



INSTITUTE FOR CONSERVATION ADVOCACY RESEARCH AND EDUCATION

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The Institute for Conservation Advocacy Research & Education, (ICARE) established in 2004, is a non profit community-based organization located in Napa County, California. ICARE's mission is to restore and conserve the biological integrity and ecosystems health of watersheds, the Napa River estuary and the greater San Francisco Bay Area through science-based advocacy, research and education.

January 30, 2024

Napa County
Planning Building and Environmental Services
Jamison Crosby

Re: Sustainable Groundwater Management Act/SGMA
Groundwater Sustainability Plan/Work Plans for implementation of groundwater sustainability

Comments:

Work Plan 1: Groundwater Pumping Reduction Plan/GPR

1. Real time stream gauging will provide accurate information about when, where, how and who regarding stream dewatering due to groundwater/GW pumping. We need to know in real time when groundwater dependent eco-systems are being dewatered not weeks or months after the fact. The Work Plan must not delay groundwater pumping reduction mandatory actions after the fact, which doesn't avoid stream dewatering and harm to groundwater dependent eco-systems/GDEs.
2. The GSA is only reading stream gauges a few times a year. This practice must change and the data should be analyzed, weekly during migration, spawning and rearing of salmonids to make sure the fish are in good condition to live out their life cycle in GDEs. Add a map of pumping frequency along with the life cycle of salmonids to show the public how vulnerable salmon and steelhead are during the high pumping cycles that occur for agriculture/grape vines/viticulture industry.
3. Groundwater pumping in the Napa Sub-Basin is exceeding our sustainable yield since 2015 by more than 3,000 ac/ft/yr. Therefore, regulations must be implemented to reduce groundwater pumping, yet this work plan is still calling for voluntary actions and incentives to reduce groundwater pumping. Voluntary actions don't work and this was

proven during the drought emergency of 2012-2017 and 2020-2022, when not one wine grape grower in Napa County volunteered to reduce surface water diversions and groundwater pumping when called upon to do so in a voluntarily program developed by the Department of Fish and Wildlife. During these years the Napa River was tragically dewatered killing all living aquatic animals and harmed GDEs. Additionally, this Work Plan may call for a 10% reduction in groundwater pumping but that was assuming that 15,000 ac/ft/year sustainable yield was occurring. Now that we have over 18,000 ac/ft being pumped/yr since 2015, this exceeds our sustainable yield by over 3,000 ac/ft/year. Therefore, a higher than 10% reduction in pumping needs to occur. If we don't increase the groundwater reduction pumping we are harming GDEs, year after year and causing harm to endangered and threatened species of the Napa River and Napa Sub-Basin. Dewatering GDEs is an unreasonable result not allowed in SGMA.

4. In management of vineyards (where 76% of groundwater pumping occurs for grape vines) add best management practices such as: year around cover crop, no till, dry farming, mulching/chipping (also reduces green house gases by not burning), bio-dynamic farming and turning OFF groundwater drainage tile infrastructure, that pipes groundwater to the River for fast discharge of percolated groundwater into stormwater runoff. These best management practices will all improve groundwater percolation and recharge and improve the health of the soil for increased percolation.
5. Add a discussion about dry wells in Napa County. Add the total dry wells in the County and their locations. Map all dry wells to show the severity of groundwater pumping and it's impact on residents and disadvantaged communities.
6. Show maps of disadvantaged communities. Add a discussion about how groundwater depletion impacts disadvantaged communities.
7. Transparency in discussing thresholds of significance for mandatory reducing of groundwater pumping due to 'undesirable results' occurring needs to be added to the Work Plan. Developed objectives and regulatory management and implementation of mandatory groundwater pumping reduction is not discussed in the this Work Plan and instead the emphasis is on voluntary groundwater pumping reduction and incentives to reduce groundwater pumping. The public needs to see this information as to the nuts and bolts of groundwater pumping reduction implementation within the Work Plan.

Work Plan 2: Conservation

8. Groundwater is used by humans for fishing, swimming, recreation and potability. Fish and other wildlife use groundwater dependent eco-systems to forage, migrate, spawn and rear the young of the year fish. Therefore, add this to groundwater users. This is where the Public Trust must be part of conservation planning to ensure that people can fish, swim, recreate and use GDE's for potable water and ceremonies for indigenous people (a disadvantaged community).
9. This Work Plan is void of groundwater recharge importance, discussion, locations, etc. To reach groundwater sustainability, recharge must be a critical element of groundwater sustainability. That the Groundwater Sustainability Plan/GSP and Work Plans omit this, is a tragedy in the making. ICARE recommends groundwater recharge projects, including

nature based recharge, be added to this Work Plan. Because this Work Plan omits groundwater recharge as a project, this becomes a Public Trust issue and the Plans lack transparency about the whole picture of what's happening to groundwater levels in the Napa Sub-Basin. Pumping groundwater is depleting groundwater storage levels and additionally, groundwater recharge is being interrupted in the watershed from: lack of year around cover crop, deforestation, other urbanization, vineyard drainage tiles causing stormwater instead of allowing percolating of rainfall for recharge, deep ripping removing rocks (prolific in the Atlas Peak volcanic soils) that help capture percolating water for recharge, submerged drainage tiles, destruction of GDE by draining, channelizing, piping pumping.

Work Plan 3: Groundwater Dependent Eco-systems/GDEs

10. This Work Plan is void of accurate scientific information about stream definitions. The Work Plan characterizes streams as either perennial or intermittent and then wrongly attaches an ecological ranking number (1-10) to the importance of these streams as defined for the purpose of determining the locations of intensive GDE dual monitoring well locations. This is a critical flaw in the Work Plan to protect GDEs because it fails to establish the correct definition of streams and their ecological values accordingly. The Department of Fish and Wildlife and National Marine Fisheries defines streams as 1st, 2nd or 3rd class based on historical hydrologic and scientific information. Because the Work Plans define streams as intermittent or perennial is passing along disinformation about the stream's ecology and importance to the Napa Sub-Basin as GDEs. This incorrect/mis-information about the Napa River watershed makes false information about a stream's ecological value. Example: the Work Plan defines Suscol Creek as an intermittent stream but then maps it as a steelhead migration corridor stream. Because the stream is said to be intermittent, it paints the picture to expect it to be dry and therefore groundwater pumping is less likely to be considered a factor in GDE dewatering. These Work Plans side step the fact that all the class 1 streams in the Napa Sub-Basin historically flowed year around even in drought conditions and provided flows for salmon. ICARE has been doing snorkel surveys in the Napa River since 2000 and 2/3rds of the class 1 streams are dewatered by a combination of groundwater pumping and water diversions, thereby causing hydrologic modification of fish habitats. All the GDE ranking of streams that the Work Plans has created must be redone with the correct terminology based on historical data not current impressions of streams being intermittent because all the intermittent streams identified in this Work Plan are actually Class 1 fish bearing streams that have been hydrologically altered by human impacts of diversions and groundwater pumping. Consultation with National Marine Fisheries Service/NMFS and the Department of Fish and Wildlife/DFW to correct the 'ranking' and definition of streams is needed in order for the Work Plans to properly state how intensive dual monitoring of GDEs locations should proceed if at all. An 'ecological ranking' by the Work Planners is being done with no science about blue line streams being fish bearing streams historically and currently which means they are ecologically rich in biodiversity and are not intermittent or class 2 and 3 streams as depicted in the Work Plan 3 and unworthy of surface water and groundwater intensive monitoring.

11. Stream incision is mentioned but not discussed throughly. This is very important to have this discussion in the Work Plans. Deforestation from vineyard development in the watershed is one of key causes of the Napa River being deeply incised. Why is this important? Deforestation in the watershed is directly related to groundwater recharge declining because rain where once there was a forest would percolate into groundwater and then recharge the Napa Sub-Basin. When deforestation occurs, rain becomes runoff and causes increased rates of runoff which erode the bed and banks of streams and then the Napa River-hence we now have a deeply incised Napa River. Add: a.) a discuss about storm water runoff caused by deforestation b) diminished recharge and how this impacts groundwater recharge c) discuss erosion to bed and banks for the streams and Napa River from increased rate of runoff d) what happens to groundwater levels from this incision process? It is vital that the public is informed of this information in the Work Plans or again it is a violation of the Public Trust.
12. Add the Public Trust Doctrine to the Work Plan resource list.
13. Add Outreach and education in Spanish.
14. In all references to benthic macro-invertebrate and steelhead monitoring information by Dr. Charley Dewberry add the Institute for Conservation Advocacy Research and Education/ICARE as the founder and our projects he wrote about. ICARE is an important groundwater stakeholder in Napa County and worthy of being added accordingly, just like the RCD is mentioned over and over again.
15. Consult with Jake Rugyt, as a local native plant expert botanist, and be advised by his recent native plant book printed in 2020; Plants of Napa County California; Including a Discussion of other Ecological Relationships. Jake has studied GDE's and their plants for many years and has critical plant data on this, to prevent omissions of important plants that help designate GDE in the Work Plan.
16. Add critically important streams as ecologically significant: Bear Creek known to have the highest benthic macro-invertebrates known to BMI taxonomy (Bob Wiseman from Aquatics Associates taxonomy).
17. Discuss freshwater harmful algal blooming/FHABs in GDE, and how low flows and dewatering causes the acceleration of harmful algal blooms which may cause toxic algal blooming to occur imperiling the public and water supplies for Napa.
18. Discuss why the Napa GSA is not responsible for including the Napa Sonoma Valley aquifer designation as the Napa Sub-Basin 2-002.01 as delineated the Department of Water Resource's website? The GSA should take responsibility for a GSP and Work Plans in the Napa Sonoma Valley aquifer. Sonoma formed a GSA for this aquifer due to it being a medium designation for groundwater sustainability requiring a GSP. Accordingly, Napa and Sonoma share this aquifer and should be doing GSP shared planning for sustainability since Napa grape growers are using this aquifer for pumping groundwater to vines.
19. Add: Ecological valuation of nature based groundwater recharging, implement recommendations of the California Ecological Flows Framework/CEFF's recommendation to improve the health of GDEs, dry farming, real-time stream gauging and mandatory groundwater reduction pumping of 20% due to current groundwater pumping that is exceeding the sustainable yield of 15,000 ac/ft/year vs. 18,150 ac/ft/year or over 3,000 ac/ft/year, no till, year around cover crop, chipping of clippings, turn off drainage tiles, GDE protection with timely, frequent and increase groundwater metering and data collection with analysis at least 2x/month during the dry season, add 23 dual

intensive GDE meters/gauges for more data to determine accurately the health of GDEs to reach sustainability by 2040 vs. *the current Work Plans of voluntary incentivized groundwater reduction pumping, adding more monitoring sites with dedicated wells and more intensive dual monitoring sites of GDEs that is unfortunately based on false stream ecological characteristics to rank for monitoring of GDE selections; improved soil absorption, conservation efforts and improved irrigation technology is a watch and wait for more data while our streams and River continuously go dry, the public trust is violated and the special ecology of the Napa River Sub-Basin aquifer continues to decline.*

In Collective Protection of Mother Earth, So All May Live On,

Chris Malan

Executive Director

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