

CHAPTER 5.4

WATER

The groundwater resource in the Nipomo area has been and continues to be a topic of debate and discussion. This section of the Program DEIR intends to compile and summarize the existing and relevant database regarding the groundwater resource. It should also be noted that the groundwater basin is in the process of being adjudicated and that the Courts will ultimately allocate water to the various Nipomo Hydrologic Sub-Area users, including the Nipomo Community Services District. From the studies that have been completed to date, it is obvious that as growth and development continues in the Nipomo area the groundwater resource will become a less viable source of water. It is also just as apparent that the District will not be able to increase (and may be required by the courts to decrease) their extraction of groundwater from the Nipomo Hydrologic Sub-Area.

A. Existing Conditions

A number of studies have been performed regarding the Santa Maria Groundwater Basin and the Nipomo Hydrologic Sub-Area over the last several years. These studies are incorporated herein by reference and include:

- Water Resources of Arroyo Grande – Nipomo Mesa, 2002, Department of Water Resources
- Nipomo Community Services District-Draft Urban Water Management Plan, April 2003
- Water and Sewer System Master Plan 2001 Update, Boyle Engineering Corporation for the NCSD
- Water Resources Management Study for the Woodlands, Cleath and Associates, 1996
- San Luis Obispo County Master Water Plan, 2001
- Annual Resource Summary Report, County of San Luis Obispo 2000-2003

- Draft Water Resources Evaluation, Nipomo Mesa Management Area, August, 2002
- Woodlands Specific Plan-Final Environmental Impact Report, December, 1998, County of San Luis Obispo

The following section is based on the information found in the above studies and is a summary of that data.

Groundwater is the only source of water currently used by the NCSD to serve the approximately 10,000-11,000 people in the Nipomo area. Water is pumped by the District from their wells located in the Nipomo hydrologic sub-area of the Santa Maria Groundwater Basin. The District also has wells located in the Nipomo Valley area on the east side of Highway 101.

The Santa Maria Groundwater Basin underlies more than 280 square miles (181,790 acres) in the southwestern corner of San Luis Obispo County and the northwestern corner of Santa Barbara County. Only a portion of the groundwater basin is within San Luis Obispo County, about 61,220 acres. Within the San Luis Obispo County, the main Santa Maria Basin underlies about 49,910 acres; Arroyo Grande Valley Sub-basin, 3,860 acres; Pismo Creek Valley Sub-basin, 1,220 acres; and Nipomo Valley Sub-basin, 6,230 acres.

Within San Luis Obispo County, the main Santa Maria Basin is bounded on the north and east by the Wilmar Avenue Fault, separating it from Arroyo Grande Valley, Pismo Creek Valley, and Nipomo Valley Sub-basins. The western boundary of the basin is the Pacific Ocean, although the basin is hydrologically continuous offshore beneath the ocean. On the south, the county line with Santa Barbara County forms a political boundary within the basin, but it has no hydrological physical significance to the groundwater system.

The Arroyo Grande Valley Sub-basin is bounded by the alluvial contact with older geologic units between Lopez Dam and the Wilmar Avenue Fault. The Pismo Creek Valley Sub-basin is bounded by the alluvial contact with older geologic units between the southern boundary of Edna Basin, where bedrock narrows the creek channel, and the Wilmar Avenue Fault. The Nipomo Valley Sub-basin is

bounded on the north and east mainly by the contact of the older alluvium and Orcutt Formation with older geologic units and is separated from the main basin on the west by the Wilmar Avenue Fault. The southern boundary of the sub-basin, which is the watershed boundary for Nipomo Creek, is the study area boundary.

The potentially water-bearing sediments of the groundwater basin are underlain by bedrock. The bedrock base of the groundwater basin is vertically displaced across the Oceano, Santa Maria River, and Wilmar Avenue Faults.

Groundwater occurs within the pore spaces in the semi-consolidated to unconsolidated sediments filling the basin to a maximum thickness of about 1,600 feet under the Santa Maria River. In the main groundwater basin, these deposits include the Squire Member of the Pismo Formation; the Careaga, Paso Robles, and Orcutt Formations; alluvium; and dune sands. These sediments consist of discontinuous sedimentary layers or lenses of varying composition, texture, and thickness, ranging from clays to boulders.

The main groundwater basin is considered a composite aquifer system of unconfined conditions, with localized semi-confined to confined conditions and perched zones. Discontinuous clay layers separate the multiple aquifer zones. The most productive and developed aquifers are in the alluvium and Paso Robles Formation. Aquifers in the Squire Member of the Pismo Formation and the Careaga Formation have, over time, become more important.

In Arroyo Grande Valley and Pismo Creek Valley Sub-basins, groundwater occurs in the alluvium, ranging in thickness from negligible to a maximum of about 175 feet in Arroyo Grande Valley Sub-basin. Groundwater is mainly unconfined. In some parts of the sub-basins, the alluvium may be saturated only during rainfall.

In Nipomo Valley Sub-basin, groundwater occurs in the older alluvium, which covers the floor of the valley up to about 90 feet thick, thinning to negligible thickness toward the eastern edges of the sub-basin. Groundwater in the older

alluvium is unconfined with local semi-perched conditions. The older alluvium stores a notable amount of groundwater and continues to supply some wells, although the older alluvium may be saturated only during rainfall at the eastern edges of the sub-basin. The bedrock formations underlying the older alluvium have, over time, become a more important source of groundwater supply in Nipomo Valley Sub-basin.

Both natural and incidental sources recharge groundwater in the main Santa Maria Basin. Stream infiltration, deep percolation of direct precipitation, and subsurface inflow are sources of natural recharge. Incidental recharge to the basin includes deep percolation of urban and agricultural return water, treated wastewater returns, and septic tank effluent.

Stream infiltration from Arroyo Grande Creek, regulated by Lopez Dam since 1969, and from unregulated Pismo Creek recharges the Tri-Cities Mesa - Arroyo Grande Plain portion of the main groundwater basin. Stream infiltration from Santa Maria River, regulated in part by Twitchell Dam since 1958, recharges the Santa Maria Valley portion of the main basin. The amount of recharge is related to the availability of stream flow.

Recharge to the groundwater basin by deep percolation of direct precipitation is intermittent, occurring during and immediately following periods of sufficient precipitation and varying from year to year depending on amount and frequency of rainfall, air temperature, land use, and other factors. Because no surface water flows into the Nipomo Mesa, deep percolation of direct precipitation is the major source of natural recharge.

Unfortunately, even after a great deal of study there remains uncertainty with regard to the extent of water available from the groundwater basin in the Nipomo area. The NCSD has taken following recent actions to manage this situation by: Completing an alternative water supply study in 2001, drafting an Urban Water Management Plan, and adopting an annexation policy that addresses the supplemental water situation on a specific, case-by-case basis.

The following section is from the Draft Municipal Service Review prepared for the NCSD's Sphere of Influence Update and summarizes the key studies completed in regard to the groundwater resource:

Water Resources of Arroyo Grande–Nipomo Mesa Area, State of California Department of Water Resources, 2002

This study was completed in 2002 by the Department of Water Resources and contracted for by the County of San Luis Obispo. It provides a comprehensive analysis of the groundwater supply and demand for the Nipomo area. It contains extensive information about the Santa Maria Groundwater Basin and associated sub-areas in San Luis Obispo County. The study provides information about the geology in the area, water demand and supply, hydrology, water quality, and the overall water budgets. It uses past data to estimate the future water supply and demand through 2020. Potential land use and population estimates are used to project future water use. This study makes several statements regarding the groundwater basin that are relevant to the water situation:

“In the Nipomo Mesa, the projected increase in urban extractions is the major factor contributing to projected deficiencies in 2010-2020 (ES-21).”

“This study refrains from finding that the Santa Maria Groundwater Basin within San Luis Obispo County is currently in overdraft because of the consistent subsurface outflow to the ocean and no evidence of sea water intrusion (ES-22).”

“Pumping depressions and declines in groundwater levels in some wells in some parts of the Nipomo Mesa portion of the basin do not imply that a condition of overdraft exists in the entire groundwater basin, but are more likely indicative of the dynamics of the groundwater system and sources of recharge in the mesa (ES-22).”

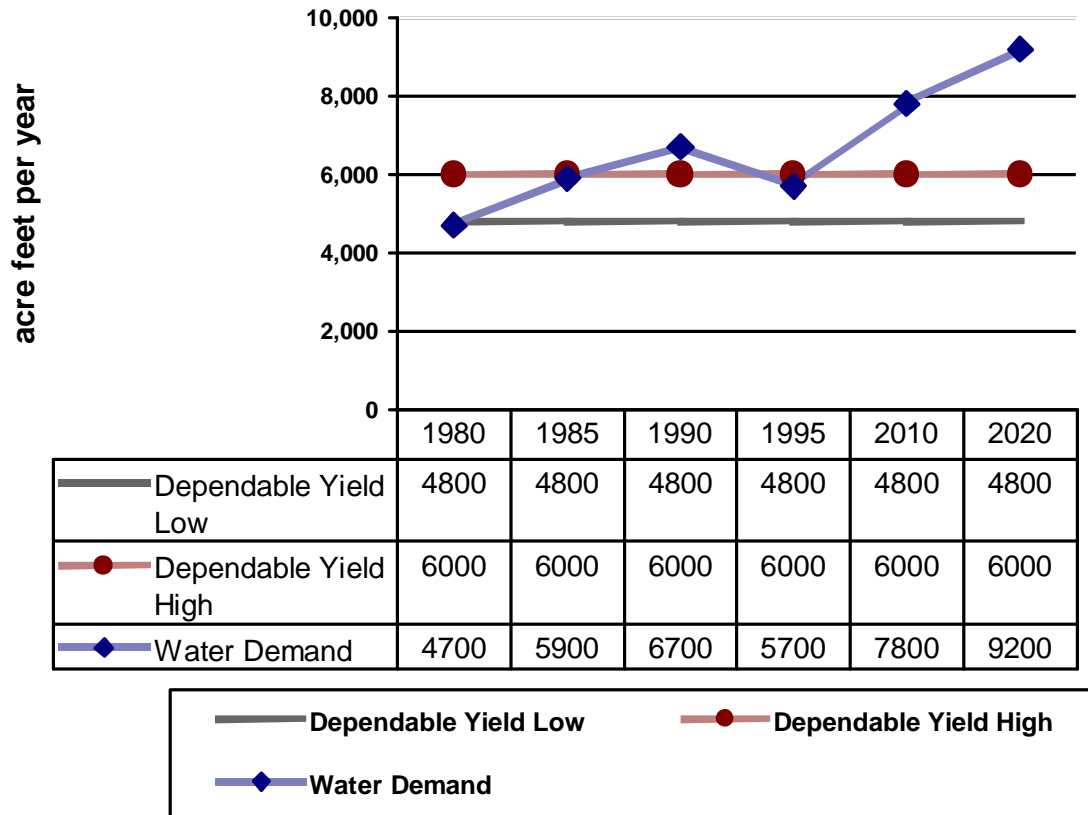
“Projected extractions are within the range of dependable yield estimates, with the exception of the Nipomo Mesa in 2020 (ES-22).”

“Supplies appear adequate (in the study area) to meet water demands through water year 2020 (page 30).”

In reviewing the study with regard to the Nipomo hydrologic sub-area (which is a sub-area of the Santa Maria Basin), it is apparent that future demand will outpace the dependable yield of the groundwater supply. The question is when will this occur? The chart/table below shows the dependable yield of the Nipomo sub-area along with the projected demand as calculated by the DWR study. The dependable yield (“safe yield”) of a groundwater basin is an estimate of how much water can be safely extracted over a period of time without causing adverse effects to the basin. The study defines dependable yield for the Nipomo Mesa groundwater basin to be 4,800 to 6,000 acre-feet per year. Overdraft of the groundwater basin may occur when extractions exceed this dependable yield for a period of time.

Figure 5.4-1

Dependable Yield and Water Demand ¹⁾
Nipomo Mesa Hydrologic Subarea



1) Water Resources of the Arroyo Grande-Nipomo Mesa Area, Department of Water Resources, 2002

While the study shows that the Nipomo Mesa sub-area is projected to encounter deficiencies in 2010 (or earlier), it refrains from indicating that there is, or will be, an overdraft situation for the Nipomo sub-area. It also states that due to the geology of the area, the sub-area receives a large amount of recharge in wet years. Using the dependable yield calculated by the study and the projected demand, the chart above shows that more water will be withdrawn than can safely be done over the next ten years and beyond. It is reasonable to assume that the groundwater sub-area is heavily relied on to provide domestic water resources and will be used even more so as growth and development continues.

The overall conclusion of the DWR study is that further analysis of the basin is needed to more clearly understand the recharge and extraction dynamics of this area.

“The projected deficiencies in the water budgets do indicate the need for continued planning, improved data, periodic data, periodic reevaluation, of the water budgets, artificial recharge programs, and expanded use of recycled water (ES-22).”

The study does provide valuable data and information regarding water demand and supply as well as the dependable yield of the groundwater basin resources for the Nipomo Mesa Area. It also provides a basis for the conclusion that the Nipomo Hydrologic Sub-area should not be viewed as a reliable and sustainable source of water for future growth in the Nipomo area. The District has stated that the Nipomo sub-area is in overdraft in their comment letter dated April 24, 1998 regarding the Woodlands project dated April 24, 1998:

“In 1989 the District board of Directors reviewed a number of groundwater studies and declared that the Nipomo Basin was in overdraft condition.”

The District re-affirmed this position in a Memorandum of Agreement between the County and the District that was adopted by the District on August 27, 2003 and states:

“Whereas, all water rights in the Nipomo Hydrologic Sub-Area (HSA) are being litigated and it is generally accepted that the HSA is at least under stress, if not in overdraft”

Nipomo Community Services District Draft Urban Water Management Plan, April 2003

The NCSD has prepared a draft Urban Water Management Plan to help manage the water supply and demand in the District’s Service Area. The draft plan covers only the area within the Districts current service boundary and includes information regarding Water Supply, Water Use, Water Demand Management

Measures, Water Shortage Response, Supplemental Water Supplies and Wastewater Collection and Treatment. The NCSO is in the process of reviewing and considering the Draft Plan and changes will likely be made. The District's production capacity from existing wells is shown in the plan as follows:

Table 5.4-1: Existing Production Capacity

Source	Production Capacity – Gallons Per Minute (GPM)	80% of Capacity – Acre Feet Per Year (AFY)
Town Wells	3,300	4,200
Black Lake Wells	750	950
Total	4,050	5,150

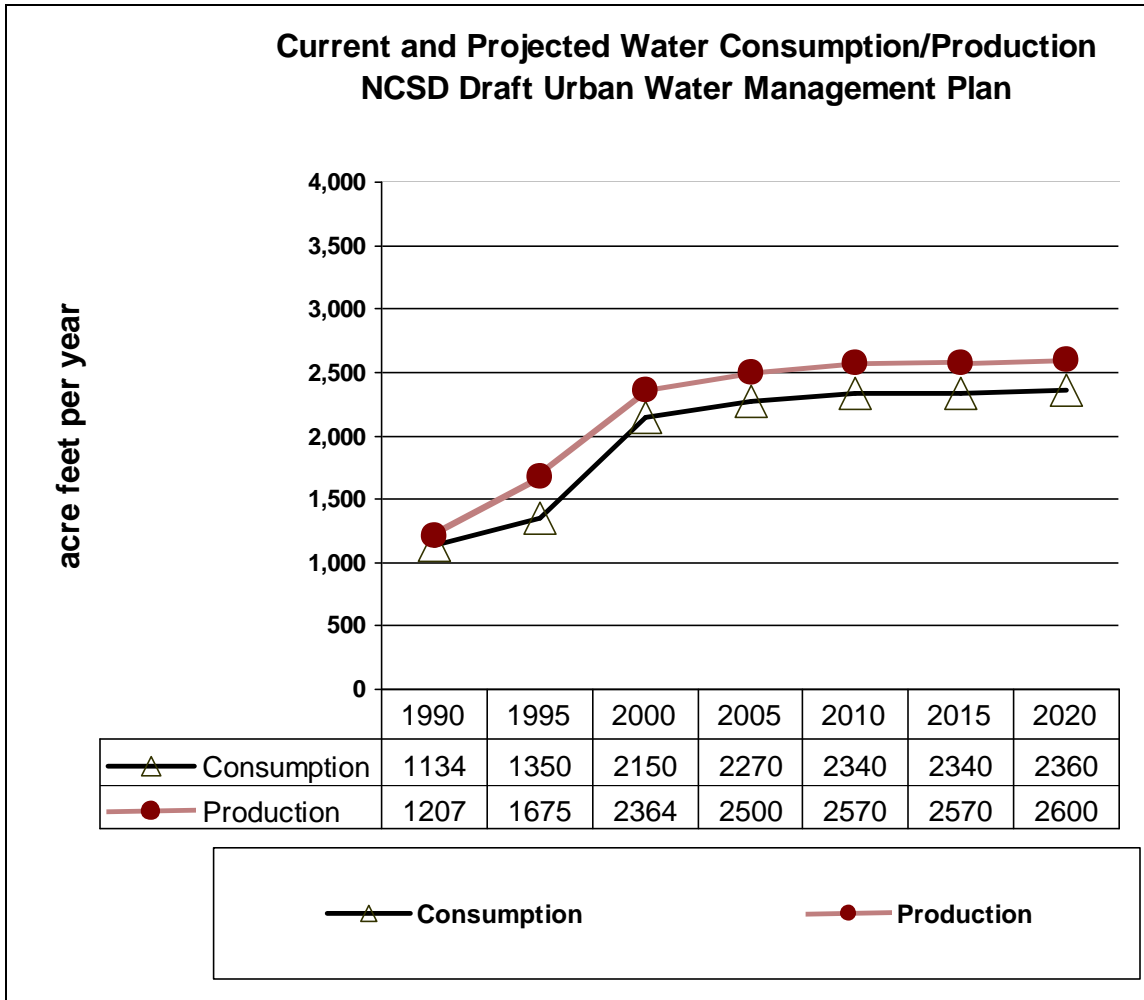
An important consideration is the ongoing groundwater adjudication case filed in 1997. While the District has the capacity to pump more than adequate quantities of water, the adjudication decision regarding the Nipomo Sub-area is likely to severely limit the amount of water the NCSO will be able to legally pump. The following table and chart shows the District's current and projected water consumption and production as shown in their Draft Urban Water Management Plan, 2003.

Table 5.4-2: Current and Projected Water Consumption-Production¹

Town/Black Lake	1990	1995	2000	2005	2010	2015	2020
Consumption (AFY)	1134	1350	2150	2270	2340	2340	2360
Production (AFY)	1207	1675	2364	2500	2570	2570	2600
Unaccounted Water (AFY)	73	325	214	300	230	230	240
Surplus (% of Total Production)	6%	19%	9%	12%	9%	9%	9%

1) Draft Urban Water Management Plan

Figure 5.4-2: Water Production vs. Consumption



The Draft Urban Water Management Plan also states that the Nipomo Sub-area of the Santa Maria Groundwater Basin is in an overdraft situation and that increased groundwater extraction in recent years has created a groundwater depression in the area. Given the ongoing adjudication process, and the evidence that points to a questionable groundwater resource in the Nipomo Hydrologic Sub-area (NHSA), the availability of increased quantities of groundwater from the NHSA to the NCSD is very unlikely. This leads to the conclusion that water resources that are outside the Nipomo Hydrologic Sub-area must be developed if the District is to expand its service area. The draft Urban Water Management Plan identifies several such sources as wells that are

currently offline and located outside the defined Nipomo Hydrologic Sub-area and shown in the following table and figure:

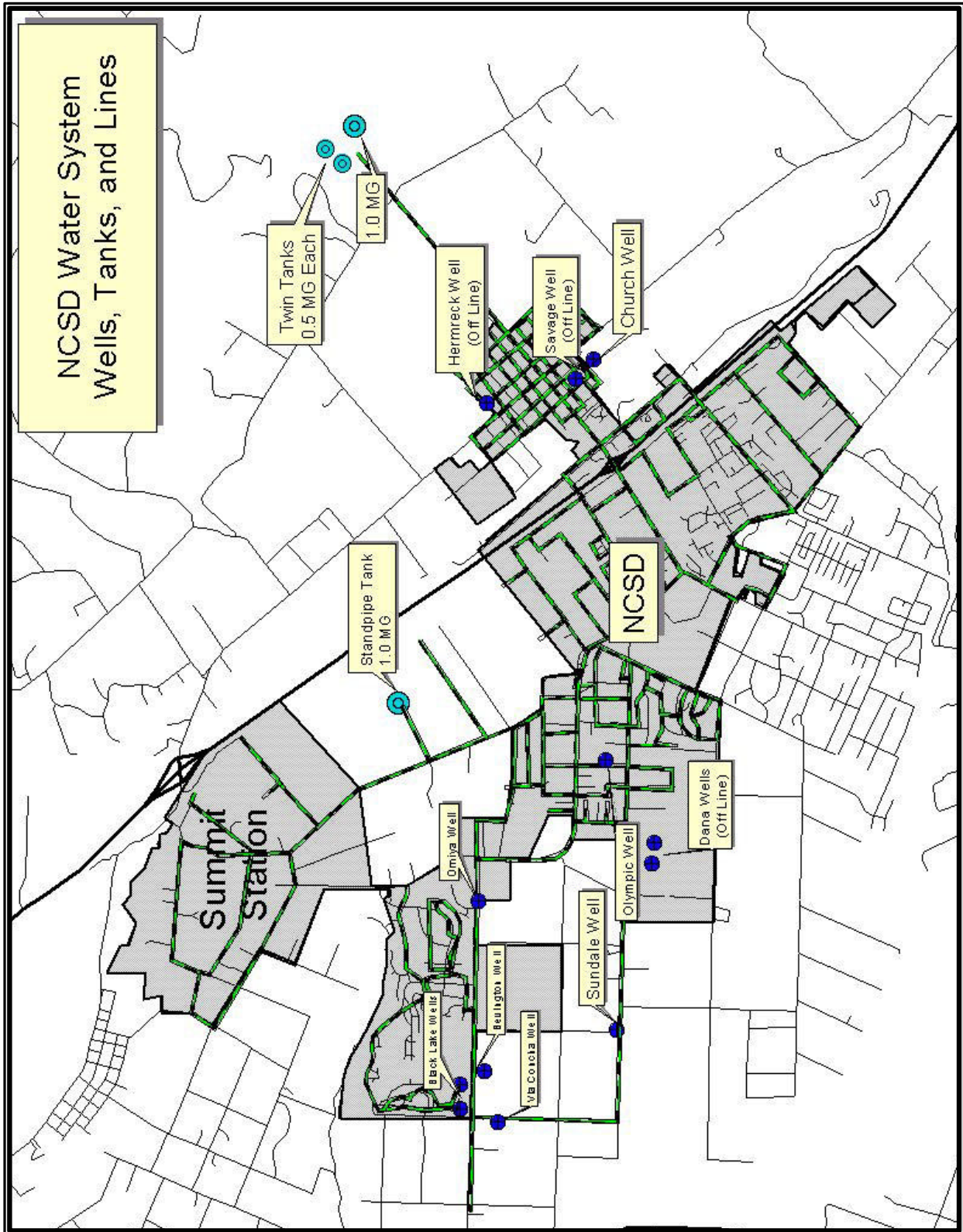
Table 5.4-3: Potential Water Supply in District¹

Future Production (Outside Sub-area)	Gallons Per Minute (GPM)	Acre Feet per Year (AFY)
Hermreck Well	250	300
Savage Well	100	100
Church Well	150	200
Retrofit Program	100	100
Total Estimated Future Production	600	700

1) Draft Urban Water Management Plan

Adjudication of the basin could result in the NCS D being allocated its current water demand of around 2,400 acre-feet per year or lower. The 700 acre-feet per year of future water production available from wells currently off-line brings the amount of available water to an estimated 3,100 AFY or less. It should be noted that the wells on east side are in a fractured geologic structure (hard rock) that could be unreliable in terms of long-term production. This water supply scenario may appear to be adequate to serve the existing service area. However, increasing the areas of service depend on a supplemental water source being added by the District. The District's new annexation policy requires annexations to the NCS D to either have a supplemental water source or to pay a fee for development of such a water supply (\$10,000 per unit). Another scenario is that adjudication results in the NCS D being allocated substantially less than what it currently pumps from the sub-area. This would leave the NCS D with less water and consequently a decreased capacity to serve areas outside the existing boundary. Figure 5.4-3 shows the District's water infrastructure pipes, wells and storage tanks.

Figure 5.4-3: NCSD Water Infrastructure



Evaluation of Water Supply Alternatives, Kennedy/Jenks, NCSD, 2001

As the title implies, this study evaluates the water supply alternatives that may be available to the District. The first water alternative analysis was completed for the District in 1994. The most recent study was completed in October 2001 and is an update and expansion of that first analysis. The objective of the most recent study is to provide more current information and evaluate a wider range of supply alternatives. The study identifies a broad range of water supply alternatives and then recommends that several alternatives be reviewed in further detail, including:

- Water Conservation (500-1000 AFY)
- Inter-tie with the City of Santa Maria (2000-3000 AFY)
- Desalination of blowdown water, produced water, and/or recycled and groundwater exchange with the Tosco Refinery (1,300 AFY)
- Recycled water delivery to a groundwater exchange with agricultural users (500-1000 AFY)
- Hard rock drilling (500-1000 AFY)

The study indicates the existing demand based on average consumption of a population of 10,790 people currently served by the NCSD. The existing demand distribution areas already being served by the NCSD is broken down as follows:

Table 5.4-4: Current Demand

Land Use or Water User	Water Demand (AFY)
Residential	1,423
Non-Residential	68
Nipomo Regional Park	46
Brassica Nursery	19
Other large users / Unaccounted for	335
Main Water System total	1,890
Black Lake Water System	450
Total	2,340

The study projects water demand for the Nipomo area at build-out of 5,890 AFY (includes Woodlands) and a current demand of 2,340 AFY. The Alternatives Study evaluates water sources that might be used to make up this deficient. The table below comes from the study:

Table 5.4-5: Projected Demand at Build-Out

Land Use or Water User	Water Demand (AFY)
Residential-Including Black Lake	3,278
Non-Residential	132
The Woodlands	1,640
Nipomo High School	81
Nipomo Regional Park	46
Brassica Nursery	19
Other large users / Unaccounted for	693
Total	5,890

The Study assumes that the NCSD will ultimately serve the Woodlands as well as other surrounding areas currently not within the District's service boundaries. The NCSD's Draft Urban Water Management Plan assumes service to only those areas within the NCSD's existing boundary; approximately 80-100 additional connections. The Alternatives Study also assumes a larger eventual service area for NCSD and addresses that by analyzing a full range of water resource alternatives. The Alternatives analysis is a useful long range planning study that gives the NCSD information about various water options.

The feasibility of these water supply options is currently in question. The NCSD is pursuing negotiations with the City of Santa Maria, and a preliminary study regarding desalination was funded in this year's budget. Supplemental water sources outside the Nipomo Hydrologic Sub-area are still in the planning stages and could take several years to fully develop. This uncertainty suggests that future annexations should be contingent upon the NCSD providing a documented

and reliable supplemental water source. Water Code section 10910 (SB 610) lists the following criteria for identifying existing water supply entitlements:

- Written contracts or other proof of entitlement to an identified water supply
- Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system
- Federal, State and Local permits for construction of necessary infrastructure associated with delivering the water supply
- Any necessary regulatory approvals required to convey or deliver the water supply.

This part of the water code also calls for a Water Assessment for certain projects. It would be prudent for the type of Water Assessment called for in 10910 to be completed by the District prior to annexing properties into the District Boundaries.

Water and Sewer System Master Plan 2001 Update, Boyle Engineering

Nipomo Community Services District Board of Directors authorized this Water and Sewer Master Plan update in November of 2000. The purpose was to update the 1995 Plan with current information regarding existing District customers and future development scenarios that would likely expand the District's service area. The 2001 Plan adopted by the NCSO Board of Directors evaluates several key service issues:

- Water Demands and Sewer Loading
- Description of Existing Water System
- Description of Existing Sewer System
- Design Criteria
- Analysis of Existing Water System
- Analysis of Existing Sewer System
- Evaluation of Future Water System

- Evaluation of Future Sewer System
- Recommended Improvements
- Recommendations for Water Service to Summit Station

This study provides information for decision makers to proceed with a capital improvement plan that prioritizes future projects for the District based on anticipated growth in the Nipomo area. The Update also makes recommendations with regard to how to best serve the Summit Station area, which has experienced low water pressures for many years.

The Plan Update provides the NCS D with an understanding of the strengths and deficiencies of the water and sewer systems and recommends improvement to correct potential or existing problems. In Chapter 11 of the update the improvements are prioritized based on urgency of need and potential benefits. Chapter 11 of the update breaks the improvements into the following two sections: Improvements to Meet Existing Needs, and Improvements to Meet Future Needs. It also includes cost estimates for the various improvement projects.

San Luis Obispo County Master Water Plan, 2001

The County Water Master Plan inventories the existing water supplies and future demand for the County of San Luis Obispo. It also provides analysis of water supply alternatives and identifies potential water deficiencies. The County defines the Nipomo Mesa area as Water Planning Area 6 and identifies a number of water purveyors in the area, including the NCS D, Rural Water Company, and the Cal Cities Water Company. The table below shows the smaller private water purveyors operating in the Nipomo Mesa area:

Table 5.4-6: Private Water Purveyors in Nipomo Area

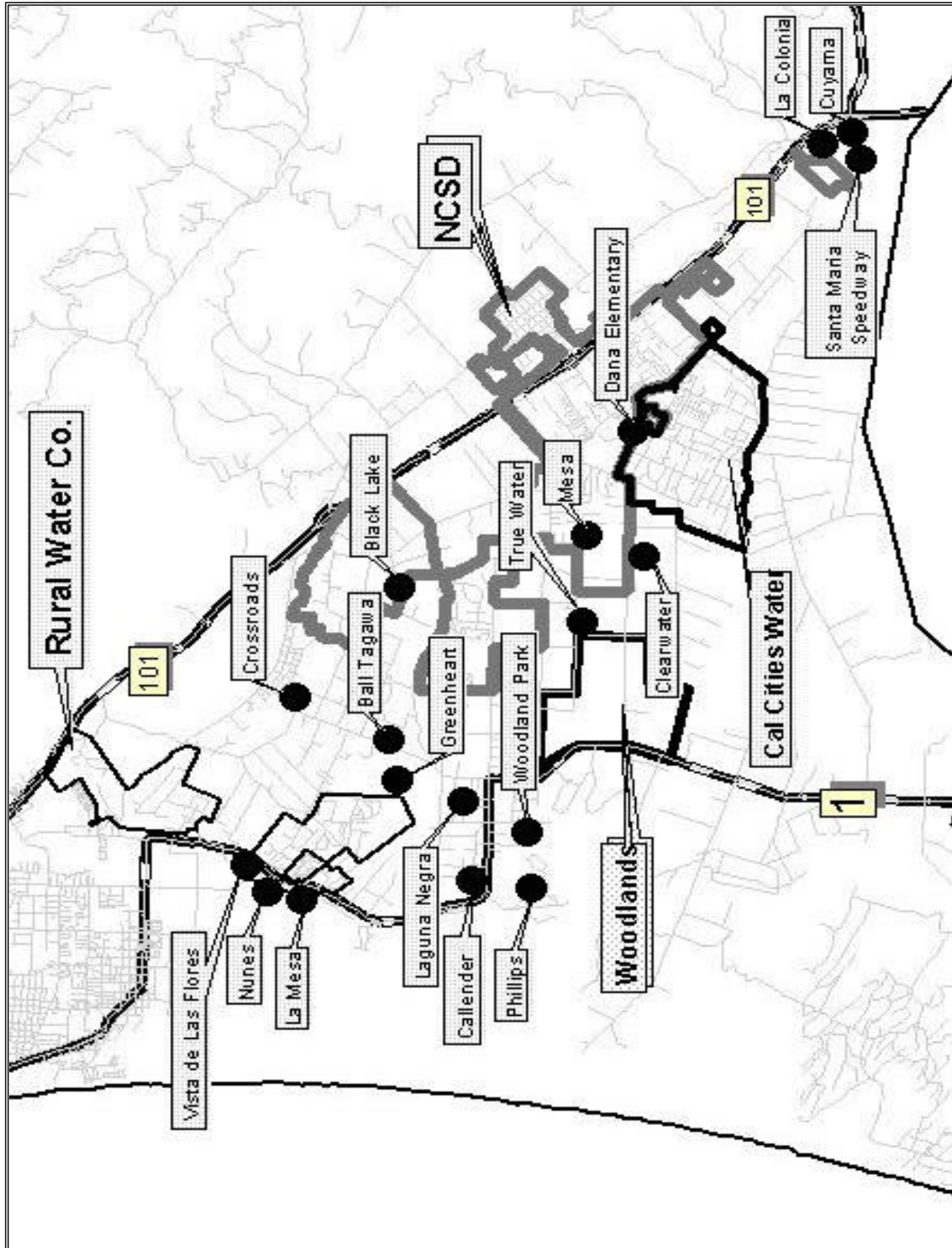
Arroyo Grande Mushroom Farm	Black Lake Canyon Water Supply
Calendar Water Assn.	Country Hills Estates
Greenheart Farms	Heritage Lane Mutual Water Company
Hetrick Water Company	Ken Mar Gardens
La Mesa Water Company	Rancho Nipomo Water Company
Guadalupe Cooling	Clearwater Nursery
Cuyama Lane Water Company	Dana Elementary School
La Colonia Water Association	Laguna Negra (Tract 610)
Mesa Mutual Water Company	Rim Rock Water Company
Santa Maria Speedway	Speeding, Inc.
True Water Supply	

This is important because private water purveyors continue to proliferate as development proposals that require community water systems are approved. Figure 4 shows the water purveyors in the Nipomo Area. Also contributing to increased water use is the approval of residences that are served by individual wells. The County’s Master Water Plan States the following for the Nipomo Mesa Water Planning Area:

“Urban demands may be understated. Nipomo will see considerable growth within the planning horizon. Competition for groundwater is increasing. The new DWR study indicates problems on the Mesa. Several mutual companies and development potential make management a challenge.”

The following excerpt from the San Luis Obispo County Water Master Plan describes the process the County is completing to evaluate water resources from a supply and demand standpoint.

Figure 5.4-4: Nipomo Area Water Purveyors



The County of San Luis Obispo is updating the County Master Water Plan (MWP). This document will serve to help policymakers, planners and the public understand the long-range availability of water resources throughout the County. This work was planned as a comprehensive, three-phased process:

- Phase I Data Compilation
- Phase II Conclusions and Policy Recommendations
- Phase III Supplemental Studies and Ongoing Review

The Phase I document is an inventory of existing information, reasonable conclusions and missing data. Included herein are current and future water needs, and current and possible water supplies. Some of these needs and supplies were computed using reasonable deductions and some are severely limited by a lack of adequate data. Significant effort has been spent to make this document as comprehensive as possible.

The County’s Master Plan shows the existing and projected water needs for the Nipomo Mesa area as shown in the following in the following table:

Table 5.4-7: Existing and Projected Water Needs¹

Land Use or Water User	Existing Demand (AFY)	Projected Demand
Urban	2,820	5,030
Agricultural	28,590	23,860-31,770
Rural	3,800	5,940
Total	35,210	34,830-42,740

1) San Luis Obispo County Master Water Plan, Table A

As land transitions from agricultural uses to rural residences, water use typically decreases because agriculture uses have higher demand for water than do residential. It is difficult to project how much water demand will decrease due to the conversion of agriculture land to residential or other less water intensive uses.

Annual Resource Summary Report, County of San Luis Obispo 2000-2003

The County Department of Planning and Building prepares an Annual Resources Summary Report that summarizes the resource situation (including water) of Nipomo and other unincorporated areas of the County. The Report rates the capability of unincorporated communities to provide public services to the areas they serve. The Annual Report uses a Level of Severity rating system to assess water resources and delivery systems in the County areas. The rating system for water includes evaluating the available supply and the production and distribution system for a particular jurisdiction.

The following categories are defined:

- **Level of Severity I:** When projected water demand over the next nine years equals or exceeds the estimated dependable supply.
- **Level of Severity II:** When projected water demand over the next seven years equals or exceeds the estimated dependable supply.
- **Level of Severity III:** When projected water demand equals or exceeds the estimated dependable supply.

The following table summarizes the findings of the Annual resource Summary Report for the last four years for the Nipomo area:

Table 5.4-8: Annual Resource Summary Report

Year	Level of Severity	Comments
2002	II	County staff is evaluating the DWR study and did not incorporate information in this years' Resource Summary Report. The Summary Report recommends preparation of a Resources Capacity Study by the County in conjunction with the NCSO and Southern California Water Company. Limits the number of units built in the Nipomo Mesa to 2.3% of the number existing units as of December 31, 2001.
2001	II	Report recommends completion a resource capacity study for the Nipomo Mesa Area based on DWR groundwater basin study and limits the growth rate to 2.3%.
2000	II	Report recommends completion a resource capacity study for the Nipomo Mesa Area based on DWR groundwater basin study and limits the growth rate to 2.3%.
1999	II	Report recommends completion a resource capacity study for the Nipomo Mesa Area based on DWR groundwater basin study and limits the growth rate to 2.3%.

The County has started work on a resource capacity study for the Nipomo area that will use the recently released (November, 2003) Department of Water Resources study as an information source for completing the report.

The Woodlands Environmental Impact Report, 1998; Water Resources - Wastewater Section and Water Resources Management Study for The Woodlands, Cleath and Associates, 1996

This EIR for the Woodlands project was completed in 1998 and was adopted by the Board of Supervisors. The Woodlands project is located on the West Mesa adjacent to Highway 1, east of Highway 101, and includes 45 holes of golf, 1320 residential units, a 500-room resort, a nine-acre commercial village core, 22 acres of business park, and a 12-acre public park. The Water Resources Management Study for The Woodlands is found in Appendix H of the Woodlands

Specific Plan Final Environmental Impact Report. The purpose of this study was to evaluate the impacts to water resources in the area from the proposed development on the property. All of these land uses would require water service.

The study provides a good deal of information regarding the existing conditions in the area including, site background, geology and hydrogeology, water resources, and proposed project conditions. The study also completes a groundwater-modeling program and identifies the potential impacts on ground water from the project. Data gathered for the groundwater basin shows long term stable conditions with periodic cycles of declines and then recovery to near historic high levels in most of the basin. The EIR concludes that the Santa Maria Groundwater Basin is not considered to be in an overdraft condition and that impacts from the Woodlands project to water resources will not be significant.

B. Thresholds of Significance

The Sphere of Influence could be affected significantly if any of the following circumstances impinged on the water supply:

- Changes in absorption rates, drainage patterns or the rate and amount of surface runoff.
- Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations, or through substantial loss of ground water recharge.
- Substantial reduction in the amount of groundwater otherwise available for public water supplies.

C. Project Impacts

Although the proposed Sphere of Influence Update and Municipal Service Review does not directly increase water demand, the proposed project could represent the first step in the development of the areas within the SOI. Future development of these Study Areas could adversely impact water resources.

It should be noted that the SOI would not cause a change in zoning or an increase in density. An increase in density in the SOI Study Areas would first require review and evaluation through one or more of the following processes:

- A zoning change in the form of a General Plan Amendment;
- Approval of a Specific Plan;
- Conditional Use Permit (Minor Use Permit/Development Plan approvals);
- Tract/Parcel Map approvals; or
- an Annexation into the District.

The above-listed processes are subject to the California Environmental Quality Act. Inclusion in the SOI does not guarantee service or development of an area, but allows for the jurisdiction to plan serving that area.

The proposed project would not directly result in any changes in land use for the involved properties. The proposed project could, however, represent the first step in development of undeveloped property in the SOI. The precise nature and extent of future development within the proposed SOI is subject to speculation and cannot be determined at this time. Any future development of the areas within the SOI would require a number of land use planning steps as listed above. These discretionary approvals would require the preparation of additional environmental documentation (CEQA) to address any potential land use and planning impacts.

The Program EIR represents the first-tier environmental document for these related actions. Once the Program EIR is prepared, subsequent activities within this program must be evaluated in order to determine the extent of the required additional CEQA documentation.

Expanding the District's Sphere of Influence could have the indirect impact of encouraging a change in land uses in some Study Areas by providing public services (water and sewer). While in this case the NCSO does not control land use decisions (the County), the provision of public services can affect the intensity and type of land development in a particular area, indirectly causing impacts on water resources. The Initial Study and comments regarding the NOP identified the following water impacts as potentially significant:

- Changes in absorption rates, drainage patterns or the rate and amount of surface runoff;
- Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations or through substantial loss of ground water recharge; and
- Reduction in the amount of groundwater otherwise available for public supplies.

Comments from the Save the Mesa organization regarding the Notice of Preparation indicated that a substantial reduction in the amount of groundwater otherwise available for public use should be studied as a potentially significant impact. This topic will be studied as a potentially significant impact.

Impact W-1. The proposed Sphere of Influence may indirectly cause changes in absorption rates, drainage patterns or the rate and amount of surface runoff by encouraging the development of properties within this area.

The SOI may indirectly induce the development of areas because of the provision of public services to the proposed areas. This development could lead to the following changes:

- Absorption rates due to an increase in “hardscape,”
- drainage patterns, or
- the rate and amount of surface runoff.

The expansion of the SOI would not directly cause any of the above-listed impacts to occur, but may indirectly cause development to be induced. The above-mentioned impacts cannot be quantified at this point in time because it is unknown how much area would be developed within the SOI.

Impacts to absorption rates, drainage patterns, and surface runoff are addressed in the planning and development process administered by the County of San Luis Obispo. This process includes a full review of the issues associated with impacts to absorption, drainage patterns and the rate/amount of surface runoff. Chapter Five of the County’s Land Use Ordinance (LUO) provides specific standards and regulations for development including the following:

22.05.032(a) Drainage Plan Required: The requirements of this section apply to all projects and activities required to have land use permit approval. Drainage plans are reviewed and approved by the County Engineer. Drainage plans are to be submitted with or be made part of the Plot Plan, Minor Use Permit, Site Plan, Development Plan or grading permit application for a project that: criteria 1-9.

The LUO lists nine criteria or circumstances that would require a drainage plan. According to these criteria, most types of development would be required to submit a drainage plan. The LUO also addresses the issue of groundwater recharge:

22.05.035 – Groundwater Recharge(a) Requirements. Groundwater recharge elements must be included in the project design to mitigate the impacts on recharge caused by the reduction in the permeability of soil areas on the site except when the following site characteristics exist.

The LUO lists five conditions under which the Groundwater Recharge requirements would not have to be met. These include a high groundwater table, impervious soils on the entire site, known geologic stability, runoff will not occur from the site, or Federal or State regulations prohibit recharge.

The South County Area Plan identifies the following area-wide standard with regard to ground water recharge areas:

2. Groundwater Recharge Areas. *New development shall be located to preserve existing natural drainage areas and aquifer recharge areas and shall incorporate natural drainage systems in new developments to aid in groundwater recharge.*

The proposed SOI would not cause direct impacts to absorption, drainage or runoff. The extent of the impacts are unknown and cannot be quantified at this point in time. The County would mitigate these impacts at the time of development. Based on this and the standards and regulations found in the County Land Use Ordinance, the impact is reduced to a less than significant level.

Impact W-2. The proposed Sphere of Influence may indirectly cause a change in the quantity of ground waters, either through direct additions or withdrawals or through substantial loss of ground water recharge by encouraging the development of properties within the Sphere area.

The SOI may indirectly induce the development of areas because of the provision of public services to the proposed areas. This development could lead to increased use of the groundwater basin known as the Nipomo Hydrologic Sub-Area of the Santa Maria Groundwater Basin. Development could also lead to the

loss of recharge areas. The expansion of the SOI will not directly cause any of the above action to occur. Also, the above-mentioned impacts cannot be quantified at this point in time because it is unknown how much area would be developed within the SOI.

There is disagreement over the condition of the groundwater resource under the Nipomo Mesa. Some believe that the groundwater resource is currently in overdraft. Others opine that the resource has an adequate recharge capability that can sustain the groundwater in the long term. In reviewing the studies summarized in the Existing Setting of this chapter, it appears that the groundwater resource will not be able to sustain growth and development in the years to come. This will necessitate the development of supplemental water sources by the District. The District believes that the groundwater basin (Nipomo HSA) would not be an available resource in the future and is planning for the development of other water sources.

The District is not planning to use the groundwater resource in the Nipomo HSA to supply water for future users. The District recognizes the groundwater basin is being stressed at a minimum, and probably in overdraft. The Groundwater Basin is in the process of being adjudicated by the Courts. This process will result in specific water allocations for the users of the groundwater resource in the Nipomo HSA. Although the exact allocation of water from groundwater is unknown at this time, the District is likely to have its allocation reduced from current supply levels of approximately 2,400 afy. This possible reduction has caused the District to take several actions:

- Adopted an annexation policy that requires the applicant to either 1) have access to a water source that does not impact the Nipomo Hydrologic Sub-Area or 2) pay an in-lieu fee for the future development of a supplemental water source by the District.
- Consider a more aggressive water conservation program that may include a more tiered rate structure, a mandatory conservation plan,

certified water plans for residential single family and Multi-family projects, hiring a part-time water conservation coordinator to implement public information program, and preparation of quarterly reports regarding well production, water storage, water consumption and trends;

- Complete the preparation of the Urban Water Management Plan of the District. This plan is being completed to comply with the Urban Water Management Planning Act Water Code 10610-10657. (Implementation of the District's Urban Water Management Plan in its current form does not call for the implementation of water conservation measures and does not take into account added Spheres of Influence areas.)

Impact W-3. The proposed Sphere of Influence may indirectly cause a substantial reduction in the amount of groundwater otherwise available for public water supplies by encouraging the development of properties within this area.

This impact was originally categorized as a “less than significant impact” in the Initial Study. Comments received by the Save the Mesa organization requested that this impact be studied as a “Potentially Significant Impact” and it will be studied as such.

The groundwater resource found in the Nipomo Hydrologic Sub-Area is undergoing litigation/adjudication at this point in time. A substantial change in the availability of this water source to the public will occur when the Judge allocates water to the various users of the resource currently involved in the litigation. As discussed earlier, this will likely be a reduction in the amount of water available to the District and other users. It is highly unlikely that the Court will allocate more of the groundwater resource than is currently being used by the District. It is far more likely that the allocation will be less than what the District currently pumps from the Nipomo HSA.

Currently, development that is outside the District's Sphere of Influence service area is served either by private water wells or private water companies using wells. Development in the Nipomo area is approved by the County based the ability of a particular site to provide for its own water source or obtain a "will serve" commitment from a water purveyor. For example, the Cal Cities Water Company is a private water company that provides service for all of Study Area Five. Another example would be the private property owner who develops a residence on their land using an individual well. This is often the case in the development of individually owned rural parcels of land of one acre or more.

The NCSO is a public water provider and makes water service available to the public within their service area. Also, the NCSO is a public agency established under the California Government Code 61600. The Government Code and other applicable laws (Brown Act, CEQA, etc.) establish the rules and regulations for operating such a public agency. The NCSO is subject to these and other laws in managing the water resource and providing services to their customers. As a public agency, the policies and decisions of the District are made with participation and involvement of interested public and users of their services. Voters living within the Service Area of the District elect the Board of Directors.

The District can provide for enhanced management of the groundwater resource through a public entity rather than the continued proliferation of individual wells and private water companies. Some of the potential advantages of having a public agency responsible for managing the groundwater resource include:

- Implementation of a coordinated, area-wide Urban Water Management Plan that will provide for the efficient use of the groundwater resource;
- Increased accountability of the public agency to the people they serve. Private Water Companies and individual well owners have limited public involvement and agency oversight in the management of the groundwater resource.

- More involvement and oversight by other state and local agencies in the management of the groundwater resource, i.e. Regional Water Quality Control Board, Department of Water Resources, County Public Works, Environmental Health, and Planning.

Some of the potential disadvantages of a public agency managing the groundwater resource may include the changing dynamics of local decision making, too much local focus without consideration of more regional issues, and less flexibility in the provision of water to new developments in the area.

Analysis of the District's water situation indicates that while the District may be able to obtain supplemental water sources sometime in the future, there is uncertainty surrounding the availability of the potential sources. The District has completed studies with regard to alternative water sources and identifies the City of Santa Maria, hardrock drilling on the east side of Highway 101, and desalination as potential future water sources. An agreement with the City of Santa Maria appears to be the most likely to occur, although no documentation is evident. Also it should be noted that hard rock drilling can be an unreliable source of water and should not be relied on for a long-term water supply. The pipeline to the District from the City is expected to be hung from the Highway 101 Bridge over the Santa Maria River when improvements are made to the bridge by Caltrans beginning in 2008.

As mentioned, adjudication of the groundwater basin is a key factor that will constrain the District from using increased amounts of the groundwater resource (Nipomo HAS) for its customers. At some point in the future, the Court will allocate a share of the groundwater resource to the involved parties. This process will most likely result in a reduction of the amount of water available to the District. This action will take place regardless of the size of the Sphere of Influence and the District will be limited in the amount of water it may pump from this area. The following table shows the District's current and future water demand within its existing boundaries and the additional water demand projected

to serve the eight Sphere of Influence Areas if they were to be built out under the current zoning:

Table 5.4-9: Water Demand within Existing Boundary plus Projected Demand of all 8 Study Areas at Build-Out under Existing Zoning

	Acre Feet Per Year (AFY)
NCSD Existing Boundary at Build-Out (estimated)	2,700
Study Area #1	289
Study Area #2	2
Study Area #3	284
Study Area #4	106
Study Area #5 – water provided by Cal Cities Water	0
Study Area #6 – Woodlands-Private Mutual Water Co.	0
Study Area #7	212
Study Area #8	28
Total Demand	3,621
Potential Water Supplies (Urban Water Mgt Plan-NCSD)	Acre Feet Per Year (AFY)
Groundwater Within the Nipomo Hydrologic Sub-basin ⁽¹⁾	2,400
Wells on east side of Highway 101 ⁽²⁾	1,100
Other Potential Sources ⁽³⁾	2,600
Total Supply Planned by the District	6,100

- 1) Current supply. Adjudication could reduce this amount of water.
- 2) Fractured geologic structure may be an unreliable long-term, municipal water source.
- 3) Assumes well site near Santa Maria River, purchase from other agencies and desalination. These supplies are in the “idea” stage and have not been documented as a viable, “wet” water source.

The water supply section of the NCSD's Urban Water Management Plan does not provide documentation regarding the status of acquiring the sources that are mentioned above. In fact, all of the sources that are listed as part the District's future supply are either in the preliminary planning stages (desalination) or may not be a viable, long-term, municipal water source (hard rock-fractured structure drilling). It appears unrealistic at this point in time that the District has access to a reliable and sustainable future water supply of 6,100 acre feet. The table below considers these assumptions and shows two other water supply scenarios for the District:

Table 5.4-10: Alternative Water Supply Scenarios

Potential Source	Scenario #1	Scenario #2
Groundwater	2,100	2,400
Water Conservation	500	500
City of Santa Maria	0	1,000
Desalinization	0	0
Recycled Water Delivery	0	0
Hard Rock Drilling	100	300
Totals	2,700	4,200

Based on the projected demand of 3,621 acre feet needed to serve all eight study areas under existing zoning, the NCSD may be able to serve these areas if Scenario #2 depicted in the above table is realized in the next 20 years. However, these water sources are in the early planning stages and the District has yet to implement an effective water conservation program.

While the District has indicated its commitment to providing adequate water service to these areas, documentation verifying the availability of future water supplies has not yet been provided. If Scenario #1 is realized for the 8 Study Areas, the District would have a projected water deficit of 945 acre-feet. If Scenario #2 comes to pass, the District will have an excess of 555 acre-feet. This being the case it would be prudent for the District to provide verifiable

documentation of a water source being available for an annexation prior to the annexation being approved. This documentation should be provided in a format consistent with the Guidebook for Implementation of Senate Bill 610. This guidebook provides a legislatively approved process for documenting water supplies and builds on the Urban Water Management Plan prepared by the District.

D. Cumulative Impacts

The CEQA Deskbook defines Cumulative impacts as “two or more individual impacts that, when considered together are considerable or that compound or increase other environmental impacts.” The District’s SOI is a contributing factor to continued growth and development in the Nipomo area. However, it should be noted that Nipomo has grown significantly over the last two decades without the prior expansion of the District’s Sphere of Influence. Typically, projects were approved by the County for development and then approved by LAFCO and the District for inclusion into the District’s SOI and service area. The growth in the Nipomo area has been driven by land use approvals at the County level. The approvals often anticipate the project itself providing public services such as water and sewer. Major development approvals such as this include:

- Black Lake Development-Within the District’s SOI/Service Area
- The Woodlands-Outside the District’s SOI/Service Area
- Maria Vista-Within the District’s SOI/Service Area
- Knollwood-Within the District’s SOI/Service Area

If all eight Study Areas are developed under current zoning and then annexed to District the water demand is estimated to be approximately 900 acre feet per year not including the Woodlands. This estimate is based on the current land use zoning. The Woodlands is not envisioned to be part of the District; however, the water demand for the Woodlands at build-out is estimated to be approximately 1,600 acre feet per year. The Woodlands use of the groundwater

resource has already been approved through the development of a private water company.

According to the Urban Water Management Plan, the total cumulative water demand for the area under current conditions is approximately 2,500 acre feet per year at build-out within the District's current service boundary and Sphere of Influence. This could occur without the expansion of the Sphere of Influence or annexation of properties into the District. Table 5.4-2 contains water consumption and production projections from the District's Urban Water Management Plan.

The cumulative impacts of the Sphere of Influence on water depend on several factors, including:

- Future Land Use decisions by the County of San Luis Obispo;
- Adjudication of the groundwater resource by the Court;
- Proposed Annexations under the Districts recently adopted annexation policy
- Development of supplemental water sources by the District

Future Land Use Decisions

The County of San Luis Obispo has land use authority in the Nipomo Area. The Sphere of Influence by definition is "a plan for the probable physical boundaries and service area of a local agency, as determined by the Commission". Land use decisions and the Sphere of Influence are indirectly linked because the provision of public services such as water and sewer can encourage more urban land uses in a rural area such as the Nipomo Mesa. However, the degree to which the Sphere of Influence causes this type of urbanization is unknown because of the influence of the other factors mentioned above. Before an area zoned Residential Rural (5-acre lot minimum) can increase density, the County Board of Supervisors must approve a General Plan Amendment. This amendment includes a comprehensive analysis of the land use and resource

issues associated with such a proposal. General Plan Amendments are also analyzed under the California Environmental Quality Act (CEQA). Also, the District has provided service to rural areas in the past that have not transitioned into more urban land uses. An example of this includes the Summit Station and area.

Adjudication of the Groundwater Basin

The outcome of this Court action will have a significant impact on the amount of water that the District and other users are allowed to pump from the Nipomo Hydrologic Sub-Area. The Court is in the process of evaluating the water data and information provided by the various users of the groundwater resource. At some point in the future, the Court will allocate a share of the groundwater resource to the involved parties. This process will most likely result in a reduction of the amount of water available to the District. This action will take place regardless of the size of the Sphere of Influence and the District will be limited in the amount of water it may pump from the groundwater resource.

Development of Supplemental Water Source

The District has been negotiating with the City of Santa Maria for additional water. The negotiations are ongoing and the District expects to enter into an agreement in the near future. However, no documentation related to this water source has been submitted to LAFCO and the status of the agreement is unknown. The community has twice voted down State Water initiatives. Desalinization would likely not be available for 10-15 years and is at the preliminary stage of development. Hard Rock drilling on the east side of Highway 101 may not be a reliable long-term municipal water source.

E. Mitigation Measures

Mitigation W-1. Prior to LAFCO approval of any annexation, the District shall:

- 1) Complete, or update, the Urban Water Management Plan that shall demonstrate a decrease of water use by 25% upon implementation.
- 2) Complete, or update, the Urban Water Management Plan to reflect the need to provide water service in the amount of 1000 acre feet for the expanded Sphere of Influence. The Urban Water Management Plan prepared/updated by the District shall be prepared consistent with the State of California's Urban Water Management Plan Act. A certified professional engineer specializing in water resource planning shall update the Plan, or provide a third party review to verify the plan's consistency with State Law.

Mitigation W-2. Prior to approval by LAFCO of any annexation, the District shall obtain or complete negotiations for a supplemental water source and provide documentation that an agreement is in place to provide such water in the future. Documentation shall be consistent with Section 5, Step Two, Documenting Supply, of the Draft SB 610 guidebook dated September 25, 2002. A certified professional engineer specializing in water planning shall review and evaluate such documentation.

The following mitigation measures are from other sections of this DEIR and are applicable to reducing the impacts to water:

Mitigation LU-2. The proposed Sphere of Influence be reduced from the eight Study Areas to include areas that are less likely to see an intensification of land use or premature development because of the provision of services from the Community Services District. It is recommended that certain portions of the eight Study Areas be excluded

from the Sphere of Influence in order to reduce the potential for premature development or intensification of land uses. The maps and narrative discussion in Chapter 5.1 depict the Sphere of Influence.

(Please see LU-2 in the Land Use section 5.1 for the reduced Sphere of Influence. This would result in reduced water demand for the District's Sphere of Influence.)

Mitigation U-2. Prior to approval of any annexation, subject to the definition of a project set forth in Water Code 10912 definition of a “project”, the District shall submit a Water Assessment pursuant to the procedures found in the Guidebook for Implementation of SB 610 and SB 221, using only the steps applicable to SB 610.

F. Residual Impacts

Even with the above mitigation measures, the water impacts of expanding the Sphere of Influence are significant and unavoidable (Class I), especially considering continued rapid growth and the District's lack of a documented future water supply. Also, it is unknown if a 25% reduction in water use can be achieved through the implementation of conservation measures. The ability of the water agreement to obtain a supplemental water source to serve the area in the Sphere is also unclear. A statement of Overriding Considerations will need to be prepared with regard to these impacts.