



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404-4731

August 26, 2014

Nathan Quarels
Sonoma County Permit and Resource Management Division
2550 Ventura Avenue
Santa Rosa, California 95403

Dear Mr. Quarels:

This letter transmits NOAA's National Marine Fisheries Service's (NMFS) general comments on Sonoma County's preliminary draft Well Ordinance, received via email from Jennifer Barrett on August 11, 2014. NMFS appreciates Sonoma County's (County) support for and commitment to protecting and conserving Federally-listed threatened and endangered salmonids within the County's rivers and streams. The County has been an effective partner with NMFS on the ongoing implementation of the Russian River Biological Opinion, and we greatly appreciate the County's generous support for salmon recovery planning efforts. Similarly, NMFS applauds the County's proactive mindset toward developing Groundwater Management Plans (GMP) for the various major aquifers throughout the county. Yet, notwithstanding these environmentally progressive efforts, NMFS is concerned that the County's draft Well Ordinance and ministerial permitting process for groundwater well drilling is lacking important measures necessary to safeguard steelhead and salmon populations from unauthorized take or habitat degradation. The purpose of this letter is to bring to your attention the likely consequences of the County's current limited oversight of well drilling and water extraction on summer stream flows in the County, and their effects on critical habitat for steelhead and salmon and the County's future environmental quality.

Groundwater can either augment or diminish streamflow (USGS 1998). Where a groundwater aquifer supplements streamflow, the influx of cold, clean water can be of critical importance to maintaining adequate water temperature and flow volume, especially during summer dry periods. Pumping unsustainably from these aquifer-stream complexes can lower groundwater levels and interrupt the hyporheic flow between the aquifer and stream. When this happens, summer streamflow can recede and water quality degrades to the point where individual juvenile steelhead and salmon suffer (Newburn *et al.* 2011). This relationship likely occurs within many watersheds with extensive agricultural operations and rural residential/industrial development. The potential for any County-permitted project to cause these impacts or exacerbate an already stressed situation should be adequately investigated and analyzed prior to permit issuance.



If well pumping affects the aquifer-surface flow connection, then that pumping must legally have an appropriative water right. Unfortunately, wells are typically permitted, dug, and become operational before proper analysis is done to ascertain whether an appropriative water right is required. Landowners often assert that their well pumps only “groundwater”, which does not require an appropriative water right unless it is later determined to be from subterranean flow in a known and definite channel (*i.e.*, connected to surface flow). However, after a well is dug, an analysis of its hydrologic source often does not occur. Thus, the end result of granting ministerial well permits absent groundwater aquifer analysis is the steady, cumulative loss of summer baseflow and the attendant disappearance of associated aquatic resources, including nursery habitats for steelhead and salmon.

The County permitting process for groundwater wells is currently a ministerial process with no analysis or consideration given to groundwater availability and potential impacts to adjacent streamflow. Wells for rural residential use or agriculture can place an enormous strain on groundwater aquifer levels, which can in turn lower summer baseflows where aquifers and streams are hydrologically connected. The stated purpose of the draft Santa Rosa Plain GMP is to “proactively coordinate public and private groundwater management efforts and leverage funding opportunities to maintain a sustainable, locally-managed, high-quality groundwater resource for current and future users, **while sustaining natural groundwater and surface water functions** (emphasis added).” Sustaining surface water functions (including preserving habitat for imperiled aquatic species, such as salmon and steelhead) requires not just groundwater and streamflow monitoring through a GMP, but utilizing that information to inform where and when further groundwater development is consistent with the stated goal of sustaining natural groundwater and surface water functions. This information should be considered during the well permitting process, prior to issuing a well drilling permit in Sonoma County.

Recent California Superior Court decisions (*e.g.*, Scott River) found that the Public Trust Doctrine protects stream and rivers from harm caused by extracting groundwater when that extraction adversely affects public trust uses (*Environmental Law Foundation, et al. v. State Water Resources Control Bd., et al.*, Case No. 34-2010-80000583, July 14, 2014). The court also determined that Siskiyou County, as a subdivision of the State, must consider public trust resources when issuing groundwater well drilling permits. In fact, the Governor of California’s draft Groundwater Workplan¹ considers local groundwater management (*e.g.*, counties), with State backing, to be the optimal regulatory framework for effective groundwater management in California. NMFS recommends the County adequately analyze stream flow impacts that are likely to occur as a result of its permitting activities. As an important first step, the County should perform CEQA review and adequately analyze groundwater/surface flow impacts before issuing well drilling permits, an action that should be viewed as discretionary. Secondly, County grading permits should only be issued after the County considers any potential effects caused by likely groundwater development or direct “riparian” stream flow diversions that may follow the permitted grading activity— that way, irreversible landscape alteration can be avoided if adequate water supplies do not exist.

¹ Information on the Governor’s Groundwater Workplan can be found at http://www.waterboards.ca.gov/water_issues/programs/groundwater/workplan.shtml

In closing, NMFS is concerned that the County's current permitting processes inadequately analyze potential impacts to steelhead, salmon and their habitats from groundwater and surface flow extraction that stem directly from grading activities and well drilling in Sonoma County. We look forward to working with the County in seeking solutions to these issues that will protect listed fish and other Public Trust Resources while ensuring a thriving, sustainable local economy in the years to come. If you have any questions or concerns regarding this letter, please reply to Rick Rogers at 707-578-8552 or rick.rogers@noaa.gov for further assistance.

Sincerely,



Lisa Van Atta
North Central Coast Office Supervisor
California Coastal Area Office

cc: Scott Wilson, DFG, Yountville
Eric Larson, DFG, Yountville
Grant Davis, SCWA, Santa Rosa
Tennis Wick, Sonoma County PRMD, Santa Rosa
Tony Linegar, Agricultural Commissioner, Santa Rosa

Literature Cited

- Newburn, D. A., N. Brozovic, and M. Mezzatesta. 2011. Agricultural water security and instream flows for endangered species. *American Journal of Agricultural Economics* 93(4): 1212-1228.
- USGS. 1998. Ground water and surface water: A single resource. U.S. Geological Survey Circular 1139. Denver, Colorado. 87 pp.