



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

December 2, 2013

In response, refer to:
151416SWR2013SR00140

Tony Linegar, Agricultural Commissioner
County of Sonoma
133 Aviation Boulevard, Suite 110
Santa Rosa, California 95403

Dear Mr. Linegar:

Please accept these comments from NOAA's National Marine Fisheries Service (NMFS) to the Sonoma County Agricultural Commission (Commission) regarding proposed agricultural development within certain watersheds in Sonoma County.

NMFS is responsible for the protection, maintenance, and recovery of anadromous salmonids listed as threatened or endangered under the federal Endangered Species Act (ESA). In your role of recommending conditions to mitigate impact on agricultural land uses, we would appreciate your consideration of the potential impact vineyard-related well pumping and direct stream diversions may have on ESA-listed salmonids or their critical habitat. We have previously commented on this issue in our letters to the Commission dated May 21 and July 31, 2013.

The direct diversion of surface flows can lower flow levels and stress rearing salmon and steelhead; groundwater pumping can also impact stream hydrology (USGS 2012). Alluvial aquifers are often interconnected to surface flow and, depending on geologic and morphologic constraints, can either augment or diminish that flow. Where the 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 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 degrading water quantity and quality to the point where juvenile steelhead and salmon may not survive.

We offer the following specific comments regarding currently proposed vineyard development on the following parcels within Sonoma County:

**Parcels 075-010-003, 130-270-005, 076-100-003, 077-020-050, 061-040-047
and 061-030-015 (Green Valley Creek watershed).**



As noted in our May 21, 2013, letter, the Green Valley Creek (GVC) watershed harbors federally endangered Central California Coast (CCC) coho salmon (*Oncorhynchus kisutch*) and threatened CCC steelhead (*O. mykiss*), and their designated critical habitat. Restoring riparian and instream habitat and flows within the GVC watershed is a critical component of NMFS' recovery strategy for CCC coho salmon (NMFS 2012), and substantial funding and resources are currently being invested towards that goal. We encourage the Commission to investigate and ensure that new vineyard development does not impair stream flow dynamics within Sonoma County watersheds containing salmon and steelhead, especially watersheds critical to coho salmon recovery (e.g., Green Valley Creek).

Parcels 120-010-008 and 132-150-001 (Maacama Creek watershed)

Maacama Creek, an important tributary for coho salmon and steelhead located in eastern Sonoma County, already suffers from vineyard-related stream flow depression during both summer and winter months (Deitch *et al.* 2007). The proposed development of 27 acres of new vineyard and orchard will likely further stress limited water supplies in the Maacama Creek watershed to the detriment of threatened CCC steelhead and endangered CCC coho salmon. Please require conditions to minimize and mitigate these potential impacts.

Parcel 090-040-003 (Wine Creek)

The Sonoma County Water Agency recently funded substantial instream restoration on both Wine Creek and Grape Creek, of which Wine Creek is a tributary. Low summer base-flows are a problem within the Grape Creek watershed. To minimize summer water diversions and improve streamflow levels, restoration funding recently helped an existing vineyard landowner install an off-channel pond to supply his irrigation needs, thus allowing him to dismantle and remove his antiquated flashboard dam and instream pump. The proposed 10 acre vineyard development within the upper reaches of Wine Creek should also mitigate for water diversion to avoid negating recent restoration gains. We urge the County to fully evaluate potential impacts to the existing Wine Creek hydrology prior to permitting additional vineyards in the watershed.

The discussion above does not represent an exhaustive list of troublesome vineyard development, but merely highlights some of the more obvious proposals where large development acreage overlaps with watersheds critical to salmon and steelhead recovery. NMFS urges the Commission to require adequate analysis of these proposals and their associated potential streamflow impacts, including an assessment of cumulative water-withdrawal effects, as part of their permitting process.

We appreciate the opportunity to work with your office to promote and protect agriculture, the environment, and public welfare in concert with protecting ESA-listed salmonids and their habitat. We are available to provide technical assistance for development that may impact federally protected species.

If you have any comments or concerns regarding this letter, please contact Rick Rogers at 707-578-8552, or rick.rogers@noaa.gov.

Sincerely,



Joyce Ambrosius
Acting Office Supervisor
North-Central Coast Office

cc: Scott Wilson, California Department of Fish and Wildlife, Yountville
Matt St. John, North Coast Regional Water Quality Control Board, Santa Rosa
Sonoma County Board of Supervisors (Attn: Supervisor Chair David Rabbitt), Santa Rosa

Literature Cited

Barlow, P.M., and Leake, S.A. 2012. Streamflow depletion by wells – Understanding and managing the effects of groundwater pumping on streamflow: U.S. Geological Survey Circular 1376, 84 p.

Deitch, M.J., G.M. Kondolf, and A.M. Merenlender. 2007. Hydrologic impacts of small scale instream diversions for frost and heat protection in California wine country. River Research and Applications 23:1-17.

NMFS. 2012. Final Recovery Plan for Central California Coast coho salmon Evolutionarily Significant Unit. National Marine Fisheries Service, Southwest Region, Santa Rosa, California.