



# County of Santa Cruz



## HEALTH SERVICES AGENCY ENVIRONMENTAL HEALTH DIVISION

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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.

### **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 a vote of the people.
- None of the zoning to meet the 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 AFY 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.
- Most homes served by wells are also on 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 AFY, that means 0.315 AFY is recharged.
- New development and some redevelopment 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 marginal 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 requires 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 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 AFY).

#### **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 2AFY 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 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 a few different 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:**

- The work from Sonoma County, cognizant that there will be some impact to streamflow, determined that 10% depletion is acceptable in coho salmon bearing streams, and 20% depletion is acceptable in steelhead bearing streams.
- 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 gages, and known surface water diversions.
- Using thresholds protective of species lifecycles, the County calculated the additional allowable depletion for Tier 1-3 wells. Tier 4 wells would require additional analysis.
- Setback and seal depth requirements were determined for Tiers 1-3 that will limit the direct depletion from streams by new or replacement wells.
- Tier 4 are Discretionary review and thus trigger CEQA. Sometimes wells are exempt but likely they would result in an IS/MND that the County would likely lead. The applicant would have to provide the analysis of surrounding impacts as part of informing the IS (as outlined in Tier 4). I have to dig into this a little, but I know that when the Planning department does an IS/MND for development projects they also require a CDFW review, so I think that may be required for at least some of these cases as well.
- Tiers 1-4 are designed to limit the cumulative impacts of pumping to keep cumulative depletion below the allowable depletion thresholds.

### **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*: 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*: 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. It does not prohibit impacts on Public Trust Resources.

- *Protecting Our Water and Environmental Resources v. County of Stanislaus*: 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.

### **Fiscal Responsibility**

- Every dollar and every minute of staff time spent on increasingly complicated analysis comes at the direct cost of other water management activities.

### **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) 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.