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October 8, 2021

Diane Riddle, Assistant Deputy Director
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

SUBJECT: September 22, 2021 Mill Creek Drought Emergency Regulation Follow-Up

Dear Ms. Riddle,

We are writing to provide additional background information as a follow up to comments made by Julie Zimmerman at the September 22, 2021 SWRCB meeting regarding Mill Creek drought emergency regulation and State Water Resources Control Board Resolution No. 2021-0038. This letter serves as a high-level overview of several critical issue areas related to the management of flows on Mill Creek, with embedded links to existing technical memos, studies, and other relevant contextual information.

Existing gage infrastructure on Mill Creek has been sufficient for supporting the relatively simple management scheme for Mill Creek water rights which dates back to the 1900s. However, as TNC seeks to dynamically manage its water rights to achieve multiple ecological benefits both in Mill Creek and via flow transfers further downstream on the Sacramento River, the existing gage data has proven to be unreliable and inadequate. A detailed description of the issues at hand is provided here, but to summarize:

- The only gage downstream of Los Molinos Mutual Water Company (LMMWC) points of diversion is consistently inaccurate and widely viewed as unreliable due both to the geomorphologic characteristics of its location and the fact that it is separated from LMMWC's points of diversion by suspected gaining and losing reaches.
- Ward Dam is an optimal location for a new flow gage because it is an engineered structure not prone to the bed-shifting conditions.
- TNC contracted Davids Engineering to perform an extensive feasibility analysis and eventually develop a flow gaging approach for Ward Dam which would accurately capture flow levels through all flow pathways (including through the fish bypass channel, contrary to the comments made by Bill Hardwick at the September 22, 2021 meeting).
- TNC contracted Davids Engineering to perform weekly spot flow measurements at Ward Dam throughout the 2021 irrigation season. These measurements have shown that the downstream MCH gage has been inaccurate much of the time, sometimes by up to 30cfs.
- Importantly, TNC's proposed gaging approach would represent flow through the fish bypass channel separately from the fish ladder and main spillway. TNC believes that the fish bypass flow should be the responsibility of all Mill Creek water rights holders and should not count towards the amount of water that TNC is choosing to leave instream; TNC views its instream flows as part of the baseline, to which the fish bypass flows should be added. Without understanding the specific amount of water in the fish bypass channel, it is not possible for LMMWC to fulfill its duties as Watermaster by allowing TNC's full water rights allocation to remain instream.

In addition to trying to improve flow accounting within Mill Creek, TNC has invested considerable time and resources into identifying opportunities to ease water stress within the LMMWC service area through expanded conjunctive use, on-farm water efficiency improvements, and irrigation delivery system improvements:

- Expanded conjunctive use: In partnership with CADWR, LMMWC, and CDFW, TNC is orchestrating a groundwater level impact analysis ('Impact Analysis') to determine the feasibility for expanding the existing conjunctive use program which allows LMMWC to exchange credits received from forgone Mill Creek diversions for groundwater from wells on the Dye Creek Preserve, which TNC manages. The Impact Analysis will conclude data collection in November 2021, but initial groundwater level trends suggest that adding an additional extraction well on the Dye Creek Preserve to expand the conjunctive use program will not have appreciable impacts on local groundwater resources, indicating the program would be feasible. However, for the program to benefit instream flows, LMMWC must agree to translate additional groundwater extraction capacity to increased flows in Mill Creek, a commitment that LMMWC has so far been unwilling to make.
- On-farm water efficiency improvements: TNC also commissioned a 2014 analysis by Davids Engineering to identify and prioritize on-farm water efficiency improvements for the Dye Creek Preserve. However, TNC has not invested in these improvements because LMMWC has not agreed to translate these water-saving measures to increased flows in Mill Creek.
- Irrigation delivery system improvements: Earlier this year, TNC submitted an FRGP grant application on behalf of LMMWC seeking funding for implementation of some of the water use efficiency measures identified in a 2019 Davids Engineering analysis that identified irrigation delivery and on-farm water efficiency measures that could be implemented across the LMMWC service area (LMMWC Northside Water Use Efficiency Master Plan, or 'Master Plan'). The measures identified in the Master Plan have the potential to save thousands of acre-feet of water annually, but again, these improvements will only translate to increased instream flows in Mill Creek if LMMWC agrees to reduce its diversions in relation to efficiency increases.

TNC's continued involvement, support, and investment in any of these opportunities is contingent on a commitment from LMMWC to translate these benefits into increased flows in Mill Creek. We strongly believe that any public funding made available to help improve LMMWC's system be contingent on this outcome. TNC will continue to work in collaboration with LMMWC and State Agencies to improve and modernize flow accounting on Mill Creek and water use efficiency within the LMMWC service area. We appreciate support from the SWRCB as we tackle these complex issues.

Sincerely,

Michael McFadden
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California Chapter, The Nature Conservancy

Julie Zimmerman
Lead Scientist, Freshwater
California Chapter, The Nature Conservancy

CC: Jason Roberts, Environmental Program Manager, California Department of Fish & Wildlife