

Technical Memorandum: Items for Consideration During Upcoming Well Ordinance Update.

Introduction

This document provides a summary of the topics that will be considered to bring the current Santa Cruz County Water Well chapters of the County Code (7.70 and 7.73) into alignment with recent approaches to groundwater management at the state and local levels. The purpose of this document is to provide some history of the Well Ordinance and current permitting procedures, discuss the important factors that need to be considered in the update, and summarize the potential content of the update.

Contents

Introduction	1
History of Well Ordinance Updates	2
Organization of Well Ordinance	2
Current Well Permitting Process.....	3
Well Yield Testing.....	5
Considerations for 2024 Well Ordinance Update.....	6
Sustainable Groundwater Management Act.....	6
GSA Review of Well Permit Applications	6
GSP Project and Management Actions	7
Metering	7
Restriction of Wells near Soquel Creek Water District Facilities.....	7
Drought Response and SB 552.....	8
Public Trust Protection	8
Recent Case Law.....	8
Specific Public Trust Values.....	9
Fisheries Protection	10
Groundwater Emergency Declaration	10
Protection of Cultural Sites.....	11
Borehole Drilling and Destruction.....	11
Updates to State Bulletin 74, Well Standards.....	12
Consideration of Agriculture and Disadvantaged Communities	12
Summary of Update Recommendations for Consideration	13

History of Well Ordinance Updates

The Santa Cruz County Well Ordinance (currently Chapter 7.70 of the County Code) was first adopted in 1971 and the Individual Water System ordinance (Chapter 7.73), including yield and quality requirements, was adopted in 1975. The ordinances have been periodically updated, on the average about once every 10 years.

The most recent major update of the Well Ordinance took place over a six-year period concluding in March, 2009, with approval of the amendments by the California Coastal Commission. Because the Well Ordinance is a local Coastal Program implementing ordinance, it requires approval by the Coastal Commission. The process included the formation of a Well Ordinance technical advisory committee consisting of well drillers, hydro-geologists, and other technical experts.

Prior to 2009, Santa Cruz was the only county in the state that required environmental review of well permits under the California Environmental Quality Act (CEQA). Most well permits were deemed to be exempt as small domestic wells or replacement wells in the same aquifer with no increase in pumping capacity. Wells that were not exempt were subject to a fairly extensive evaluation, preparation of an initial study and development of mitigation measures requiring efficient water use. Concerns were expressed beginning in 1999 that this process created unnecessary costs and delays, did not result in significant improvement in groundwater resources, and that potentially denying a well permit under CEQA would conflict with a property owners water rights. The 2009 ordinance update included designation of most well permits as ministerial and instead required water efficiency measures for all uses using more than 2 acre-feet/year, including replacement wells.

The 2009 update also required a confirmation of lot legality prior to well permit approval, further evaluation and setbacks if a well was proposed near a contaminated site, water quality testing for all newly-drilled wells (with required destruction if quality was unsuitable), single zone completion for areas subject to seawater intrusion or other water quality degradation, stronger well destruction requirements, and Board discretion in the potential declaration of a groundwater emergency if adequate measures were already being taken to address the overdraft.

Organization of Well Ordinance

The Well Ordinance includes the following elements (with reference to the specific sections):

7.70.010, 020: Purpose and Definitions.

7.70.030, 040, 050: Permit Requirements: explicitly defines well permits as ministerial unless a discretionary review is required by other sections of the county code related to riparian protection, sensitive habitat, historical resource or presence in coastal zone.

7.70.060, 070, 080: Requirement of Licensed contractor, reporting, and inspections.

7.70.090: Technical standards: requires adherence to State Bulletin 74 (including future updates), requires setbacks from septic systems, animal enclosures, property lines and contaminated sites; specifies a minimum seal depth of 50 ft in most situations.

7.70.100: Well abandonment and destruction: requires destruction of all abandoned or unused wells and specifies destruction procedures.

7.70.110: Groundwater protection: includes provisions for testing, electric-logging, sealing, single zone completion and possible well destruction to prevent cross-aquifer contamination by seawater intrusion or other degraded water quality; requires estimate of the proposed water use and requirement of water efficiency measures for any non-de minimis well serving more than 4 homes or any use projected to use more than 2 acre-feet/year (added in 2009 in lieu of the requirement for CEQA review which typically resulted in requirement of water efficiency as mitigation measures).

7.70.120: Soquel Creek service area restrictions: prohibits drilling of a new well in the Soquel Creek Water District Service Area. This was implemented in 1981 over concerns of seawater intrusion in the Soquel-Aptos Groundwater Basin. Replacement and ag wells are exempt.

7.70.130: Groundwater emergencies: provides for Board of Supervisors to conduct hearings and declare a groundwater emergency where overdraft is occurring, and adequate measures are not being taken to address the overdraft. The Board shall take steps to require conservation, limit pumping and limit construction of new wells. Historically the Board held hearings to consider declaring a groundwater emergency in the Pajaro Valley.

7.70.140, 150, 160: Abatement of nuisances and hazards: (There is not presently a section for violations, as these are provided for elsewhere in Chapters 1.12 and 1.14 of the County Code.)

7.70.170: Amendments: Any amendment requires review and approval of the California Coastal Commission

Current Well Permitting Process

The current well permitting process in Santa Cruz County is largely ministerial (limited review as long as standards are met), though it requires proposed wells to meet specific conditions to protect water resources. These requirements include minimum standards for the annular seal depth, single zone completion, review of potential impacts to sensitive habitat by environmental resource planners, and requirement of water use efficiency measures for non-de minimis wells. Discretionary review is currently required when the well serves a public

water system, requires a discretionary approval based on other County Code sections, including the potential requirement for a coastal development permit in the Coastal Zone. Coastal development permits are not required for replacement wells or wells serving single family dwellings or agricultural uses, provided the proposed well is not in sensitive habitat, in an area subject to groundwater emergency or immediately near the coast.

The code mandates a minimum seal depth of 50 feet below ground, except when the only available water is within that range. Even in such a situation, the seal depth may not be less than 20 feet below ground. However, a seal depth less than 50 ft is a very rare occurrence. It is much more common to have a deeper seal depth to seal out shallow layers.

During the review process, County staff consults resource maps, and if there is a potential concern for sensitive habitat, they refer the well applications to environmental resource planners. Sensitive habitat includes the riparian corridor and Sandhills habitat as well as known or potential habitat for listed species such as coho salmon and steelhead trout, Santa Cruz Long-Toed Salamander, California Red-Legged Frog, among others. Planner review may result in the location of the well moved out of the sensitive area or it may require a more in-depth review and mitigation.

Wells that serve more than four residential parcels or that serve uses expected to use more than two acre-feet of water per year are considered non-de minimis and must demonstrate efficient use of indoor and outdoor water. Applicants must report conservation measures that are currently in place or will be implemented once the well is constructed. The County also has the authority to conduct water use efficiency audits and require reasonable conservation measures to be implemented, as per SCCC 7.70.110(D). If a proposed well is located within the boundaries of a public water agency, the application is also sent to the agency for their notification and an opportunity to comment on the proposed well.

During the past 5 years of 2018-2022, there have been an average of 52 well permit applications per year, with 21% for new uses and the remainder for supplemental or replacement wells. 78% of the applications are for de minimis wells, pumping less than 2 acre-feet per year (AFY) for domestic use on rural residential properties. 86% of non-de minimis well applications are for replacement/supplemental wells and do not reflect new use of water (see table below).

There was not a significant increase in well permit applications during the recent drought. The 1975-77 drought period saw a large number of well installations, with many old shallow wells going dry and a total of 400 wells drilled in 1977. There was also a relative increase in applications (155/yr) in 1990-92 during the last years of a 6 year drought. This suggests that the deeper wells currently in use may be less susceptible to drought impacts.

Santa Cruz County maintains two well databases: one which tracks well permit applications and another geographic-based database with mapped records of well installations as a

layer in the County's Geographic Information System (GIS). The permit database is relatively complete going back to 1991, but not all permit applications result in an installed well. For example, for 2018-2022, there were 260 well construction permit applications, but only 198 of those wells were completed and entered in the GIS database. The GIS database is not complete but provides a good representative sample of well characteristics relative to site conditions in the county. There are currently 9400 well installation records in the GIS database, including 2600 records that have the specific location of the well on the parcel pinpointed. Of the records with specific well locations, 46% are within 750 ft of a stream, 31% are within 500 ft of a stream, 16% are within 250 ft of a stream and 6% are within 100 ft of a stream.

Types of Well Permit Applications Received 2018-2023 (Permit Database)

Permit Type	2018	2019	2020	2021	2022	2023	Total	
NEW WELL DOMESTIC	13	11	11	9	6	2	52	
NEW WELL IRRIGATION	2					1	3	1%
NEW WELL NON-DOMESTIC	2		1		2	1	6	2%
REPLACEMENT WELL - DOMESTIC	5	6	8	3		1	23	
REPLACEMENT WELL - IRRIGATION	3	3	1	4	1		12	
REPLACEMENT WELL - NON-DOMESTIC	2		3		1		6	
SUPPLEMENTAL WELL - DOMESTIC	29	18	25	32	31	12	147	
SUPPLEMENTAL WELL - IRRIGATION	3	6	2	3	6	2	22	
SUPPLEMENTAL WELL - NON-DOMESTIC	2	1	1	1	3	6	14	
Total	61	45	52	52	50	25	285	
Subtotal replacement/supplemental	44	34	40	43	42	21	224	79%
Subtotal Non-domestic	14	10	8	8	13	10	63	22%

Well Yield Testing

The production capabilities and water quality of a well are required to be verified prior to approval of the well as a water source to support new development. These requirements are specified in the Individual Water System (IWS) Ordinance (Chapter 7.73 of the County Code). A well must be shown to produce at least 2-3 gallons per minute over a 24 hour period for each connection that will be served. A satisfactory yield test must have been completed within 2 years prior to approval of the IWS permit. These yield tests may not be adequate in hard rock areas of the county where there are many anecdotal reports of wells going dry almost every summer resulting in a need to haul water during dry periods for many properties.

Considerations for 2024 Well Ordinance Update

Subsequent to 2009, there have been a number of state and local actions relative to groundwater oversight that require consideration and updates to the Well Ordinance, including:

- Adoption of the Sustainable Groundwater Management Act (SGMA) in 2014, formation of Groundwater Sustainability Agencies (GSAs), and development of Groundwater Sustainability Plans (GSPs).
- Issuance of the Governor's Executive Order N-7-22 that required a determination that new non-de minimis wells be consistent with local GSPs and will not impact existing wells.
- Passage of SB 552 requiring counties to develop drought response plans, including drought mitigation measures for private wells and state small water systems.
- Court Cases finding that wells may be discretionary permits subject to review under CEQA.
- Court cases requiring greater consideration of the impact of wells on streamflow and associated public trust resources.
- County staff have also identified a need to require proper destruction procedures for monitoring wells and soil test boreholes, consistent with requirements of state water code and regulations of most other jurisdictions.

These considerations are discussed further below, along with a general discussion of how staff intends to address those issues in the updated ordinance. These recommendations will be further developed and discussed during the update process.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) was passed in California in 2014 to address the overuse of groundwater and ensure its sustainable management. Local Groundwater Sustainability Agencies (GSAs) are required to develop groundwater sustainability plans (GSPs) under the Act to achieve sustainable groundwater levels by 2040. Most wells in the County are located within one of the three major groundwater basins that are managed by a local GSA with approved GSPs in place. The GSPs specifically address managing pumping to protect water quality, to prevent depletion of surface waters and groundwater dependent ecosystems, and to prevent cumulative impacts on groundwater resources. The Well Ordinance needs to be updated to support implementation of SGMA and the local GSPs. The County is responsible for promoting sustainable management of groundwater resources outside the three GSAs.

GSA Review of Well Permit Applications

In 2022, Executive Order N-7-22 Paragraph 9 went into effect, requiring counties to ensure that non-de minimis wells not serving a water system will not impact existing surrounding wells

before permits can be issued. Additionally, the Order requires GSAs to confirm, when applicable, that the proposed new wells would not be inconsistent with the GSP. It is important to note that although the Executive Order is temporary, it remains in effect until it is rescinded by the Governor, and there is proposed state legislation that may make this requirement permanent. Given that the GSAs are ultimately responsible for considering cumulative impacts and promoting sustainability, it is recommended that the ordinance update provides for continued review by the GSAs of well permits for at least non-de minimis wells.

GSP Project and Management Actions

Ensuring that groundwater basins are not harmed by wells through over pumping or contaminant introduction is a crucial aspect of sustainable groundwater management. Equally important is the alignment of the Well Ordinance with GSP-supported Projects and Management Actions (PMAs). For instance, exclusion zones are required around injection sites for recycled water projects, and allowing a well to be permitted within an exclusion zone could jeopardize the project's success and could have adverse water quality impacts.

While specific PMAs could be listed in the ordinance update, it is more practical to include language that is general, rather than mention specific projects. Since GSPs are updated every five years and PMAs will likely evolve, incorporating general protective language in the Well Ordinance would ensure continued compliance with evolving state and local requirements.

Metering

SGMA gives the GSAs authority to require metering of all new and existing non-de minimis wells to provide better information on overall basin water use. Metering is already required in the Pajaro Basin and requirements are being developed in the Mid-County and Santa Margarita Basins. The County has already implemented requirements for metering of small water systems. It would be consistent for the ordinance update to include provisions for metering all newly constructed non-de minimis wells.

Restriction of Wells near Soquel Creek Water District Facilities

The current text of section 7.70.120 prohibits the development of new wells within 200 feet of a main line operated by the Soquel Creek Water District (SqCWD). This measure was put into place in 1981 to address the issue of seawater intrusion. However, the section provides exemptions for agricultural water use, which has led to the installation of new wells that appear to be primarily used for landscape irrigation to avoid paying District usage charges. During the update of the Well Ordinance, it is important to consider better defining and possibly tracking agricultural water use to address this issue. This issue could also be addressed through tighter policy without requiring ordinance amendment. However, if the GSAs are given authority to review all new agricultural wells, additional county authority may

not be necessary. The GSAs may determine that the water use is inconsistent with the GSP, and therefore the County would not be able to issue the permit.

Drought Response and SB 552

Senate Bill (SB) 552 mandated that counties develop a plan to address their role in drought mitigation for private wells and state small water systems. To comply with this, Santa Cruz County engaged a diverse Drought Response Working Group in a year-long stakeholder-driven process to develop the Santa Cruz County Drought Response and Outreach Plan (DROP). While the primary focus of the DROP was on outreach to inform residents relying on private wells and state small water systems about available services, some longer-term outcomes were identified with relevance to the Well Ordinance update.

As a part of the DROP development, staff conducted several mapping exercises, including identification of “problem areas” in terms of water quality and water supply. (The County General Plan and development ordinances also reference groundwater constraint areas that were originally mapped in 1978.) The Working Group raised the question of what measures the County would take, if any, to prevent new wells from being placed in “problem areas.” The rationale behind this is that areas with known water supply challenges where wells go dry should not be allowed to be further impacted by new users. The current Well Ordinance has provisions for denying well permits based on presence of unsuitable water quality but does not have any provisions for denying well permits based on limited quantity. Potential implications of water rights law should be taken into consideration.

Public Trust Protection

Recent Case Law

In recent years, there have been several significant California case law decisions that have addressed the application of the public trust doctrine to groundwater resources. The public trust doctrine is a common law principle that requires the state to protect certain natural resources for the benefit of the public, including navigable waters, beaches, and other coastal areas. In California, the public trust doctrine is enshrined in the state Constitution and applies to all waters of the state.

One case that has impacted county well permitting requirements is the 2017 California Court of Appeals decision in *Environmental Law Foundation v. State Water Resources Control Board*. The court held that the state’s system of groundwater management was inadequate to protect the public trust values of groundwater resources. The court found that the state has a duty to consider the public trust values of groundwater in its management and regulation of the resource and that the state’s current system of groundwater management did not meet that duty. This decision may have implications for county well permitting requirements by requiring more rigorous evaluation of the impacts of well pumping on groundwater resources and public trust values.

Protecting Our Water and Environmental Resources v. County of Stanislaus is a California Court of Appeals decision issued in 2018 that addressed the application of the California Environmental Quality Act (CEQA) to well permitting decisions by counties. CEQA is a state law that requires environmental review of certain discretionary projects, including those undertaken or approved by public agencies, to identify and mitigate potential environmental impacts. The court held that county well permitting decisions are discretionary and subject to CEQA review to determine if issuance of the well permit could potentially cause significant impacts to the environment or public health.

The implications of the Protecting Our Water decision for county well permitting requirements are that counties may need to conduct more extensive environmental review of well permit applications to ensure compliance with CEQA. Moreover, the Protecting Our Water decision may also require counties to consider the cumulative impacts of multiple well permits or other related projects on groundwater resources and public trust values. This means that counties may need to adopt a more holistic approach to well permitting that takes into account the overall impacts of well pumping on the local hydrology, ecosystems, and communities.

It's worth noting that the application of the public trust doctrine to groundwater resources is still evolving, and there may be further case law developments that impact county well permitting requirements in the future.

Specific Public Trust Values

The primary considerations when describing public trust values for Santa Cruz County are summarized in the following categories:

1. Surface water and aquatic ecosystems: In many parts of the county, groundwater resources are known to be interconnected with surface water resources such as streams, lakes, and wetlands, and provide essential base flow and cold water to these systems. This particularly crosses into Public Trust values where the waterways support threatened and endangered salmonids. The County should consider the potential impacts of well pumping on surface water flow and temperature. Wells located adjacent to smaller streams that do not support fish could still have impact on the flow of those small streams and adversely affect fish habitat in larger streams downstream.
2. Water quality: Well pumping can alter water quality by changing the rate and direction of groundwater flow, resulting in contamination or depletion of aquifers and other groundwater resources, or causing seawater intrusion. The County should consider the potential impacts of well pumping on water quality, including its impacts on groundwater recharge, water availability, and contamination risks.

3. Climate change adaptation and resiliency: Groundwater pumping challenges are expected to be further exacerbated by climate change, increasing drought and wildfire risks, and changing hydrological patterns. The County should consider climate change adaptation and resiliency in the ordinance development and provide for additional safeguards.

Fisheries Protection

On November 3, 2022, the NOAA National Marine Fishers Service sent a letter to the Santa Cruz County Board of Supervisors stating that:

South-Central California Coast steelhead, and Central California Coast coho salmon, listed as threatened and endangered (respectively) under the ESA, inhabit many of the navigable waterways (e.g., San Lorenzo River, Soquel Creek, Aptos Creek, Pajaro River) overlying the County, and should clearly be considered a public trust resource. We reiterate our view that groundwater development/extraction is likely currently impacting salmon and steelhead migration, rearing, and spawning habitat, and thus harming public trust resources. We urge the County to enact a discretionary permitting process for well construction and groundwater extraction within Santa Cruz County that appropriately considers and minimizes these impacts.

Although the County disputed some of the evidence for established interconnection of groundwater and surface water presented in the letter, it acknowledges that where interconnection is known or may exist, the updated Well Ordinance should be sufficiently protective of fisheries resources.

Groundwater Emergency Actions

Section 7.70.130 states:

A groundwater emergency shall be declared in areas demonstrated to be experiencing a groundwater overdraft exceeding the safe yield in order to prevent further depletion and degradation of water resources where such degradation threatens the public health, safety and welfare of the community and where the Board of Supervisors finds that adequate measures are not already being taken to alleviate the overdraft situation.

The above section was written before the passing of SGMA and requires reevaluation in light of the authorities now granted to the GSAs to manage groundwater. One consideration is to add the GSAs to the text as an entity that can recommend a groundwater emergency and serve as the likely source of the reports. Alternatively, the section could potentially be removed entirely, as the GSAs may make the County's role in groundwater management redundant. During the Drought Response Working Group meetings, it was recommended to clarify the "triggers" for a groundwater emergency, although this recommendation was not formally adopted.

Protection of Cultural Sites

The current Well Ordinance lacks provisions for tribal review or assessment of culturally sensitive sites. However, County Code Chapter 16.40, Native American Cultural Sites, recognizes the importance of protecting areas of significance for Native Americans and preserving their historic, cultural, educational, and scientific value. That chapter establishes regulations for the protection, enhancement, and perpetuation of Native American cultural sites to promote the public welfare and implement the policies of the County's General Plan and the Land Use Plan of the Local Coastal Program.

During a recent well permit application, a disconnect between the Environmental Health well permit review process and the recognition of cultural sites was brought to light. The update to the Well Ordinance should be consistent with Chapter 16.40. If necessary, language should be added to the Well Ordinance to require additional review and evaluation if a proposed well is within 500 feet of a mapped archaeological sensitive area.

It is required to engage with the Native American tribal representatives within the County to ensure that their interests and concerns are taken into account in the update to the Well Ordinance.

Borehole Drilling and Destruction

The current language in Well Ordinance 7.70 does not align with the standards set forth in Bulletins 74-81 and 74-90, which require permitting and agency oversight of soil boring construction and destruction. California State Water Code Section 13801 mandates that all well permitting agencies align with these Bulletins.

Regulatory oversight of borehole drilling and destruction is crucial to protect public health and groundwater. Improperly destroyed soil borings can create preferential pathways for contamination, which are routes of least resistance for fluid flow or more permeable features than surrounding materials. Disturbed sediments, unless properly compacted, are more porous and permeable than naturally deposited ones, making man-made preferential pathways a potential risk for groundwater contamination.

To address this issue, the Santa Cruz County Environmental Health Division is establishing a soil boring destruction program based on the Regional Water Quality Control Board (RWQCB) model ordinance, which was adopted in California State Water Code Section 13801. The model ordinance requires soil borings that intersect groundwater to be properly destroyed per the requirements in Bulletin 74-81 and supplemental Bulletin 74-90. However, depth to water is highly variable in Santa Cruz County, and it is also proposed that any boring that penetrates groundwater or is greater than 10 feet in depth would be regulated.

Moreover, the model ordinance does not provide a regulatory standard for borings advanced at a site with known or suspected contamination. To address this, adopting boring permitting

standards in the Well Ordinance will enable the agency to enforce state minimum standards while adopting additional standards to protect local conditions. Bulletins 74–81 and 74–90 Limitations of Standards state that “Local enforcing agencies may need to adopt more stringent standards for local conditions to ensure groundwater quality protection.”

Updates to State Bulletin 74, Well Standards

Section 7.70.090 incorporates by reference the standards contained in Bulletin 74 and any subsequent updates to that bulletin. The state is currently in the process of an extensive update of the bulletin, with a public review draft expected in winter 2025 and completion in Fall 2025. County staff are participating in that process and will identify any elements that should be potentially considered for explicit inclusion in the County Well Ordinance update.

Consideration of Agriculture and Disadvantaged Communities

Updates to the Well Ordinance should remain consistent with policies and regulations that aim to preserve agricultural lands, cultural heritage and economic diversity in Santa Cruz County. Agriculture is a major industry in the County and residents and workers that rely on agriculture for their income and livelihood represent diverse communities. When developing approaches to meet new requirements of local, state and federal agencies, consideration should be given to accessibility and feasibility of groundwater pumping for all County residents and workers.

Santa Cruz County agriculture has a gross market value of roughly \$600 million (Santa Cruz County Agricultural Commissioner Crop Report, 2021). Roughly 20% of the land is zoned for agricultural uses, with the majority being commercially irrigated crops.

Santa Cruz County plans and policies preserve agricultural land as an essential and irreplaceable resource for future generations. The Santa Cruz County Strategic Plan (2021–2023) includes a goal to protect and restore natural resources, including water, air, forests, coastline and agricultural lands. Chapter 5 of the Santa Cruz County Sustainability Update (adopted by the Board of Supervisors in 2022) includes policies and implementation strategies to preserve agricultural lands, limit conversion of these lands, and support the viability of small local farms. The preservation of agricultural land and support for the local agricultural economy is addressed comprehensively through the Zoning Ordinance and the Agricultural Land Preservation and Protection Ordinance.

While the average farm size in the County is about 100 acres, most farms are relatively small and many are family-based and/or owned by beginning farmers. Eighty percent of farms are less than 50 acres in size, and the median farm size is about 10 acres (USDA National Agriculture Statistics Service, 2017). Among the challenges that farmers navigate are increasing regulatory compliance, shortage of labor, shortage of available land, and market pressures. This has led to consolidation and centralization of many farming operations and further challenges the viability of small farms.

Santa Cruz County residents and workers that rely on agriculture for their income and livelihood represent diverse communities. Most farms and farmworkers are located in south Santa Cruz County, where residents largely represent economically disadvantaged communities and historically underserved populations (disadvantaged is defined by California Water Code as a community with an annual median household income that is less than 80% of the Statewide annual median household income). Many farmers lease their land. It is not known how/if responsibility for navigating the well application process, incurring costs of the application process, and costs of drilling the well, are assumed by the landowner or by the lessee. Current fee for a well construction permit is \$2,038 and costs of drilling a well are in the range of \$150-\$200 per foot.

The use of a tiered approach for CEQA review and protection of public trust values will help minimize the extent and cost of a well permit review where there is limited potential impact on public trust values, while still providing protective measures and more extensive review where there is significant potential for adverse impacts.

Summary of Update Recommendations for Consideration

1. SGMA and GSP Implementation:

- a. Require submittal of well permit applications for review by the GSAs and the affected water agencies. Consider exempting de minimis wells that meet specific criteria.
- b. Provide authority to deny well permits in groundwater injection exclusion zones or in other areas where the GSA determines that a well would be inconsistent with GSP implementation.
- c. Provide authority to require metering of all new non-de minimis wells, with specific standards and procedures to be developed by regulation.

2. Drought Impacts on Wells:

- a. Amend Chapter 7.73 to require a 72-hour yield test for wells serving new uses in designated problem areas, including those with hard rock geology (similar to current requirements in Monterey County).
- b. Define areas of limited water availability or degraded quality that present challenges to new and existing wells.
- c. Consider requiring testing for additional contaminants for new wells and/or IWS permits.
- d. Tighter yield and water quality requirements may limit installation and use of new wells in problem areas, but criteria to deny permits could be considered, along with issues of correlative water rights and potential implications of denying permits in problem areas.
- e. Establish a tiered approach to determine if there are likely to be impacts on existing wells. This approach could utilize information on groundwater

characteristics, setbacks, and pumping volumes similar to approaches used in Glenn County or Monterey County.

3. Public Trust

- a. Establish tiers for CEQA review: if certain criteria are met, the permit can be processed ministerially; additional tiers of review, evaluation and mitigation would be applied where there is greater potential impact on sensitive resources.
- b. Establish a tiered approach to evaluate and mitigate potential impacts on surface waters, taking into account stream setback, aquifer characteristics, proposed pumping volumes, depth of well seal, gradient, and value and sensitivity of the resource. Sonoma, Glenn and Monterey counties have all developed variations of tiered approaches which can inform the development of a tiered approach for Santa Cruz.
- c. Consider opportunities for more conservative protective measures and safeguards in anticipation of the declining groundwater resources and other impacts projected to result from climate change.

4. Groundwater Emergency

- a. Consider whether the County has more authority than a GSA to implement protective measures in the event of a groundwater emergency.
- b. Consider deleting or modifying the section on groundwater emergency to reflect the powers of SMA and the GSAs.

5. Protection of Cultural Sites: Add language procedures to ensure well permit applications are processed in compliance with County Code Chapter 16.40, Native American Cultural Sites.

6. Boreholes: Establish authority and standards for ensuring proper destruction of monitoring wells and soil boreholes to prevent pathways for groundwater contamination.

7. Updates to Bulletin 74, Well Standards: Monitor progress of the ongoing Bulletin 74 update for possible inclusion of elements in the county ordinance update.