April 7, 2013

Felicia Marcus, Chair
Thomas Howard, E.D.

Re: State Water Resources Control Board Revised Sections 6.2, 6.9, and 7 of the North Coast Instream Flow Policy Substitute Environmental Document

Dear Ms. Marcus and Mr. Howard:

Please make these comments a part of the official administrative record in the consideration of changes to the policy to maintain instream flows in northern California streams -AB2121 (hereafter, the revised policy). Thank you for your consideration of these comments and for your work on this important issue. The public is anxious that the state address the over appropriated conditions of the north coast streams through a comprehensive and integrated approach that properly anticipates and avoids potential new impacts on stream flows.

Protection of Listed Species

The State has the affirmative duty to regulate water development activities such as licensing and permitting of diversions from surface waters and regulation of unreasonable use of ground water. Water use that harms listed species, whether it be authorized direct diversions or authorized groundwater pumping would be unreasonable. Arguably permitted uses have already caused harm and the problem must not inadvertently be made worse through aspects of this new policy.

National Marine Fisheries Service-NOAA

The State must, in the context of low budgets and continuing harm to listed species, require that applicants provide credible and verifiable evidence that the State's water will not be further degraded or impaired by planned water use. The State must conduct the independent peer review of the applicants' information, as opposed to carrying out the investigations themselves, in order that the State fulfills its duty to rigorously consider the public trust and avoid contributing to take of listed species by its permit program.

Impacts of Groundwater and Surface Water Connection is Not Speculative

The revised policy states that, "[a] switch to groundwater pumping could cause a delay in surface flow depletion, which could in turn cause a significant, adverse, environmental impact, particularly if the delayed reduction in flows occurs during the summer months. For the reasons set forth in the Supplement to Appendix D, however, this potential impact is ***speculative and unlikely to occur*** in the Policy area. (State Water Resources Control Board Revised Sections 6.2, 6.9, and 7 of the North Coast Instream Flow Policy Substitute Environmental Document; emphasis added). Unfortunately, the State relies on a study in 2010 by O'Connor (Supplement to Appendix D, page 6) and does not provide the public with an opportunity to read this study or comment upon it.

The independent science on groundwater pumping shows the State's above assertion to be incorrect in material ways and unreliable. For example, at least as far back as 1987 the State's own consultant and other experts came to the opposite conclusion. "Kondolf et al. (1987) and Zariello and Reis (2000) both describe groundwater pumping as causing long- term reductions to streamflow during base flow periods by lowering groundwater tables.("Hydrologic impacts of small-scale instream diversions for frost and heat protection in the California wine country Matthew J. Deitch, G. Mathias Kondolf, and Adina M. Merenlender). The temporary

lowering of water tables in streams, that have historically supported all life stages of anadromous salmonids, is a big problem and the primary reason for adopting this policy in the first place. The independent study by Kondolf et al. contained many data points and occurred in small stream systems and came up with results contrary to the results of O'Connor.

In addition, the Biological Opinion for the Russian River states with respect to ground water pumping in the North Coastal Diversity Stratum for Central Coast Steelhead, "[s]tream desiccation is related to intensive groundwater pumping and other water uses associated with agricultural, rangeland, and residential developments. (September 2008). In 2009, the Division of Water Rights found Gallo's change from a direct diversion to an offset well (100-200 feet from the Russian River) to be illegal and subject to state Water Board permitting authority. At that time, Division staff correctly stated that the well was subflow to the river. "Gallo's extent of harm is twofold. Its continued unauthorized diversion reduces the amount of water available for legitimate downstream water right holders. Secondly, while the adverse impacts on the steelhead trout fishery have not been quantified, Gallo's unauthorized diversions may contribute to reducing habitat for steelhead trout in the Russian River and its tributaries."(Administrative Civil Liability - Gallo 8900 and 9015 Westside Road, Healdsburg, CA).

The current state of the science is that groundwater pumping is connected to stream flow; and therefore, in the policy area where streams are small, highly responsive to demand, and critical to the migration, reproduction, feeding, and sheltering of listed salmonids year round, those impacts are much more than speculative and must be evaluated on a case-by-case basis. In response to the continuing demands and over allocation of stream systems, scientists have called for winter time storage. They are not calling for unlimited additional new wells in undefined basins or presumed percolating groundwater to solve the problems of fisheries in collapse. Many coastal rivers and streams are small and or have low flows during some parts of the year. As the studies referenced above confirm, these attributes make them highly susceptible and vulnerable to changes in groundwater tables.

In summary, the conclusion of the State quoted above, that impacts are speculative and unlikely to occur, is not based upon substantial evidence.

Estimate of the Shift of Future Demand to Groundwater Extraction

The estimates provided in the revised policy, on number of acre-feet that might be shifted to ground water supplies as a result of the policy, has the potential to be useful. The numbers, however are not evaluated in the context of any stream. Small streams, streams already under extreme pressure from water demands, and streams with marginal flows could easily be affected by ground water diversions in even small amounts. This is especially significant in light of the statements of Stetson Engineers. The State must not presume otherwise. "Groundwater diversions can have similar effects on the depletion of surface flow as diversions from surface streams. Thus, increased groundwater pumping could have a negative effect on the instream flows and anadromous fish habitat in the policy area if a hydraulic connection exists." (Stetson Engineers-February 2008). In short, providing a gross number estimate of demand without context and in a relative vacuum is not substantial evidence of the conclusion that surface flows in critical streams are not likely to be impacted in the future by potential well water withdrawals.

The State explains in the revised policy that is does have the duty to regulate groundwater in subterranean streams and to prevent unreasonable use. Unreasonable use includes adverse modification of critical habitat. It is first necessary, not discretionary, to determine what wells are hydraulically connected to critical habitat streams. This is properly the task the State must require the developer to carry out.

The developer, especially in areas that may not yet be defined as a "groundwater basin", must demonstrate that it will not be tapping into subterranean streams, connected ground water, or subflows. Wells in proximity to creeks must not affect flows and if they do, they must demonstrate that they are not affecting flows in a manner that adversely modifies critical habitat.

The revised policy estimates that there are over 16,000 small water agency and self-supplied individuals that could potentially pump from wells as a result of the policy just in the Russian River watershed alone. Some of these, perhaps most of these, are not in defined basins or even within the Stetson delineations of subterranean streams, but are potentially, and do, tap into important subsurface flows on which small streams and their aquatic species depend. The revised policy acknowledges this crack in the regulation but asserts that nothing significant will come of it in any watershed or subwatershed. This assertion is contrary to the independent science currently available. These types of water development activities do need analysis. Again, depending upon where these wells are, the impacts of the well, or a bunch of small wells, on a small stream at the wrong time of the year are more than likely to be significant. The State must require, not carry out itself with its limited budget, independent analysis of the ground water impacts on individual streams. The State must conduct a peer review of the analysis prior to permitting potentially harmful activities.


(Stream flows depleted by frost protection water use.)

Costs Estimates to Protect Stream Flows

The revised policy goes into great depth about the costs of protecting ground water and stream flows via ground water delineations. It quotes the disclaimer of Stetson Engineers which states that, "[s]ite specific investigations will be needed to verify the existence of subterranean streams or potential stream depletion areas. Stetson does not dictate who must carry out or fund the investigations." The revised policy, however unilaterally places the burden of carrying out investigations squarely on the SWRCB or the taxpayer. This burden is

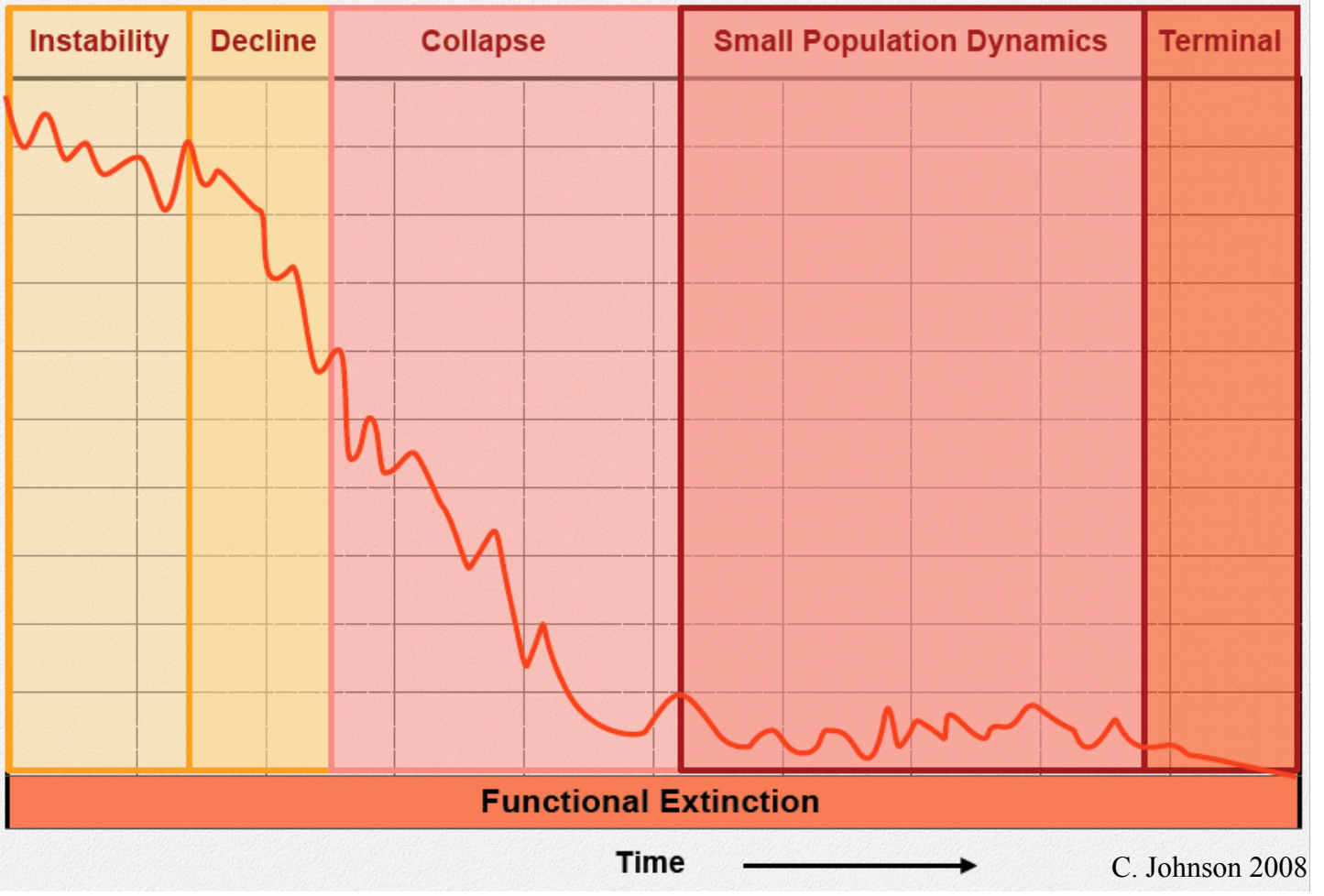
misplaced. Externalizing the costs of doing business is a practice that is out of date. For example, in 2000, staff of the Division of Water Rights recommended that applicants, not the state, bear the costs of studies when proposing water development activities.

"Applicants that desire to operate their projects other than under these conditions will need to submit fishery studies and other supporting documentation to demonstrate that fishery resources will not be adversely affected or they will need to prepare an Environmental Impact Report." (Staff Report for August 3, 2000 Meeting; Item 9).
In addition, "[s]taff recommend that new diversions not be allowed after March 31, unless the applicant submits specific studies which demonstrate that further diversions in the spring will have no significant effect on coho and steelhead." (August 15, 1997 Staff report SWRCB Russian River). Given the precedent already established, that applicants demonstrate no significant effect, the estimates provided in the revised policy are clearly too high, and delineations are much more feasible than staff concludes.

The State has a duty to avoid take of listed species and if the State cannot carry out necessary investigations, it must require applicants to demonstrate that their proposed and current activities are not modifying habitat or harming listed aquatic species prior to the State permitting that activity. Such a showing if required of the applicant will not increase the costs to the State, removes the economic burden from the equation, removes the time delay in protecting critical habitat, and is an economical alternative to the time consuming expenditures described in the revised policy wherein the tax payers would heavily subsidize the environmental review of private proposals to draw upon the public's limited water resources.

Thank you again for your work on this important policy.

Kimberly Burr
Green Valley Creek Restoration Volunteer
Forestville, CA



C. Johnson 2008

Addendum to my comments for clarification of the graph incorporated:
Chinook and Steelhead are in the second to the last panel and the coho salmon are in the final panel to the right.
National Marine Fisheries Service-NOAA

Thank you. Kimberly Burr

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