



County of Santa Cruz



HEALTH SERVICES AGENCY ENVIRONMENTAL HEALTH DIVISION

Water Resources Program
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Well Ordinance Update Context

Purpose:

The purpose of this document is to outline the factors that should be understood when evaluating the necessity for and impacts of the proposed amendments to Santa Cruz County Code Chapters 7.70 and 7.73.

Limited Rural Growth:

- There is limited allowable growth in rural areas due to the 1978 Growth Management Initiative Measure J, as well as other factors that limit development such as roads, septic constraints, slope, and fire risk. These restrictions are incorporated into the General Plan, which was recently updated, and can't be changed without approval and adoption by the Board of Supervisors.
- None of the zoning to meet the Regional Housing Needs Allocation (RHNA) allotments are proposed for areas outside of municipal water supplies.
- None of the Groundwater Sustainability Plans in the County anticipate significant increases in pumping for rural or agricultural water users.

Limited new water use, mitigated by septic systems, recharge, and conservation:

- The County and Groundwater Sustainability Agencies estimates that a domestic user pumps between 0.3-0.5 acre-feet per year of water based on measured data from small water systems and the infrequency of large, irrigated landscapes throughout most of the rural parts of the county.
- Homes served by wells typically use onsite wastewater treatment systems (i.e., septic systems) which are estimated to recharge 90% of indoor water use, which is up to 70% of total water used. For a home that pumps 0.5 acre-feet per year, that means up to 0.315 acre-feet per year is recharged.
- New development and some redevelopments are already required to retain pre-development stormwater recharge onsite.
- The County's geology is heterogeneous and many areas have a prevalence of fine grained materials that limit recharge – making a blanket recharge mitigation program infeasible.

- A property already recharging pre-development stormwater, with a septic adding additional water, will see little benefits of additional small recharge projects, which must be properly maintained, and may compromise water quality.
- Permits for new water use in the County recently have been largely limited to domestic wells (approximately 10 well applications per year).
- New development and some redevelopment already require the installation of water saving devices and water efficient landscapes.
- Non-de minimis wells must already fill out a water conservation form and new de minimis wells will be required to fill out a water conservation form under the new permit as well.
- While there have been historical declines in groundwater levels, there are no parts of the County that are currently experiencing downward water level trends.
- New wells are not drawing from alluvium - in the last five years, only 7% of wells drilled are less than 200 feet deep and 73% are deeper than 300 feet.
- New large capacity wells are less common (0-2 per year) and still relatively small water users compared to other parts of the state (typically under 100 acre-feet per year).

Context for De Minimis Wells

- Wells are considered de minimis if they pump less than 2 acre-feet per year for domestic purposes. Any well proposed for non-domestic uses, even if the estimated water use is under 2 acre-feet per year, is not considered de minimis, and would require metering and reporting of water use.
- To ensure that individual parcels are not using excessive water, irrigated landscaping/gardening will be limited to ½ acre.
- Given that rural households typically use less than 0.5 acre-feet per year, shared wells serving up to four parcels with limited outdoor irrigation are Tier 1 and de minimis if they can meet the required setbacks.
 - Significant consideration and environmental impact evaluation was given to this decision, which is outlined in the Stream Depletion Analysis document.
 - The benefits of shared wells include reduced costs to property owners, reduced disturbance associated with drilling, and a greater ability to meet protective setbacks.
 - This is consistent with County policy on small water systems, which are 5 or more properties on a shared well and are already regulated by the County.
 - This is more protective than the Sustainable Groundwater Management Act, which uses 2 acre-feet per year as the threshold for de minimis but does not have exemptions for non-domestic uses.
 - This is consistent with the metering requirements in SCCC 7.70 for wells anticipated to use 2 acre-feet per year.

- This is consistent with fiscal responsibility, as non-de minimis well applications require significantly more staff time to evaluate and review. This staff time comes at the cost of other, more impactful resource management programs, and will likely not result in any significant environmental benefit.
- All permittees will be required to demonstrate efficient water use to ensure that household water use is within the County's estimates.

Ample monitoring:

- There are 482 groundwater monitoring locations, and 53 surface monitoring locations tracked on the [regional data management system](#). Note that not all of the sites are currently being actively monitored. Santa Cruz is the smallest County in California with the exception of San Francisco.
- The County has maintained a geodatabase for wells for over 20 years. Wells installed since that time have accurate spatial data and links to the well logs. Older wells are a mix of actual location, centroid of parcel, and centroid of grid location. The County has a grant to improve the legacy data quality and will be using innovative AI approaches to be more efficient with staff time.
- New and replacement wells pumping over 2 acre-feet per year or supporting over ½ acre of irrigated landscape will be required to meter and report water use.

Limits to Additional Monitoring and Modeling:

- Outside of the limited alluvial groundwater basins in the County, using representative monitoring points to inform groundwater management and the impacts of wells is of limited utility, as demonstrated by the Santa Cruz Mid-County Groundwater Agency.
- Detecting depletion from pumping lower aquifers in the field is not possible, as demonstrated by the significant monitoring for depletion caused by the Soquel Creek Water District Main Street Well.
- There are three numerical models in the County. To estimate the impact of a single well costs around \$6,000 per model run. If the well is within 100 feet of a stream it will likely over-estimate the impact of that well. The parts of the County without alluvial basins or marine sedimentary rock are mostly fractured crystalline rock, which is not suitable for the development of a numeric model.

Adaptability of Proposed Approach

- The approach taken by the County is to have the County Code point to Policy for concerns such as water conservation and resource protection, rather than to have those guidelines adopted within the Code itself.
- While the Code takes approximately two years and upwards of \$200,000 to update, policy updates can be brought to the Board of Supervisors for adoption in a matter of months.

- This allows for adaptive management over time as new information becomes available.

Allowable Depletion Limits:

- Santa Cruz County estimated current depletion from every major salmonid bearing stream that is or may be interconnected with groundwater more than 5% of the time using methodology recommended by the Nature Conservancy with the Natural Flows Database, stream gauges, and known surface water diversions.
- Setback and seal depth requirements were determined for Tiers 1-2 that will limit the direct depletion from streams by new de minimis or replacement wells.
- Using thresholds protective of species lifecycles, the County calculated the additional allowable depletion for Tier 3 wells. Tier 4 wells would require additional analysis.
- Tiers 1-3 are designed to limit the cumulative impacts of pumping to keep cumulative depletion below the allowable depletion thresholds.
- Tier 4 are Discretionary review and thus trigger CEQA.

Karst Protection

- Non-de minimis wells proposed in an area likely to experience solution caverns are automatically included in Tier 4. De minimis wells are exempt from this requirement.

Legal Landscape

- *Barstow v. Mojave Water Agency* (2000): The California Supreme Court emphasized that water right priority is a fundamental principle in California water law. It affirmed that overlying property owners have the right to use water reasonably and beneficially.
- *Environmental Law Foundation v. State Water Resources Control Board* (2018): The Appellate Court found that the state has a duty to consider the public trust values of groundwater in its management and regulation of the resource. It does not prohibit impacts on Public Trust Resources.
- *Protecting Our Water and Environmental Resources v. County of Stanislaus* (2020): The California Supreme 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.

Water Quality:

- Currently, Public Community Water Systems are required to test for around 100 contaminants at the time of development and must test for over 70 contaminants on a regular basis. Based on the system location, other contaminants may be added.
- Water Quality testing of any kind for the development of an Individual Water System (IWS, also known as a domestic well) has only been required since the 1980s.
- In Santa Cruz County, domestic wells are currently only required to test for the following contaminants with primary drinking water Maximum Contaminant Levels (MCLs)- bacteria,

nitrate, total dissolved solids, chlorides, as well as iron and manganese which have secondary MCLs which affect color, odor, and taste.

- There are many contaminants, naturally occurring and/or resulting from human activities, that can impact the water quality in an IWS. For example, the County is known to have elevated levels of contaminants such as arsenic and hexavalent chromium (typically associated with the movie Erin Brockovich).
- Residences on an IWS are not typically required to do any testing after the completion of the well.
- This means that most of the over 8,000 households with an IWS are drinking water that has never had comprehensive testing, which may present a health risk.
- The update to SCCC 7.73 is addressing this through the requirement that all new and replacement wells intended to be used as an IWS get tested for the full common range of contaminants (known as “Title-22” which is a reference to Chapter 15 of Division 4 of Title 22 of the California Code of Regulations) as well as any additional tests recommended by the County based on the location of the well. Treatment may be required for some exceedances, and in that case, the requirement for treatment would be recorded on the Deed.
- Additionally, there will be a time-of-sale requirement that any household receiving its water from an IWS must test for Title-22 contaminants, and that the results are provided to the buyer through the Disclosures, as well as to the County. No requirement for treatment is included, that is something the buyer can negotiate with the seller. The requirement is waived for properties that have had comprehensive testing within three years of the sale date.

Drought resilience/supply protection:

- Climate change has altered the way water recharges local aquifers, a pattern that is expected to continue into the future.
- The geology of the County is extremely complex and some areas have a naturally limited supply of groundwater. Property owners and buyers may not be aware that their well is vulnerable to water shortages based on location.
- Senate Bill 552 includes requirements for drought response and planning on the part of counties when it comes to domestic wells.
- Given the importance of a secure water supply for rural households, the update to SCCC 7.73 will require more extensive yield testing during well development in areas mapped as “Groundwater Concern Areas.”
- Additionally, yield testing will now be a requirement for homes relying on an IWS for water supply at time-of-sale. The results of this testing must be included in the Disclosures. No restrictions on sale will be placed on properties based on the results, but it may impact negotiations between buyer and seller.