than 1.04 billion gallons of water from Loch Lomond Reservoir each year. In recent years, average annual withdrawal from the lake has varied from less than 600 to almost 900 million gallons, but as mentioned above, the system relies more heavily on the lake in dry years. Without a change to the water rights at Newell Creek, or additional source of water supply, this restriction could represent the most immediate regulatory ceiling to any future growth the City faces in the very near future as the shape of the demand pattern changes over time.

Underlying the problems of seasonal and drought related water shortages is one other challenge in allowing future expansion of the water system. This other challenge is in providing adequate water treatment capacity on peak days at the Graham Hill Water Treatment Plant. This constraint is not quite, but could become, another limiting factor in determining how much more growth the system can accommodate, as Federal and State drinking water regulations for surface water treatment become increasingly stringent over time.

3. COMMUNITY GROWTH AND DEVELOPMENT

The Santa Cruz water system serves a geographic area that encompasses the entire City of Santa Cruz, Live Oak and adjoining unincorporated areas of Santa Cruz County, as well as a small part of the City of Capitola (Figure 3). The service area is nestled between the foothills of the Santa Cruz Mountains and the shoreline of Monterey Bay and is bounded in a number of areas by a greenbelt consisting of State and city-owned park and open space lands. East of 41st Avenue, water service is provided by another water district. The preservation of open space to the west and north lends a natural geographic definition to the City and represents a political barrier to any future physical expansion of the water service area. Accordingly, any growth and redevelopment that does happen is expected to do so within the confines of the existing service area boundary.

Figure 3. City of Santa Cruz Water Service Area



Profile of the Water Service Area

The land use pattern in the Santa Cruz water service area is predominantly residential, including a mix of single family homes, multiple residential units, mobile homes and various other types of housing. Commercial development is centered in downtown Santa Cruz, around 41st Avenue in Capitola, and along the major transportation corridors, such as Mission, Ocean, Soquel, and Water streets. Industrial activity is located primarily in the Harvey West area and along the west side of Santa Cruz.

The current population is estimated to be about 90,000. Of this total, approximately 55,000 people, or 62 percent, live inside the Santa Cruz City limits. The other 37 percent live in the unincorporated area, and 1 percent live in the City of Capitola. The water system supports a total of approximately 36,000 existing housing units and an employment base of about 45,000 jobs. UC Santa Cruz is the areas' largest and most influential public institution, as well as the City's largest water customer, with student enrollment now numbering about 14,500.

The water use characteristics reflect the above mix of land uses across the service area, with just under two-thirds of the total annual water deliveries going for residential purposes. The remaining amount is divided among different commercial, industrial, institutional, and irrigation uses.

Who Approves Growth?

Decisions concerning land use within the City's water service area are made by three separate jurisdictions: the City of Santa Cruz, the County of Santa Cruz, and the City of Capitola. The Santa Cruz City Council serves as the governing body for all policy matters concerning the physical growth and economic development of the City. In the unincorporated area, the County Board of Supervisors is the policy making body for land use decisions. The Capitola City Council does the same in the small part of the Capitola served by the Santa Cruz water system. All three jurisdictions have Redevelopment Agencies that play an active role in promoting economic development and affordable housing throughout the City water service area.

Of these three agencies, only the City Council has the dual role of decision making with regard to both water supply and land use. Neither the Board of Supervisors nor the Capitola City Council has this responsibility. Instead, they rely on the City's continuing issuance of "will serve" letters, and those of other water agencies, as evidence of sufficient water prior to approving new development projects in their jurisdictions.

On University property, land use decisions are the province of State government, which is independent from control and regulation by local government, even though it is the city that provides many of the services upon which the university is dependent for such growth.

Factors Influencing Growth and Land Use

There are many factors, both private and public, that affect the amount, location, type, and density of development that is permitted and built within the service area. All three jurisdictions have general plans, local coastal programs, zoning regulations, and development standards that serve to regulate and manage growth. The adopted General Plans were most recently updated in the late 1980's and early 1990's. To a large degree, the goals and policies contained in these documents are intended to protect existing neighborhoods and preserve environmental resources as a way to maintain the quality of life and unique sense of place for those that live, work, and visit the area. Thus, with certain exceptions, major changes in current land use patterns are not expected in the near future.

Vacant land is also diminishing. Most of the residential parcels within the water service area have already been developed. Within the City of Santa Cruz, only about 4 percent of residentially zoned land remains undeveloped. This is even truer in the part of Capitola served by the City. Most of the undeveloped or underutilized residential land remaining in the service area is located in the County's jurisdiction.

Instead, much of the development that is being seen today is being accomplished through infill, renovation, remodeling, conversions, second units, and additions to existing residential and commercial buildings that increase density on already developed or underutilized land. These types of projects may already have water service connections, so the expansion or intensification of use of land already developed does not necessarily show up in terms of a new account on the utility billing system; it is reflected instead as a change in water consumption at existing accounts. For many of these smaller projects, land use approval is handled ministerially, and the issue of water supply is simply a question of determining if projects' fixture unit count exceeds the rated capacity of the existing meter, and paying the appropriate fees.

How Much New Growth is Happening?

Table 2 below shows the number and type of new water accounts added to the system annually from 1996 through 2002¹. The number of accounts on the system now totals about 23,600.

Table 2. Number of New Water Accounts, 1996-2002

Customer Category	1996	1997	1998	1999	2000	2001	2002
Single Residential	111	121	178	124	93	114	184
Multiple Residential	1	9	1	7	3	1	1
Commercial/Industrial	7	7	14	12	12	2	8
Municipal	2	7	1	4	5	1	2
Irrigation	6	7	6	8	12	7	19
Total	127	151	200	155	125	125	214

Over this period, an average of about 150 new single family accounts were added to the system each year. The total number of multifamily dwelling units built in this period was 310, which averages about 44 new dwelling units added each year. While single family housing construction seems to be occurring at a fairly uniform rate, multifamily projects tend to be more unpredictable and inconsistent. These figures do not include several new multifamily projects containing hundreds of new dwelling units presently under construction or recently completed in the City.

Each one of the new single residential accounts connected adds an average of 77,000 gallons per year additional demand on the system. Each new multi-family dwelling unit adds about half that amount. All together, water demand from the new accounts listed above has totaled 126 million gallons over the past seven years, equal to an average of about 18 million gallons per year over this period, which translates to a growth rate in demand of only about 0.4 percent per year.

¹ Note that water account categories are not synonymous with type of housing. A single family account has one dwelling unit per meter, but may be any type of residence. A multifamily account has two or more dwelling units per meter.

Future Development

Each of the three jurisdictions is in the process of, or has just completed, updating their housing elements to address its required regional fair share housing needs established by AMBAG. These documents set forth goals and objectives for housing production, rehabilitation, and conservation through the year 2007. The plans identify generally where sites are available for housing to be built and describe programs to facilitate new housing opportunities, but this does not necessarily mean such housing actually will be constructed. Also unknown is what type of housing will actually be built over the next few years.

For this update, the City is planning for an additional 2,167 units, a fair amount of which already has been approved and is under construction. This figure includes a mix of housing types ranging from detached single family homes to small scale infill like accessory dwelling units. The County is planning for a total of 3,411 units to be built Countywide through 2007, of which perhaps 1,400 units potentially would be located within the City water service area. Capitola is projecting 337 units by 2007 in its housing element, but only a small number of these are expected to fall into the City's water service area.

Assuming that future development has equal numbers of single and multi-family housing units, the above housing plans represent a total of 3,567 new homes and a potential increase in residential water demand alone on the order of about 206 million gallons per year once they are all built.

The City will undertake a comprehensive review of its General Plans in 2005. This update will cover planned development out to 2020, and take into account new population and employment projections now being developed by AMBAG.

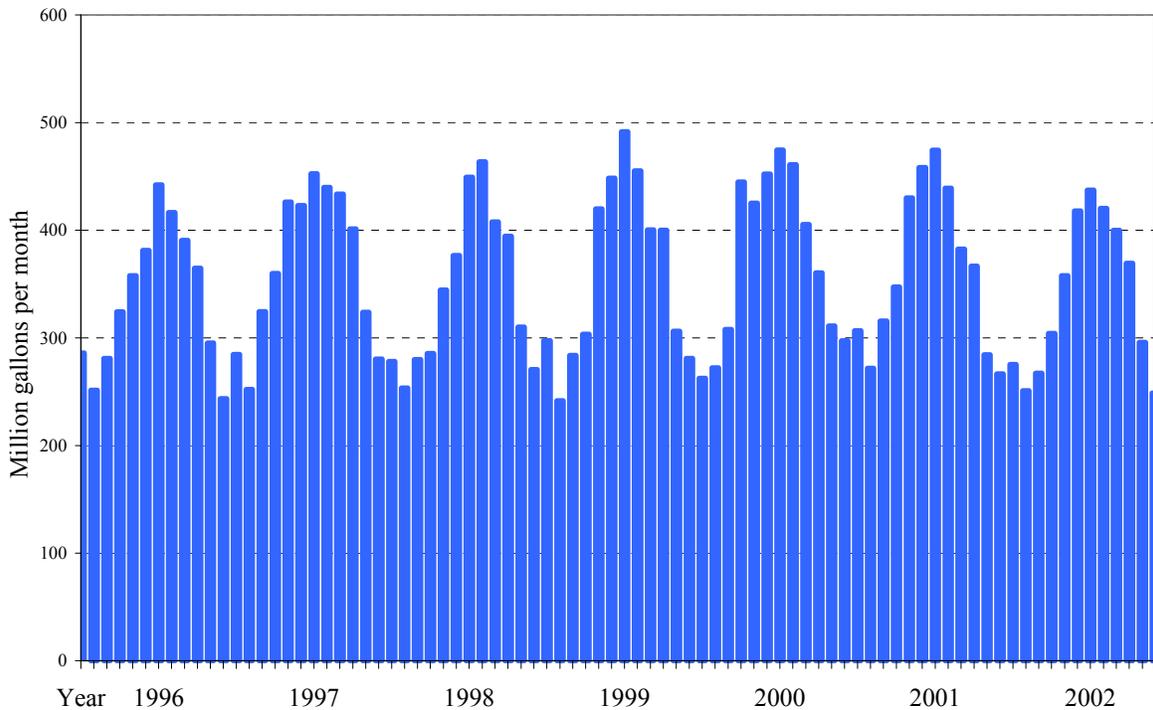
UC Santa Cruz has also announced it will be preparing a new long-range development plan for development on campus covering the same time period as the City's general plan. Since the last plan was completed in 1988, it has added more than 5,000 students, two new colleges, several academic buildings, and hundreds of new bedrooms on campus. The target enrollment for 2020 and on campus housing plans are yet to be determined. At the same time, the University is preparing a long range plan for expanding teaching and research capabilities on its coastal marine laboratory site. The extra water UC will need to meet these long range plans is unknown.

Impact of Growth on the Water System

In examining whether the water system is adequate to support future development, it is apparent that the incremental increase in water demand from new connections, based on the actual rate of growth over the last several years, is so small as to be virtually imperceptible. Even after many years in a row, all the demand associated with new account growth combined barely adds up to more than a few percent of the system total. Much more important, from a water system perspective, is the trend in total demand on the other existing water accounts, which tends to overshadow any effect of new connections and makes it seem little more than a faint background noise.

Figure 4 below shows total monthly water production over the period for which growth in new accounts is listed above. The chart illustrates the recurring seasonal cycle of production from a low of middle 200 million gallons per month in winter to a high of middle to upper 400 million gallons per month in summer. With the exception of one high value in 1999, there is no apparent signal in terms of increased water production over time that can be attributed to account growth.

Figure 4. Total Water Production



Rather, overall trend in production, up or down, is driven by the net effect of many small changes in demand occurring on all the other 23,000+ accounts. Some accounts are

increasing use, others declining. For instance, people are constantly moving, homes and landscapes are renovated, businesses are opened and closed, students and tourists come and go, the economic climate and weather conditions change, all of which, to some degree, influence demand for water. This larger signal, taken against the normal backdrop of the seasonal cycle in water demand, tends to drown out the comparatively tiny increase from new connections.

Currently, the system is experiencing a downturn in total annual production, mainly as a result of the closure of the Texas Instruments plant, and the cumulative effect conservation programs and plumbing codes are having on indoor residential water use, which has more than offset several years' worth of increased demand from hundreds of new accounts.

As economic conditions change, an upturn in total demand could easily recur. For instance, redevelopment of the existing Texas Instruments facility could do more to change the overall pattern of demand for water than years of new residential development ever would at current rates. Or if another new business on this scale were to locate in Santa Cruz, which doesn't appear likely in today's economy, its impact on the water system would be more noticeable. One change that does appear probable looking forward is increasing use at the University, both on campus and at the Long Marine Lab. Again, this is an example of change in use on existing connections whose magnitude potentially could far outweigh what most people perceive to be the increase in water use from highly visible construction projects.

The fact that demand from new development tends to be drowned out by much larger seasonal fluctuations and cumulative changes at other accounts on water system is just another aspect that makes it difficult to determine whether the water system is sufficient to allow new development. The gallons new accounts use are real, and they accumulate year after year. From a water production and delivery standpoint, however, it can be difficult to sense any real impact, at least in recent years. That may change as the hundreds of new units under construction now become occupied. The point is, new construction does not appear to matter very much at this time; what matters in terms of deciding if there is sufficient water for the future uses, is the level of total demand, and whether it is high or low, for whatever reason.

4. DISCUSSION

The impetus for preparing the Integrated Water Plan was to reduce the City's vulnerability to water shortages and to decrease the level of risk to the community from one of potentially crisis proportions to a more tolerable level. In the process of developing the plan, the City established a future water supply reliability goal to reduce the current worst case drought shortfall of 45 percent to no more than 25 percent. The final recommendation called for an even lower level of drought curtailment - 15 percent - through implementation of water conservation measures and the development of a 2.5 mgd seawater desalination facility. In the meantime though, growth continues to be permissible in spite of the current risk, based on the anticipation that the desalination project will materialize before the City is confronted again with another major drought. The unspoken assumption in permitting new growth while a supply solution is being sought is that the City could fall back on drought emergency management measures as it did in the 1970's and late 1980's until a solution is achieved, but cutbacks of the magnitude achieved before may be much harder to come by with today's lower per capita use.

The City has tried to resolve this problem several times before, without success, and has been actively pursuing a supplemental source of supply now for more than twenty years. All this time, development has continued to occur based on the notion that progress toward a solution was being made. Even in the prolonged 1987-92 drought, there was no serious consideration of halting development because a planning process was in the works at the time and the small amount of water that would have been saved by doing so was not worth the real economic effects to some segments of the community, nor the financial, legal, and political repercussions to the City that would result from temporarily stopping all growth.

One dynamic that has contributed to the current situation is the conflicting responsibilities of City government. As a municipal utility, the City has a duty to provide water service to existing and prospective customers within its service area. This provision of essential services is a basic function of local government. Moreover, the City has statutory responsibility to facilitate housing development and an institutional obligation to make adequate provisions for the housing needs of all economic segments of the community. And as a redevelopment agency, the City is not just a regulatory agency approving growth; sometimes it is also the developer itself.

On the other hand, the City also has the fundamental responsibility to protect the public health and welfare. For the purpose of managing the water system, this responsibility means protecting the existing population from a water shortage disaster. Ultimately,

continuing to provide water to new customers upon request, as is the current practice, may do harm to existing customers by making the potential water shortage situation worse than it would otherwise be.

Up to now, the point at which this one responsibility, to protect the public health and safety of existing customers from drought impacts, outweighs the other duty, to serve new customers, has never been defined. As a result, an upper limit to how much water can or should be produced on the City water system to protect current users has never been quantified.

Shortcomings of Existing Public Policy

The California Water Code contains provisions for managing a public water supply in the event of a water shortage emergency. Other statutes provide cities with the powers to acquire water and water rights, reservoir sites, rights of way for pipes, etc. to supply water for use by the city and its inhabitants. But no law requires a water supplier to meet any particular level of water supply reliability. This is matter left purely to local decision makers to address. Only recently has the legislature required the subject of urban water supply reliability to be described and discussed as part of an agency's Urban Water Management Plan.

Some state regulations and local policy begin to touch upon on the problem of balancing water supply and growth, but the language is either ill suited, too generalized, or abstract to give a clear answer or even useful guidance in determining whether a surface water system like the City's is sufficient for allowing new development. One law contained in the California Code of regulations deals generally with adequacy of supply. Another body of law, CEQA, requires local land use agencies to analyze and document impacts of growth. The city's general plan also contains policy language relevant to this problem. These regulations are discussed below.

California Waterworks Standards

State drinking water regulations pertaining to quantity of supply are contained in Title 22 of the California Code of Regulations. This regulation is used by the State Department of Health Services in permitting a public drinking water system. Section 65562 states that:

(a) Sufficient water shall be available from the water sources and distribution reservoirs to supply adequately, dependably, and safely the

total requirements of all users under maximum demand conditions before agreement is made to permit additional service connections to a system.

The regulation goes on to list the procedures for determining source capacity which, for a surface water supply, is based on “the lowest anticipated daily yield.” What is unmentioned in this regulation, and which makes the entire section vague, is any reference to the hydrologic conditions, i.e., during an average, single dry year, or multiple dry years, that a utility should use for determining its source water sufficiency. The point when State health officials would invoke this statute for an existing approved urban water system is also unclear.

The California Environmental Quality Act

New development projects that are subject to CEQA must be analyzed by local land use agencies to identify any significant impacts of the project on the physical environment. One of the issues required to be analyzed under CEQA is the project’s potential impact on local utilities, including public water systems.

Defining the criteria for determining when a particular impact is considered to be “significant” is an important step in the environmental analysis. Some examples of the types of impacts considered to be significant for a water system are if a project would:

- Substantially increase consumption of limited potable water supplies;
- Result in a water demand that exceeds the capacity of a water supply, or would require substantial expansion of water supply treatment or distribution facilities;
- Require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant adverse effect;
- Have insufficient water supplies available to serve the project from existing entitlements and resources, necessitating new or expanded entitlements.

These questions are assessed under CEQA in two ways. First, the direct effects of a project by itself are discussed. Then the impacts of the project must be considered, along with other related future projects, in a cumulative sense.

Of the many different projects that have had EIRs prepared in recent years within the City service area, the general conclusion is commonly as follows: the project in and of itself does not constitute a significant impact on the water system. This conclusion is appropriate because water demand associated with any single project usually represents no more than a one percent increase of the system total. Looking at a project this way, in

comparison with the total demand from all other users, gives the impression that any one project alone could be accommodated without seriously impacting other users.

When addressing cumulative effects, however, the treatment given to a project's impact on water supply system varies from one report to another. Most EIRs describe the City's drought problem, acknowledge that demand exceeds the system yield in a drought, and summarize planning studies underway to overcome the situation. Some go on to look at a project's water demand in light of the City's future demand projections and dismiss the impact as insignificant; others describe the project as contributing to increased cumulative demand for water in a system that does not have adequate supplies in time of drought. The admission that a project may contribute to a significant and unavoidable impact on the water system, however, is often followed with the qualification that the basic supply problem is not the project proponent's responsibility to solve; rather, the City is the proper entity that bears the responsibility for developing additional water resources for planned growth.

No matter what the perspective, looking at the direct or the cumulative impacts, CEQA as a planning tool is oriented more toward finding a way to mitigate and accommodate an individual project instead of addressing the broader question of whether the water system is sufficient to allow new development. This could explain why, as mentioned earlier, most EIRs failed to do an adequate job of assessing water supply availability after the passage of SB 901.

City of Santa Cruz General Plan

One of the land use goals in the City's General Plan is called "concurrency". This term refers to having adequate infrastructure in place, or made available, to support current and projected population growth. The goal reads:

"Plan community facilities and services to serve the projected population, allowing development only when adequate facilities and services are provided and are available to serve it."

This language implies a certain order, that adequate facilities and services must precede growth. The question of whether adequate water facilities are provided now is debatable. One could certainly argue that adequate facilities are not available to serve more development under this policy, given the identified need for major capital improvements described in the Integrated Water Plan. The General Plan goes on to describe a series of

policies and programs designed to fulfill this goal. One of those is to develop level of service standards for public facilities, including water.

The absence of any meaningful service standard such as that alluded to in the General plan, or referenced in the California Waterworks Standards, based on some measure of water availability or system capacity is part of the reason land use and water supply planning have been difficult to link. CEQA has unsuccessfully attempted to fill this void by examining the impacts of individual projects on a case-by-case basis. Getting at the larger question of how much more water is available for future development, however, is clearly beyond the scope of a typical environmental impact report. The next section of this report examines two different approaches that could be used to identify how much demand the water system can support. Once that level is known, the remaining amount of water available for future development can be determined.

5. OPTIONS FOR DETERMINING WATER SUPPLY AVAILABILITY

Two possible approaches that could be used to estimate the delivery capability of the water system were identified in the process of preparing this report. One approach, like the City's water supply planning process, focuses on the yield of the system in a worst-case drought condition. The other approach focuses on the operational capacity of the water system in a typical year, not just in times of drought. This second option is based on the relationship between total annual demand and annual use of Loch Lomond Reservoir, and provides a sense of how much water can be delivered each year while remaining in compliance with the limit on annual withdrawal from the lake under the City's existing water rights.

Option 1. Maximum Acceptable Level of Shortage

During the integrated water planning process, the Confluence model was used to examine, in theory, how short the water system would be under different hydrologic conditions and levels of water demand. It found that, for a 1976-77 type drought, the City is now 45% short of meeting demand, and that the higher the demand, the greater the potential shortfall in some future drought. When demand reaches 5.1 billion gallons per year, the Confluence model indicates the system would be 50% short in a 1977-type drought. For reasons mentioned earlier, mainly because extreme drought is a statistically rare event and because there is sufficient water in most other years, new customers continue to be added on the system in spite of this potential risk.

One possibility for defining an operational limit to the water system would be to identify the worst shortfall that existing residents and businesses should ever have to endure, beyond which the resulting social and economic impacts would be considered intolerable for the community to bear. Just as was done in developing the IWP to select a desired future level of reliability, the City Council could also make a choice about a maximum acceptable level of drought shortfall. The demand corresponding with that level of shortfall would then be determined; this would be established as an interim limit for the system until a new source of supply comes on line.

This approach would focus mainly on the magnitude of the worst-case drought, because it is the degree of shortfall that determines what actions the community would have to take and the resulting hardships the public would face.

It should also take into account, though, the chance of that event occurring before a solution is achieved. The amount of time that elapses before new supply can be

developed is an important consideration because it also has a bearing on the degree of risk faced by city water customers. The longer the delay, the greater the risk. As with the threat of other natural hazards like a flood or an earthquake, the probability of a severe drought in any one year may be comfortably low. For instance, the drought on record of 1977 has a recurrence interval of 1 in 59 years. This means the probability of such an event is 1/59 or 0.017, which is the same thing as saying there is a 1.7% chance of occurrence in any one year. But the percent probability of occurrence, or chance, of a shortage occurring over a longer time frame is considerably higher, which changes the perception of the significance of risk. The following table presents the chance of various shortfalls occurring on the existing City water system over a specified period of time:

Table 3. Relationship of Water Shortages with Various Recurrence Intervals to the Probability of Occurrence over Time

Shortage Magnitude	Recurrence Interval	Percent Probability of Occurrence over:			
		5 years	10 years	20 years	30 years
10% or more	7 in 59	47	72	92	98
20% or more	4 in 59	30	51	76	88
30% or more	1 in 59	8	16	29	40

This means if the recommended desalination plant could be built in the next five years, the odds are about even of experiencing a moderate water shortage over this time, and there is only an 8 percent chance of experiencing a critical drought like the 1977 event between now and then. On the other hand, if the project were delayed or rejected, and the earliest another project realistically could be commissioned was twenty years out, the chance of experiencing a moderate shortage over this time rises to over 90 percent and nearly 30 percent for a critical drought, which exposes the community to a much greater risk.

In considering what might be a maximum acceptable level of demand or drought shortfall, it might be all right to accept a higher level of risk if the desalination project remains pretty much on schedule and if the outlook for success remains optimistic. If, on the other hand, the project is so controversial that it becomes necessary to restart another process of supply planning involving several more years of studies, consultants, and reviews, which presents greater risk, it would be prudent to accept a lower limit as a way to manage that risk.

Once that limit was debated and established, it would enable an estimate to be made of the number of additional housing units and commercial uses that could be supported on the water system. It would also help to define for the other two land use agencies how much longer into the future they could continue to approve permits for homes and businesses.

With this approach, the question of whether the City’s water supply is sufficient to support more development essentially becomes one of a policy matter of how much risk the City is willing to accept. Through the water planning process, the City has identified where it would like to be in the future in terms of system reliability. What has not been decided up to this time, though, is what level of reliability represents too great a risk, or how much curtailment would be intolerable, to warrant continued expansion of the system.

Option 2. Annual Use of Loch Lomond

As mentioned earlier, there is a significant portion of every year in which three of the four major sources, including the North Coast, San Lorenzo River, and the Live Oak wells are operating at their full capacity. During this period, there is a correlation between system demand and lake production. The higher the demand, the more water must be withdrawn from Loch Lomond reservoir. This second approach to defining the delivery capability of the system is based on this relationship: as demand rises over time there will be a point when lake production reaches the legal limit under current water rights of 1.04 billion gallons per year. At this point, all four sources will be operated at their full capacity. Unless there are changes made that improve infrastructure constraints or relieve institutional limits, this point will effectively represent the time at which the system is fully committed.

It should be noted that the City is in the process of addressing a series of water rights issues involving both Newell Creek and Felton Diversion through the filing of a petition or a new water right with the State Water Resources Control Board. This complex project has been in progress for years and may take many more to complete. The outcome is uncertain; it could result in the City being able to legally withdraw more water or less water from the lake in future years.

To explore this relationship between demand and lake production, we examined water production data over the last five years. This is a period of relative stability in both demand and in water conditions. Table 4 below shows annual production figures for each major source over this five-year period. Total system demand during this period varied

from 4.05 billion gallons in 1999 to 3.87 billion gallons in 2003. The reduction in demand over time reflects the effect of the closure of the Texas Instrument plant beginning in mid 2001. The coast and wells exhibit some variability in annual production, but the river is essentially constant over this period. On average, the coast supplies 1.08 billion gallons, the river contributes 2.01 billion and the Live Oak wells add 0.15 billion gallons for a combined total of 3.24 billion gallons per year.

To the extent that annual production from these three sources varies, or demand changes from year to year, the difference must be made up by withdrawals from Loch Lomond Reservoir. In 1999, the amount of water needed from Loch Lomond was less than normal due to high production from the coast sources. When coast production declined in 2000 and 2001, greater amounts of water were required from Loch Lomond to meet essentially the same demand.

Table 4. Water Production Data, 1999-2003
(million gallons)

<i>Year</i>	1999	2000	2001	2002	2003	Average
<i>Year Classification</i>	Normal	Normal	Dry	Normal	Normal	
<i>Source:</i>						
North Coast	1,306	899	901	1,204	1,076	1,077
San Lorenzo River	2,072	2,073	2,003	1,976	1,918	2,008
Live Oak Wells	92	187	171	178	130	152
Subtotal	3,470	3,159	3,075	3,358	3,123	3,237
Loch Lomond	584	797	842	538	748	702
Total System Demand	4,054	3,956	3,918	3,896	3,872	3,939

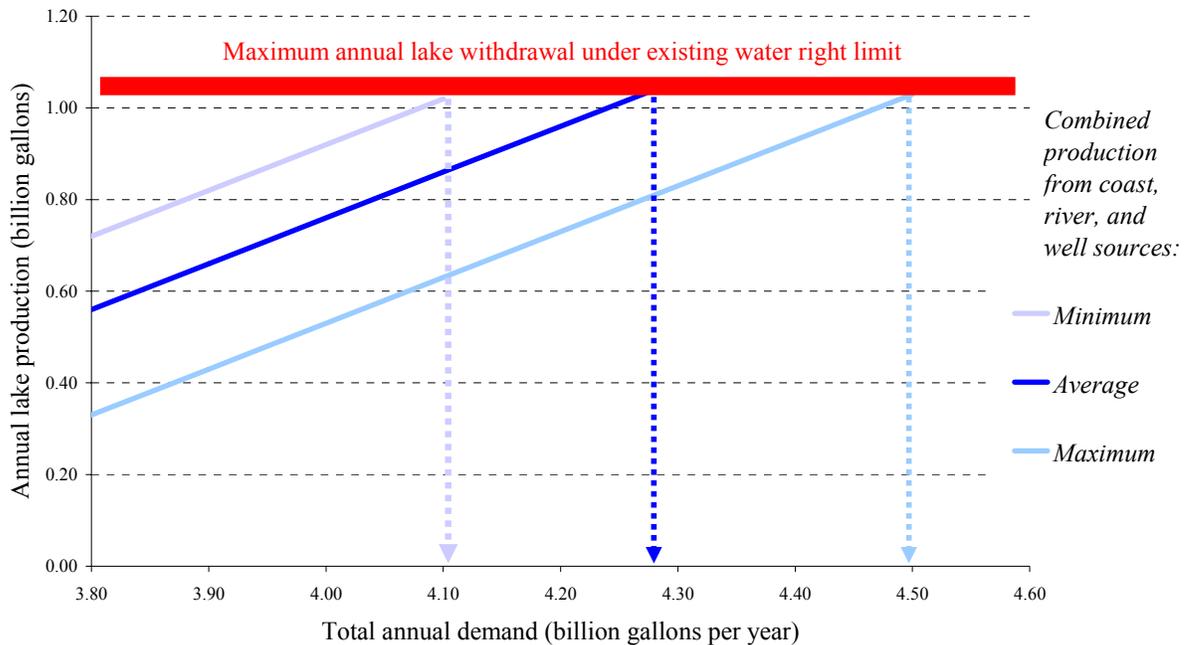
With the coast/river/well sources operating at capacity for much of the year, it is believed that the figure of 3.24 billion gallons represents a good estimate for the upper limit of production for these three sources under average conditions. During this period, about 700 million gallons per year has been needed from Loch Lomond reservoir to meet total system demand of almost 4.0 billion gallons. This relationship means the system can accommodate a total system demand of about 4.28 billion gallons while staying within the 1.04 billion gallon water right limit on withdrawal from the lake¹.

¹ Approximately 100 million gallons of this water right technically belongs to the San Lorenzo Valley Water District, which is not currently exercising its portion.

Because production does vary somewhat from year to year, it is more appropriate to express capacity as a range, instead of a single figure. Figure 5 below illustrates how much water is needed from Loch Lomond as a function of total system demand under three scenarios. One scenario represents the situation like the 1999 year during which production from the coast, river, and wells was at a recent maximum. Another scenario represents the situation when production from the coast, river and wells was at a recent minimum, corresponding with the year 2001. The third scenario is the average production over all five years. The chart shows, under average conditions, when demand reaches about 4.3 billion gallons, system capacity is reached.

To the extent production from the coast, river, and wells is increased, the capacity of the system rises to 4.5 billion gallons. Conversely, if combined production from the coast, river, and wells declines, as it did in 2001, the system capacity is decreased to only about 4.1 billion gallons. The estimated capacity of the water system based on this approach therefore is approximately 4.3 billion gallons per years, plus or minus 200 million gallons.

Figure 5. Relationship Between System Demand and Lake Production



This means that compared to the average level of demand over the last five years, the system can accommodate a net increase of another 340 million gallons per year, on average, before reaching maximum capacity.

The chart above underscores the importance of maintaining existing sources in service, particularly the coast sources. Any events or actions that reduce north coast production, from losses due to leakage or further pipeline deterioration, to possible regulatory actions, or even increased agricultural water consumption, has a corresponding effect on reducing overall system capacity. On the other hand, water conservation efforts once thought to be beneficial mainly in water short years now appear to have much greater value in terms of stretching available resources to minimize lake production and enhance system capacity.

There is one other factor that should be mentioned involving the water right at Felton Diversion. Water that is pumped up from the San Lorenzo River at the Felton Diversion facility to Loch Lomond is accounted for separately than the water captured in the reservoir from runoff in Newell Creek. The current understanding is that the limit on annual withdrawal from the lake does not apply to water that is pumped up from Felton Diversion. The total amount of water that can be withdrawn from the lake therefore is higher in those years that Felton diversion is operated; i.e., when weather conditions are dry and runoff is low. This is fortuitous because under those conditions, the coast and river sources tend to drop off sooner than usual and proportionally more lake water is needed in drier years to meet summertime demands. In normal and wet years when the lake spills, though, there is no benefit to be gained by pumping Felton Diversion in terms of increasing the annual limit on withdrawal since that water can't be stored for later use.

Comparison of Two Approaches

The options described above are two very different approaches to estimating the delivery capability of the water system. The first approach tries to strike a balance between protecting the needs of existing customers and accommodating future development, based on the risk of water shortage and severity of customer impact. The other approach acknowledges the fact that three of the City's four major sources are already fully utilized most of the time, and projects when the last source would become fully committed.

For integrating water supply and land use decisions, it makes better sense to use the latter approach, for the following reasons:

1. The maximum amount of water that can be withdrawn from Loch Lomond annually is a valid legal constraint that the city cannot choose to ignore.
2. With the first approach, there is always the possibility of underestimating the future risk of water shortage, thus exposing the existing community to more hardship than

anticipated. Also, it's not readily apparent how one could discriminate between a given level of shortfall deemed to be acceptable and another that is not.

3. The second approach can be evaluated periodically and adapted to reflect ongoing changes in operations. For example, if renovation of the North Coast pipeline system increases the yield of flowing sources and decreases the need to withdraw water from the lake, the capacity can be easily updated to reflect this change. Alternatively, if there is a reduction in the amount or timing of water that can be diverted from the North Coast system in the future due to regulatory action or lack of maintenance, the effect on system capacity can be quantified.
4. There is a more rational relationship between land use and water use with the second approach. As the City, County, and Capitola continue to develop and new accounts are added each year, and as the character of existing accounts changes with time, the net increase or decrease in total water use will be reflected in production trends and can be accounted for, analyzed, and updated over time.

Concluding Observations

This report answers at least the initial question posed in the report, namely: *Is there enough water available to support more development in Santa Cruz?* The answer is yes, if we accept that a modest amount of additional growth will not substantially worsen the hardship in some future drought for those already here. The City's primary problem of insufficient supply in times of drought remains and must be addressed. In average conditions, though, there appears to be on the order of about 300 million gallons of capacity remaining to support future development.

This conclusion, however, simply leads to other questions:

- How many housing units will it support?
- How long will it last?
- How will this water be allocated?
- What happens when we reach that point?
- How should the allotment reserved for the San Lorenzo Valley Water District be treated?
- Can the water right limitation at Loch Lomond be modified to allow more withdrawal?
- What implications does this finding have on the water supply planning process?

This report leaves to other forums these questions and the issue of how any remaining water would be used.

The next steps would be for staff, the Water Commission, the City Planning Commission, and City Council to discuss the different approaches to defining the capacity for the system to serve future growth, and then to decide which option makes the most sense for the City system. Depending on which approach is chosen, an estimate could then be made of the amount of water remaining on the existing system to support more development, considering those projects already permitted, but not yet constructed. This would give some signal to decision makers and other land use agencies about the timeline remaining in which development could be approved compared to the time required to augment water supply, and the means to address the following topics:

- It would provide a basis for evaluating whether the water system is indeed capable of supporting the type and intensity of development that is envisioned in the forthcoming City and County General Plans and in the new UCSC long range development plans. It would also allow an analysis to be made of the extent to which growth being planned at the University would potentially compete with other planned uses in the City and County for water service.
- It would make information in EIRs for new development more meaningful, in terms of deciding how much of the City's remaining available water supply would be committed for each individual project.
- It would help in evaluating the impact of any operational changes that might arise from the Section 10 Habitat Conservation Plan now under preparation on the City's ability to serve future development.

APPENDICES

1. Senate Bill 610
2. Senate Bill 221

BILL NUMBER: SB 610 CHAPTERED
BILL TEXT

CHAPTER 643
FILED WITH SECRETARY OF STATE OCTOBER 9, 2001
APPROVED BY GOVERNOR OCTOBER 9, 2001
PASSED THE SENATE SEPTEMBER 13, 2001
PASSED THE ASSEMBLY SEPTEMBER 10, 2001
AMENDED IN ASSEMBLY SEPTEMBER 6, 2001
AMENDED IN ASSEMBLY AUGUST 27, 2001
AMENDED IN SENATE MAY 23, 2001

INTRODUCED BY Senator Costa
(Coauthor: Assembly Member Dickerson)

FEBRUARY 22, 2001

An act to amend Section 21151.9 of the Public Resources Code, and to amend Sections 10631, 10656, 10910, 10911, 10912, and 10915 of, to repeal Section 10913 of, and to add and repeal Section 10657 of, the Water Code, relating to water.

LEGISLATIVE COUNSEL'S DIGEST

SB 610, Costa. Water supply planning.

(1) Existing law requires every urban water supplier to identify, as part of its urban water management plan, the existing and planned sources of water available to the supplier over a prescribed 5-year period. Existing law prohibits an urban water supplier that fails to prepare or submit its urban water management plan to the Department of Water Resources from receiving drought assistance from the state until the plan is submitted.

This bill would require additional information to be included as part of an urban water management plan if groundwater is identified as a source of water available to the supplier. The bill would require an urban water supplier to include in the plan a description of all water supply projects and programs that may be undertaken to meet total projected water use. The bill would prohibit an urban water supplier that fails to prepare or submit the plan to the department from receiving funding made available from specified bond acts until the plan is submitted. The bill, until January 1, 2006, would require the department to take into consideration whether the urban water supplier has submitted an updated plan, as specified, in determining eligibility for funds made available pursuant to any program administered by the department.

(2) Existing law, under certain circumstances, requires a city or county that determines an environmental impact report is required in connection with a project, as defined, to request each public water system that may supply water for the project to assess, among other things, whether its total projected water supplies will meet the projected water demand associated with the proposed project. Existing law requires the public water system to submit the assessment to the city or county not later than 30 days from the date on which the request was received and, in the absence of the submittal of an assessment, provides that it shall be assumed that the public water system has no information to submit. Existing law makes legislative findings and declarations concerning "Proposition C," a measure approved by the voters of San Diego County relating to

regional growth management, and provides that the procedures established by a specified review board established in connection with that measure are deemed to comply with the requirements described above relating to water supply planning by a city or county.

This bill would revise those provisions. The bill, instead, would require a city or county that determines a project is subject to the California Environmental Quality Act to identify any public water system that may supply water for the project and to request those public water systems to prepare a specified water supply assessment, except as otherwise specified. The bill would require the assessment to include, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project and water received in prior years pursuant to those entitlements, rights, and contracts. The bill would require the city or county, if it is not able to identify any public water system that may supply water for the project, to prepare the water supply assessment after a prescribed consultation. The bill would revise the definition of "project," for the purposes of these provisions, and make related changes.

The bill would prescribe a timeframe within which a public water system is required to submit the assessment to the city or county and would authorize the city or county to seek a writ of mandamus to compel the public water system to comply with requirements relating to the submission of the assessment.

The bill would require the public water system, or the city or county, as applicable, if that entity concludes that water supplies are, or will be, insufficient, to submit the plans for acquiring additional water supplies.

The bill would require the city or county to include the water supply assessment and certain other information in any environmental document prepared for the project pursuant to the act. By establishing duties for counties and cities, the bill would impose a state-mandated local program.

The bill would provide that the County of San Diego is deemed to comply with these water supply planning requirements if the Office of Planning and Research determines that certain requirements have been met in connection with the implementation of "Proposition C."

(3) The bill would incorporate additional changes in Section 10631 of the Water Code proposed by AB 901, to be operative only if this bill and AB 901 are enacted and become effective on or before January 1, 2002, each bill amends Section 10631 of the Water Code, and this bill is enacted last.

(4) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. (a) The Legislature finds and declares all of the following:

(1) The length and severity of droughts in California cannot be predicted with any accuracy.

(2) There are various factors that affect the ability to ensure

that adequate water supplies are available to meet all of California's water demands, now and in the future.

(3) Because of these factors, it is not possible to guarantee a permanent water supply for all water users in California in the amounts requested.

(4) Therefore, it is critical that California's water agencies carefully assess the reliability of their water supply and delivery systems.

(5) Furthermore, California's overall water delivery system has become less reliable over the last 20 years because demand for water has continued to grow while new supplies have not been developed in amounts sufficient to meet the increased demand.

(6) There are a variety of measures for developing new water supplies including water reclamation, water conservation, conjunctive use, water transfers, seawater desalination, and surface water and groundwater storage.

(7) With increasing frequency, California's water agencies are required to impose water rationing on their residential and business customers during this state's frequent and severe periods of drought.

(8) The identification and development of water supplies needed during multiple-year droughts is vital to California's business climate, as well as to the health of the agricultural industry, environment, rural communities, and residents who continue to face the possibility of severe water cutbacks during water shortage periods.

(9) A recent study indicates that the water supply and land use planning linkage, established by Part 2.10 (commencing with Section 10910) of Division 6 of the Water Code, has not been implemented in a manner that ensures the appropriate level of communication between water agencies and planning agencies, and this act is intended to remedy that deficiency in communication.

(b) It is the intent of the Legislature to strengthen the process pursuant to which local agencies determine the adequacy of existing and planned future water supplies to meet existing and planned future demands on those water supplies.

SEC. 2. Section 21151.9 of the Public Resources Code is amended to read:

21151.9. Whenever a city or county determines that a project, as defined in Section 10912 of the Water Code, is subject to this division, it shall comply with Part 2.10 (commencing with Section 10910) of Division 6 of the Water Code.

SEC. 3. Section 10631 of the Water Code is amended to read:

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments as described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75

(commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree.

For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the amount and location of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the location, amount, and sufficiency of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

- (1) An average water year.
- (2) A single dry water year.
- (3) Multiple dry water years.

For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:

- (A) Single-family residential.
- (B) Multifamily.
- (C) Commercial.
- (D) Industrial.
- (E) Institutional and governmental.
- (F) Landscape.
- (G) Sales to other agencies.

(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(2) The water use projections shall be in the same five-year increments as described in subdivision (a).

(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

- (1) A description of each water demand management measure that is

currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

- (A) Water survey programs for single-family residential and multifamily residential customers.
 - (B) Residential plumbing retrofit.
 - (C) System water audits, leak detection, and repair.
 - (D) Metering with commodity rates for all new connections and retrofit of existing connections.
 - (E) Large landscape conservation programs and incentives.
 - (F) High-efficiency washing machine rebate programs.
 - (G) Public information programs.
 - (H) School education programs.
 - (I) Conservation programs for commercial, industrial, and institutional accounts.
 - (J) Wholesale agency programs.
 - (K) Conservation pricing.
 - (L) Water conservation coordinator.
 - (M) Water waste prohibition.
 - (N) Residential ultra-low-flush toilet replacement programs.
- (2) A schedule of implementation for all water demand management measures proposed or described in the plan.
- (3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.
- (4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of such savings on the supplier's ability to further reduce demand.
- (g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:
- (1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.
 - (2) Include a cost-benefit analysis, identifying total benefits and total costs.
 - (3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.
 - (4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.
- (h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single dry, and multiple dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline

for each project or program.

(i) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).

SEC. 3.5. Section 10631 of the Water Code is amended to read:

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments as described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree.

For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

(1) An average water year.

(2) A single dry water year.

(3) Multiple dry water years.

For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or

climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:

- (A) Single-family residential.
- (B) Multifamily.
- (C) Commercial.
- (D) Industrial.
- (E) Institutional and governmental.
- (F) Landscape.
- (G) Sales to other agencies.

(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(2) The water use projections shall be in the same five-year increments as described in subdivision (a).

(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

(A) Water survey programs for single-family residential and multifamily residential customers.

(B) Residential plumbing retrofit.

(C) System water audits, leak detection, and repair.

(D) Metering with commodity rates for all new connections and retrofit of existing connections.

(E) Large landscape conservation programs and incentives.

(F) High-efficiency washing machine rebate programs.

(G) Public information programs.

(H) School education programs.

(I) Conservation programs for commercial, industrial, and institutional accounts.

(J) Wholesale agency programs.

(K) Conservation pricing.

(L) Water conservation coordinator.

(M) Water waste prohibition.

(N) Residential ultra-low-flush toilet replacement programs.

(2) A schedule of implementation for all water demand management measures proposed or described in the plan.

(3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.

(4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.

(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This

evaluation shall do all of the following:

(1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.

(2) Include a cost-benefit analysis, identifying total benefits and total costs.

(3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.

(4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.

(h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single dry, and multiple dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

(i) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).

SEC. 4. Section 10656 of the Water Code is amended to read:

10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26 (commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

SEC. 4.3. Section 10657 is added to the Water Code, to read:

10657. (a) The department shall take into consideration whether the urban water supplier has submitted an updated urban water management plan that is consistent with Section 10631, as amended by the act that adds this section, in determining whether the urban water supplier is eligible for funds made available pursuant to any program administered by the department.

(b) This section shall remain in effect only until January 1, 2006, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2006, deletes or extends that date.

SEC. 4.5. Section 10910 of the Water Code is amended to read:

10910. (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

(b) The city or county, at the time that it determines whether an

environmental impact report, a negative declaration, or a mitigated negative declaration is required for any project subject to the California Environmental Quality Act pursuant to Section 21080.1 of the Public Resources Code, shall identify any water system that is, or may become as a result of supplying water to the project identified pursuant to this subdivision, a public water system, as defined in Section 10912, that may supply water for the project. If the city or county is not able to identify any public water system that may supply water for the project, the city or county shall prepare the water assessment required by this part after consulting with any entity serving domestic water supplies whose service area includes the project site, the local agency formation commission, and any public water system adjacent to the project site.

(c) (1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).

(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).

(3) If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.

(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

(d) (1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts.

(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:

(A) Written contracts or other proof of entitlement to an identified water supply.

(B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.

(C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.

(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contractholders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments.

(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment:

(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.

(2) A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(5) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to

meet the projected water demand associated with the proposed project.

A water supply assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

(g) (1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.

(2) Prior to the expiration of the 90-day period, if the public water system intends to request an extension of time to prepare and adopt the assessment, the public water system shall meet with the city or county to request an extension of time, which shall not exceed 30 days, to prepare and adopt the assessment.

(3) If the public water system fails to request an extension of time, or fails to submit the assessment notwithstanding the extension of time granted pursuant to paragraph (2), the city or county may seek a writ of mandamus to compel the governing body of the public water system to comply with the requirements of this part relating to the submission of the water supply assessment.

(h) Notwithstanding any other provision of this part, if a project has been the subject of a water supply assessment that complies with the requirements of this part, no additional water supply assessment shall be required for subsequent projects that were part of a larger project for which a water supply assessment was completed and that has complied with the requirements of this part and for which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has concluded that its water supplies are sufficient to meet the projected water demand associated with the proposed project, in addition to the existing and planned future uses, including, but not limited to, agricultural and industrial uses, unless one or more of the following changes occurs:

(1) Changes in the project that result in a substantial increase in water demand for the project.

(2) Changes in the circumstances or conditions substantially affecting the ability of the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), to provide a sufficient supply of water for the project.

(3) Significant new information becomes available which was not known and could not have been known at the time when the assessment was prepared.

SEC. 5. Section 10911 of the Water Code is amended to read:

10911. (a) If, as a result of its assessment, the public water system concludes that its water supplies are, or will be, insufficient, the public water system shall provide to the city or county its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. If the city or county, if either is required to comply with this part pursuant to subdivision (b), concludes as a result of its assessment, that water supplies are, or will be, insufficient, the city or county shall include in its water supply assessment its plans for acquiring additional water supplies, setting

forth the measures that are being undertaken to acquire and develop those water supplies. Those plans may include, but are not limited to, information concerning all of the following:

(1) The estimated total costs, and the proposed method of financing the costs, associated with acquiring the additional water supplies.

(2) All federal, state, and local permits, approvals, or entitlements that are anticipated to be required in order to acquire and develop the additional water supplies.

(3) Based on the considerations set forth in paragraphs (1) and (2), the estimated timeframes within which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), expects to be able to acquire additional water supplies.

(b) The city or county shall include the water supply assessment provided pursuant to Section 10910, and any information provided pursuant to subdivision (a), in any environmental document prepared for the project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

(c) The city or county may include in any environmental document an evaluation of any information included in that environmental document provided pursuant to subdivision (b). The city or county shall determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses. If the city or county determines that water supplies will not be sufficient, the city or county shall include that determination in its findings for the project.

SEC. 6. Section 10912 of the Water Code is amended to read:

10912. For the purposes of this part, the following terms have the following meanings:

(a) "Project" means any of the following:

(1) A proposed residential development of more than 500 dwelling units.

(2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

(3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

(4) A proposed hotel or motel, or both, having more than 500 rooms.

(5) 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.

(6) A mixed-use project that includes one or more of the projects specified in this subdivision.

(7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

(b) If a public water system has fewer than 5,000 service connections, then "project" means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.

(c) "Public water system" means a system for the provision of piped water to the public for human consumption that has 3000 or more service connections. A public water system includes all of the following:

(1) Any collection, treatment, storage, and distribution facility under control of the operator of the system which is used primarily in connection with the system.

(2) Any collection or pretreatment storage facility not under the control of the operator that is used primarily in connection with the system.

(3) Any person who treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.

SEC. 7. Section 10913 of the Water Code is repealed.

SEC. 8. Section 10915 of the Water Code is amended to read:

10915. The County of San Diego is deemed to comply with this part if the Office of Planning and Research determines that all of the following conditions have been met:

(a) Proposition C, as approved by the voters of the County of San Diego in November 1988, requires the development of a regional growth management plan and directs the establishment of a regional planning and growth management review board.

(b) The County of San Diego and the cities in the county, by agreement, designate the San Diego Association of Governments as that review board.

(c) A regional growth management strategy that provides for a comprehensive regional strategy and a coordinated economic development and growth management program has been developed pursuant to Proposition C.

(d) The regional growth management strategy includes a water element to coordinate planning for water that is consistent with the requirements of this part.

(e) The San Diego County Water Authority, by agreement with the San Diego Association of Governments in its capacity as the review board, uses the association's most recent regional growth forecasts for planning purposes and to implement the water element of the strategy.

(f) The procedures established by the review board for the development and approval of the regional growth management strategy, including the water element and any certification process established to ensure that a project is consistent with that element, comply with the requirements of this part.

(g) The environmental documents for a project located in the County of San Diego include information that accomplishes the same purposes as a water supply assessment that is prepared pursuant to Section 10910.

SEC. 9. Section 3.5 of this bill incorporates amendments to Section 10631 of the Water Code proposed by both this bill and AB 901. It shall only become operative if (1) both bills are enacted and become effective on or before January 1, 2002, (2) each bill amends Section 10631 of the Water Code, and (3) this bill is enacted after AB 901, in which case Section 3 of this bill shall not become operative.

SEC. 10. No reimbursement is required by this act pursuant to Section 6 of Article XIIIIB of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.

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BILL TEXT

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INTRODUCED BY Senator Kuehl
 (Coauthors: Senators Machado and Perata)
 (Coauthors: Assembly Members Chan, Goldberg, Pavley,
Strom-Martin, and Thomson)

FEBRUARY 14, 2001

An act to amend Section 11010 of the Business and Professions Code, and to amend Section 65867.5 of, and to add Sections 66455.3 and 66473.7 to, the Government Code, relating to land use.

LEGISLATIVE COUNSEL'S DIGEST

SB 221, Kuehl. Land use: water supplies.

(1) Under the Subdivision Map Act, a legislative body of a city or county is required to deny approval of a tentative map, or a parcel map for which a tentative map is not required, if it makes any of a number of specified findings. Under the Planning and Zoning Law, a city, county, or city and county may not approve a development agreement unless the legislative body finds that the agreement is consistent with the general plan and any applicable specific plan.

This bill would prohibit approval of a tentative map, or a parcel map for which a tentative map was not required, or a development agreement for a subdivision of property of more than 500 dwelling units, except as specified, including the design of the subdivision or the type of improvement, unless the legislative body of a city or county or the designated advisory agency provides written verification from the applicable public water system that a sufficient water supply is available or, in addition, a specified finding is made by the local agency that sufficient water supplies are, or will be, available prior to completion of the project.

By increasing the duties of local legislative bodies and local planning agencies and commissions, the bill would impose a state-mandated local program.

(2) Existing law requires any person who intends to offer subdivided lands within California for sale or lease to file with the Department of Real Estate an application for a public report consisting of a notice of intention and a completed questionnaire that includes, among other things, a true statement of the provisions, if any, that have been made for public utilities in the

proposed subdivision, including water, electricity, gas, telephone, and sewerage facilities.

This bill would provide that for proposed subdivisions subject to specified requirements of the Subdivision Map Act, the true statement of the provisions that have been made for water is satisfied by submitting a copy of the written verification of the availability of a sufficient water supply, obtained pursuant to specified requirements as described in (1) above.

(3) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Section 11010 of the Business and Professions Code is amended to read:

11010. (a) Except as otherwise provided pursuant to subdivision (c) or elsewhere in this chapter, any person who intends to offer subdivided lands within this state for sale or lease shall file with the Department of Real Estate an application for a public report consisting of a notice of intention and a completed questionnaire on a form prepared by the department.

(b) The notice of intention shall contain the following information about the subdivided lands and the proposed offering:

- (1) The name and address of the owner.
- (2) The name and address of the subdivider.
- (3) The legal description and area of lands.
- (4) A true statement of the condition of the title to the land, particularly including all encumbrances thereon.
- (5) A true statement of the terms and conditions on which it is intended to dispose of the land, together with copies of any contracts intended to be used.
- (6) A true statement of the provisions, if any, that have been made for public utilities in the proposed subdivision, including water, electricity, gas, telephone, and sewerage facilities. For subdivided lands that were subject to the imposition of a condition pursuant to subdivision (b) of Section 66473.7 of the Government Code, the true statement of the provisions made for water shall be satisfied by submitting a copy of the written verification of the available water supply obtained pursuant to Section 66473.7 of the Government Code.
- (7) A true statement of the use or uses for which the proposed subdivision will be offered.
- (8) A true statement of the provisions, if any, limiting the use or occupancy of the parcels in the subdivision.
- (9) A true statement of the amount of indebtedness that is a lien upon the subdivision or any part thereof, and that was incurred to pay for the construction of any onsite or offsite improvement, or any community or recreational facility.
- (10) A true statement or reasonable estimate, if applicable, of the amount of any indebtedness which has been or is proposed to be incurred by an existing or proposed special district, entity, taxing area, assessment district, or community facilities district within the boundaries of which, the subdivision, or any part thereof, is located, and that is to pay for the construction or installation of

any improvement or to furnish community or recreational facilities to that subdivision, and which amounts are to be obtained by ad valorem tax or assessment, or by a special assessment or tax upon the subdivision, or any part thereof.

(11) (A) As to each school district serving the subdivision, a statement from the appropriate district that indicates the location of each high school, junior high school, and elementary school serving the subdivision, or documentation that a statement to that effect has been requested from the appropriate school district.

(B) In the event that, as of the date the notice of intention and application for issuance of a public report are otherwise deemed to be qualitatively and substantially complete pursuant to Section 11010.2, the statement described in subparagraph (A) has not been provided by any school district serving the subdivision, the person who filed the notice of intention and application for issuance of a public report immediately shall provide the department with the name, address, and telephone number of that district.

(12) The location of all existing airports, and of all proposed airports shown on the general plan of any city or county, located within two statute miles of the subdivision.

(13) A true statement, if applicable, referencing any soils or geologic report or soils and geologic reports that have been prepared specifically for the subdivision.

(14) A true statement of whether or not fill is used, or is proposed to be used in the subdivision and a statement giving the name and the location of the public agency where information concerning soil conditions in the subdivision is available.

(15) Any other information that the owner, his or her agent, or the subdivider may desire to present.

(c) The commissioner may, by regulation, or on the basis of the particular circumstances of a proposed offering, waive the requirement of the submission of a completed questionnaire if the commissioner determines that prospective purchasers or lessees of the subdivision interests to be offered will be adequately protected through the issuance of a public report based solely upon information contained in the notice of intention.

SEC. 2. Section 65867.5 of the Government Code is amended to read:

65867.5. (a) A development agreement is a legislative act that shall be approved by ordinance and is subject to referendum.

(b) A development agreement shall not be approved unless the legislative body finds that the provisions of the agreement are consistent with the general plan and any applicable specific plan.

(c) A development agreement that includes a subdivision, as defined in Section 66473.7, shall not be approved unless the agreement provides that any tentative map prepared for the subdivision will comply with the provisions of Section 66473.7.

SEC. 3. Section 66455.3 is added to the Government Code, to read:

66455.3. Not later than five days after a city or county has determined that a tentative map application for a proposed subdivision, as defined in Section 66473.7, is complete pursuant to Section 65943, the local agency shall send a copy of the application to any water supplier that is, or may become, a public water system, as defined in Section 10912 of the Water Code, that may supply water for the subdivision.

SEC. 4. Section 66473.7 is added to the Government Code, to read:

66473.7. (a) For the purposes of this section, the following definitions apply:

(1) "Subdivision" means a proposed residential development of more than 500 dwelling units, except that for a public water system that has fewer than 5,000 service connections, "subdivision" means any proposed residential development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections.

(2) "Sufficient water supply" means the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses. In determining "sufficient water supply," all of the following factors shall be considered:

(A) The availability of water supplies over a historical record of at least 20 years.

(B) The applicability of an urban water shortage contingency analysis prepared pursuant to Section 10632 of the Water Code that includes actions to be undertaken by the public water system in response to water supply shortages.

(C) The reduction in water supply allocated to a specific water use sector pursuant to a resolution or ordinance adopted, or a contract entered into, by the public water system, as long as that resolution, ordinance, or contract does not conflict with Section 354 of the Water Code.

(D) The amount of water that the water supplier can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state, and local water initiatives such as CALFED and Colorado River tentative agreements, to the extent that these water supplies meet the criteria of subdivision (d).

(3) "Public water system" means the water supplier that is, or may become as a result of servicing the subdivision included in a tentative map pursuant to subdivision (b), a public water system, as defined in Section 10912 of the Water Code, that may supply water for a subdivision.

(b) (1) The legislative body of a city or county or the advisory agency, to the extent that it is authorized by local ordinance to approve, conditionally approve, or disapprove the tentative map, shall include as a condition in any tentative map that includes a subdivision a requirement that a sufficient water supply shall be available. Proof of the availability of a sufficient water supply shall be requested by the subdivision applicant or local agency, at the discretion of the local agency, and shall be based on written verification from the applicable public water system within 90 days of a request.

(2) If the public water system fails to deliver the written verification as required by this section, the local agency or any other interested party may seek a writ of mandamus to compel the public water system to comply.

(3) If the written verification provided by the applicable public water system indicates that the public water system is unable to provide a sufficient water supply that will meet the projected demand associated with the proposed subdivision, then the local agency may make a finding, after consideration of the written verification by the applicable public water system, that additional water supplies not accounted for by the public water system are, or will be, available prior to completion of the subdivision that will satisfy the requirements of this section. This finding shall be made on the record and supported by substantial evidence.

(4) If the written verification is not provided by the public water system, notwithstanding the local agency or other interested party securing a writ of mandamus to compel compliance with this section, then the local agency may make a finding that sufficient water supplies are, or will be, available prior to completion of the subdivision that will satisfy the requirements of this section. This finding shall be made on the record and supported by substantial evidence.

(c) The applicable public water system's written verification of its ability or inability to provide a sufficient water supply that will meet the projected demand associated with the proposed subdivision as required by subdivision (b) shall be supported by substantial evidence. The substantial evidence may include, but is not limited to, any of the following:

(1) The public water system's most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610) of Division 6 of the Water Code.

(2) A water supply assessment that was completed pursuant to Part 2.10 (commencing with Section 10910) of Division 6 of the Water Code.

(3) Other information relating to the sufficiency of the water supply that contains analytical information that is substantially similar to the assessment required by Section 10635 of the Water Code.

(d) When the written verification pursuant to subdivision (b) relies on projected water supplies that are not currently available to the public water system, to provide a sufficient water supply to the subdivision, the written verification as to those projected water supplies shall be based on all of the following elements, to the extent each is applicable:

(1) Written contracts or other proof of valid rights to the identified water supply that identify the terms and conditions under which the water will be available to serve the proposed subdivision.

(2) Copies of a capital outlay program for financing the delivery of a sufficient water supply that has been adopted by the applicable governing body.

(3) Securing of applicable federal, state, and local permits for construction of necessary infrastructure associated with supplying a sufficient water supply.

(4) Any necessary regulatory approvals that are required in order to be able to convey or deliver a sufficient water supply to the subdivision.

(e) If there is no public water system, the local agency shall make a written finding of sufficient water supply based on the evidentiary requirements of subdivisions (c) and (d) and identify the mechanism for providing water to the subdivision.

(f) In making any findings or determinations under this section, a local agency, or designated advisory agency, may work in conjunction with the project applicant and the public water system to secure water supplies sufficient to satisfy the demands of the proposed subdivision. If the local agency secures water supplies pursuant to this subdivision, which supplies are acceptable to and approved by the governing body of the public water system as suitable for delivery to customers, it shall work in conjunction with the public water system to implement a plan to deliver that water supply to satisfy the long-term demands of the proposed subdivision.

(g) The written verification prepared under this section shall also include a description, to the extent that data is reasonably available based on published records maintained by federal and state

agencies, and public records of local agencies, of the reasonably foreseeable impacts of the proposed subdivision on the availability of water resources for agricultural and industrial uses within the public water system's service area that are not currently receiving water from the public water system but are utilizing the same sources of water. To the extent that those reasonably foreseeable impacts have previously been evaluated in a document prepared pursuant to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) or the National Environmental Policy Act (Public Law 91-190) for the proposed subdivision, the public water system may utilize that information in preparing the written verification.

(h) Where a water supply for a proposed subdivision includes groundwater, the public water system serving the proposed subdivision shall evaluate, based on substantial evidence, the extent to which it or the landowner has the right to extract the additional groundwater needed to supply the proposed subdivision. Nothing in this subdivision is intended to modify state law with regard to groundwater rights.

(i) This section shall not apply to any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses, or where the immediate contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses, or housing projects that are exclusively for very low and low-income households.

(j) The determinations made pursuant to this section shall be consistent with the obligation of a public water system to grant a priority for the provision of available and future water resources or services to proposed housing developments that help meet the city's or county's share of the regional housing needs for lower income households, pursuant to Section 65589.7.

(k) The County of San Diego shall be deemed to comply with this section if the Office of Planning and Research determines that all of the following conditions have been met:

(1) A regional growth management strategy that provides for a comprehensive regional strategy and a coordinated economic development and growth management program has been developed pursuant to Proposition C as approved by the voters of the County of San Diego in November 1988, which required the development of a regional growth management plan and directed the establishment of a regional planning and growth management review board.

(2) Each public water system, as defined in Section 10912 of the Water Code, within the County of San Diego has adopted an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) of the Water Code.

(3) The approval or conditional approval of tentative maps for subdivisions, as defined in this section, by the County of San Diego and the cities within the county requires written communications to be made by the public water system to the city or county, in a format and with content that is substantially similar to the requirements contained in this section, with regard to the availability of a sufficient water supply, or the reliance on projected water supplies to provide a sufficient water supply, for a proposed subdivision.

(l) Nothing in this section shall preclude the legislative body of a city or county, or the designated advisory agency, at the request of the applicant, from making the determinations required in this section earlier than required pursuant to subdivision (a).

(m) Nothing in this section shall be construed to create a right or entitlement to water service or any specific level of water

service.

(n) Nothing in this section is intended to change existing law concerning a public water system's obligation to provide water service to its existing customers or to any potential future customers.

(o) Any action challenging the sufficiency of the public water system's written verification of a sufficient water supply shall be governed by Section 66499.37.

SEC. 5. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.