

Addressing Low Flows in California TMDLs



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Water Quality/Quantity

- ▶ Lack of water is a form of pollution, a term defined by the Clean Water Act as the "man-induced alteration of the chemical, physical, biological, and radiological integrity of water." Water quality includes water quantity and no artificial distinction can be made between them.
- ▶ California combines water rights and water quality functions of the state government into one agency for this very reason. Jurisdiction over the administration of water rights lies with the Division of Water Rights and the State Water Board, however, the Regional Water Board may address low flows in its Basin Plan for the Division of Water Rights' and State Water Board's consideration.



▲ **State Water Board:**

- ▲ Water rights jurisdiction
- ▲ Authority to set state policy for water quality control
 - ▲ Binding on Regional Boards
 - ▲ Appellate body

▲ **Regional Water Boards:**

- ▲ Authority over water quality in its region
- ▲ Regulations (basin plans), permits, enforcement



Division of Water Rights

▲ Jurisdiction:

- ▲ Permits after 1914
- ▲ Enforcement
- ▲ Public trust/ waste and unreasonable use
- ▲ Statutory adjudications/court reference



Porter-Cologne Water Quality Act

▲ Basin Plans

- ▲ Water quality control plans for each region

- ▲ Establish WQS

 - ▲ Beneficial uses

 - ▲ Water quality objectives

- ▲ Program of Implementation



Points of authority for considering the Basin Plan in water right proceedings:

- ▲ Water Code section 13247 provides: “State offices, departments, and boards, in carrying out activities which may affect water quality, shall comply with water quality control plans approved or adopted by the state board unless otherwise directed or authorized by statute, in which case they shall indicate to the regional board in writing their authority for not complying with such plans.”
- ▲ Water Code section 1258 provides: “In acting upon applications to appropriate water, the board shall consider water quality control plans...and may subject such appropriations to such terms and conditions as it finds are necessary to carry out such plans.”



Points of authority for considering flows in Basin Plan:

- ▶ “Water Quality Control” means the regulation of any activity or factor which may affect the quality of the waters of the state....” (§ 13050(i)).
- ▶ Lack of water is a form of pollution, a term defined by the Clean Water Act as the "man-induced alteration of the chemical, physical, biological, and radiological integrity of water." Water quality includes water quantity and no artificial distinction can be made between them.
- ▶ Regional Board shall establish objectives to ensure the reasonable protection of beneficial uses and prevent nuisance. Consider WQ conditions that could be reasonably achieved through the coordinated control of all factors which affect water quality in the area.
- ▶ Regional duty to consider the effect of its actions on the California Water Plan or other coordinated governmental plan looking toward the development, utilization or conservation of the water resources of the state.



Policy Reasons for Considering Flows in Basin Plan:

- ▶ *Water quality determinations are inherently flow-related—(ppm)*
- ▶ *Law is comprehensive*
- ▶ *May be no other way to achieve objectives*
- ▶ *Fairness*



Porter-Cologne Implementation is Discharge Dependent

- ▶ *Report of Waste Discharge: “Any person discharging waste, or proposing to discharge waste....”*
- ▶ *Waste Discharge Requirements (WDRs), Waiver of WDRs, and Prohibition*
- ▶ *Water Quality Certification*
- ▶ *Clean Up and Abatement and other Enforcement Orders*
- ▶ *Investigation of Water Quality*



TMDL: Backstop provisions

- ▲ *“The TMDL program is the primary program responsible for achieving clean water where traditional controls on point sources have proven inadequate. The program is thus charged with creating plans that consider all sources and causes of impairment, and allocating responsibility for corrective measures, regardless of the sources or cause, that will attain water quality standards.” (Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options (2004).)*



TMDL Process

- ▶ Pollution (303(d) list) and Pollutants (TMDL)
- ▶ Loading capacity of pollutant (applied science), and thus the necessary load reductions to attain standards (science and policy)
- ▶ Establish TMDL for impaired water bodies “at a level necessary to implement water quality standards” with seasonal variation and margin of safety
- ▶ Established by Regional Water Boards, generally via Basin Plan amendment
- ▶ California requires a program of implementation with each TMDL



Already Addressing Flows in Load Allocation

- ▶ Loading capacity of pollutant—must consider flows in determining the assimilative capacity of the water and seasonal variation
- ▶ Load reductions to attain standards (discretion to address flows)
 - ▶ Can you achieve objectives without flow?
 - ▶ May want to provide another option to discharge dependent regulation
 - ▶ terminology

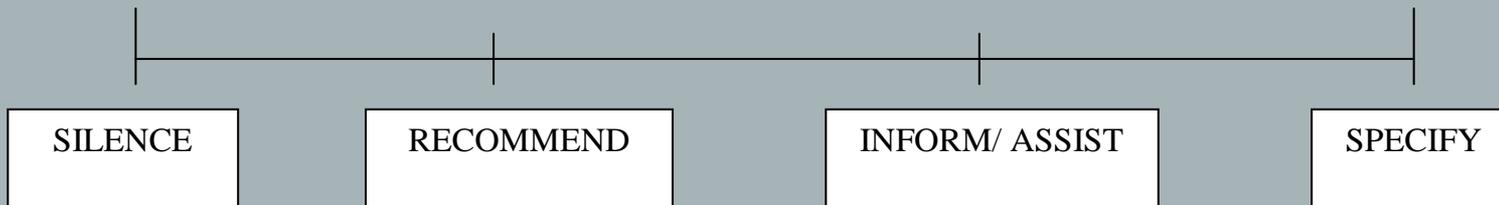


terminology

- ▲ “Flow-dependent objectives”—all objectives that could be met by the flow of water or by changes in the operations of [diversion] facilities, notwithstanding that such objectives also could be met entirely or partially through other means, such as management measures and waste discharge requirements.
- ▲ “Flow objective”—water quality based objective based on the amount of water (measured in cfs) flowing in a watercourse at a given time.



Range of Force and Effect of Flow-Related Load Allocations



TMDL Implementation Programs

▶ *Program to Achieve Objectives*

- ▶ *Actions necessary to achieve objectives, including recommendations for appropriate action by any entity, public or private;*
- ▶ *Time schedule;*
- ▶ *Monitoring to determine compliance.*



Implementing Flow Measures

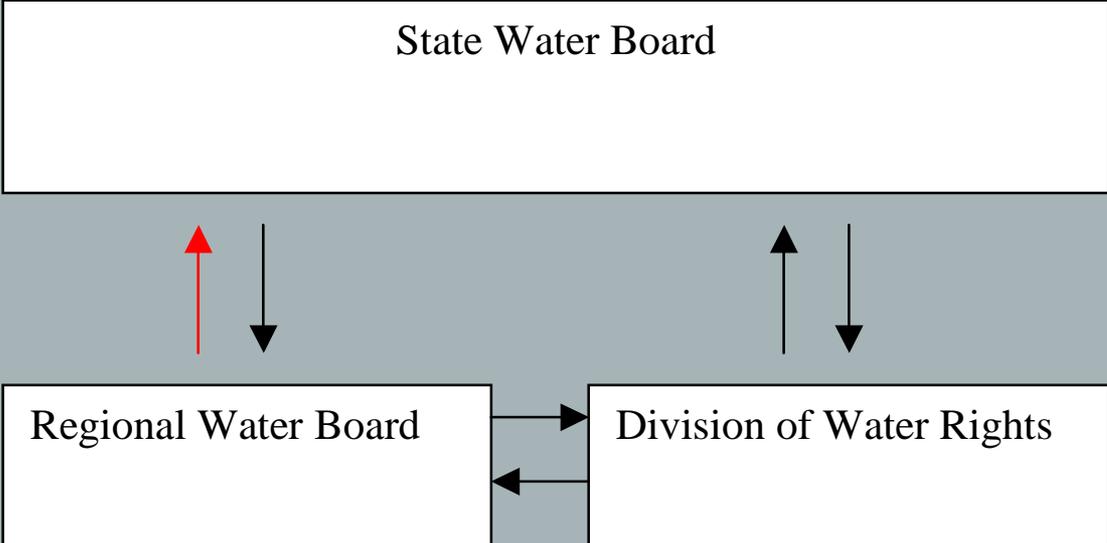
- ▶ *Do Nothing (not an option if other measures will not achieve compliance)*
- ▶ *Recommendation to Non-Regulatory Entity (with or without a flow number)*
- ▶ *Recommendation to State Water Board (with or without flow number)*
- ▶ *Promulgate Flow Objective and Direction to State Water Board to Implement*
- ▶ *Incentive Based--Link to discharge prohibition/waiver/WDR (invites pollution trading)*



Factors to Consider

- ▶ *Comity*
- ▶ *Takings*
- ▶ *Practicality*
- ▶ *Division of Water Rights needs*
- ▶ *Ability of Flows to Help*





Recommended Flow Measure in Table 4

- ▲ **Water Diverter(s) Actions:**
- ▲ Water diverters should employ water management practices and activities that result in increased **dedicated cold water instream flow** in the Shasta River and its tributaries.
- ▲ Water diverters should participate in and implement applicable flow-related measures outlined in the following sources:
 - ▲ Policy for the Implementation and Enforcement of the Nonpoint Source Pollution Control Program (NPS Policy) (SWRCB 2004 or as amended).
 - ▲ Shasta Watershed Restoration Plan (November 1997).
 - ▲ Shasta Valley Resource Conservation District Master Incidental Take Permit (ITP) Application (Shasta RCD 2005).
 - ▲ Recovery Strategy for California Coho Salmon (Coho Recovery Strategy) (CDFG 2004).
- ▲ In addition, landowners may develop and implement management measures suitable for their site-specific conditions.



Recommended Flow Measure in Table 4 continued

- ▶ Within two years, and again within four years, of EPA approval of the TMDL, water diverters shall report in writing to the Regional Water Board, either individually or through the Shasta Valley RCD and its CRMP, on the measures taken to increase the dedicated cold water instream flow in the Shasta River by 45 cfs or alternative flow regime that achieves the same temperature reductions from May 15 to October 15.
- ▶ Within five years of EPA approval of the TMDL, water diverters shall provide a final report to the Regional Water Board, either individually or through the Shasta Valley RCD and its CRMP, on documenting dedicated cold water instream flow in the Shasta River in relation to the 45 cfs goal or alternative flow regime that achieves the same temperature reductions from May 15 to October 15.
- ▶ **Proposed language:**
- ▶ This recommended flow measure does not alter or reallocate water rights in the Shasta River watershed, nor bind the State Water Board, Division of Water Rights in any water right decision.



Recommended Flow Measure in Table 4 continued

▲ RCD Actions:

▲ The Shasta Valley RCD and its CRMP should:

- ⑩ Assist water diverters in developing and implementing management practices that increase dedicated cold water instream flows in the Shasta River and tributaries.

- ⑩ Assist water diverters in developing and implementing a monitoring program to evaluate and document implementation and effectiveness of the actions taken to increase dedicated cold water instream flows in the Shasta River.

▲ State Actions:

▲ CDFG will:

- ▲ Assist water diverters in developing and implementing management practices that increase dedicated cold water instream flows in the Shasta River and tributaries.

- ▲ Administer the Coho Recovery Strategy and the ITP (when approved).

- ▲ Assist in developing and implementing a monitoring program to evaluate and document implementation and effectiveness of the actions taken by the water diverters to increase dedicated cold water instream flows in the Shasta River.

▲ DWR should:

- ▲ Coordinate and assist water diverters in developing and implementing a monitoring program through a watermaster service to evaluate and document implementation and effectiveness of the actions taken by the water diverters to increase dedicated cold water instream flows in the Shasta River.



Recommended Flow Measure in Table 4 continued

- ▶ The Regional Water Board will:

Work cooperatively with water diverters, the Shasta Valley RCD, its CRMP, CDFG and DWR, wholly or in part, to establish monitoring and reporting programs to gauge implementation and effectiveness of the actions taken by responsible parties.



If after five years, the Regional Water Board's Executive Officer finds that the above-measures have failed to be implemented or are otherwise ineffective, the Regional Water Board may recommend that the State Water Board consider seeking modifications to the decree (In re Waters of Shasta River and its Tributaries, No. 7035 (Super. Ct. Siskiyou County Dec.29, 1932)), conducting proceedings under the public trust doctrine, and/or conducting proceedings under the waste and unreasonable use provisions of the California Constitution and the California Water Code.



flow recommendation v. flow requirement

- ▶ *Collaborative solutions involve all water diversions, including groundwater and riparian*
- ▶ *Avoids unnecessary procedural burdens*
- ▶ *Collaborative approach allows for creative problem solving if parties take advantage of the opportunity*

