Background and Overview

The Central Valley Regional Water Quality Control Board (Central Valley Water Board) is currently finalizing a staff report on a proposed basin plan amendment to establish a drinking water policy to protect source water quality. The policy includes a focused narrative water quality objective for *Cryptosporidium* and *Giardia* and other elements to address constituents of potential concern to drinking water, and will apply to the Sacramento-San Joaquin Delta and its tributaries below the first major dams. The draft staff report will be released for public review in January 2013, and the Central Valley Water Board will consider the proposed amendment in a July 2013 hearing.

In 2002, a Central Valley Drinking Water Policy Workgroup (Workgroup) was formed to provide a stakeholder-based platform for development of the policy. The Workgroup is comprised of representatives from federal, state agencies; and from drinking water, wastewater, municipal storm water and agricultural interests. The Workgroup has collaborated closely with Central Valley Water Board staff over the last several years to develop this policy, which has also been informed by a number of technical studies performed specifically to assess drinking water constituents.

Results of Technical Studies

- Evaluations of wastewater and urban runoff discharges showed that receiving water quality will likely stay the same or possibly improve as a result of actions the Water Boards have taken in recent years. Planned regulatory actions are expected to offset the impacts of increased population.
- The load of drinking water constituents from agricultural land is expected to decrease as a result of conversion to other land uses. Activities undertaken through the Irrigated Lands Program may also reduce the load of drinking water constituents from agricultural land.
- The impacts of projected changes in water quality and drinking water regulations were evaluated with an EPA Water Treatment Model. Since water quality is expected to stay the same or possibly improve, no changes in water treatment will be required with the existing drinking water regulations. Under a projected future regulatory scenario, the model predicted that water treatment upgrades would be needed for water treatment plants treating water from the Sacramento River, the Delta, and at some locations along the California Aqueduct.

Drinking Water Policy Basin Plan Amendment

- Compilation of all existing regulations that protect the municipal water supply (MUN) beneficial use.
- Clarification that the existing narrative objective for chemical constituents does include drinking water constituents of concern, including, but not limited to organic carbon.
- Recognition of the importance of a multi-barrier approach to public health protection that includes source water protection, drinking water treatment, and protection of water quality in the drinking water distribution system.
- Narrative Water Quality Objective for Pathogens to protect the public water system component of the MUN beneficial use. Proposed language: *Waters shall not contain Cryptosporidium and Giardia in concentrations that adversely affect the public water system component of the MUN beneficial use. This narrative water quality objective for Cryptosporidium and Giardia shall be applied within the Sacramento-San*
Joaquin Delta and its tributaries below the first major dams (shown in map X) and should be interpreted as specified in Section IV of the Basin Plan. Compliance with this objective will be assessed at existing and new public water system intakes.

Narrative Objective Implementation

- The proposed Drinking Water Policy includes an implementation element to specifically address the interpretation of and compliance with the proposed narrative objective for Cryptosporidium and Giardia.
- The goal of the objective is to maintain pathogens within the range of current bin levels, as defined by the Long-Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) bin at public water system intakes.
- To prevent violations of the narrative objective and evaluate compliance, numeric Cryptosporidium thresholds tied to US EPA’s drinking water requirements will be used to trigger early actions. Specifically, trigger levels will be set at 80 percent of the next highest bin level from the LT2ESWTR for a given public water system intake.
- Exceedances of the triggers would not be violations of the proposed narrative objective, but would initiate a process for addressing the issue (see attached flow chart). The Central Valley Water Board would work with the Department of Public Health, the affected drinking water utility, and potential sources of pathogens to implement the program.

Water Quality Monitoring Requirements

- A one-time special study to further characterize ambient background conditions, linkages to potential sources, and fate and transport is included in the Policy. Details of the monitoring program are to be worked out in the next several months.
- As waste discharge requirements are renewed, the Central Valley Water Board will consider the need to include monitoring for organic carbon, salinity and nutrients in permits for dischargers greater than 5 mgd.
- The Central Valley Water Board will consider requiring monitoring for organic carbon, salinity and nutrients when monitoring is conducted to evaluate the effectiveness of management practices for other constituents (e.g., metals or pesticides).

For More Information and to Provide Feedback

See [http://www.swrcb.ca.gov/centralvalley/water_issues/drinking_water_policy/](http://www.swrcb.ca.gov/centralvalley/water_issues/drinking_water_policy/)

Central Valley Water Quality Control Board Hearings:

- Informational Workshop - April 11 or 12, 2013
- Adoption Hearing – July 25 or 26, 2013
TRIGGER EXCEEDANCE

Affected drinking water utility requests Water Board assistance?

No

No further action by Water Board.

Yes

Is data quality and quantity good?

No

Recommend data follow-up by original drinking water utility.

Yes

1. DATA REVIEW
Evaluate data and determine if trigger exceedance is driven by outlier or poor data quality.

2. ASSESSMENT
Develop list of possible sources and evaluate individually. Review existing reports, data, modeling results and other pertinent information such as timing, volume, adequacy of treatment of possible sources, any changes in operation or other changes by possible sources since DWP adoption that could have contributed to trigger exceedance.

Does data indicate need for source evaluation?

No

No further action for source under evaluation. Return to Step 2 if additional sources need assessment. No further action if all sources end here.

Yes

Is change in source negligible, mitigated by an already proposed action, unrelated to trigger exceedance, or uncontrollable?

No

Was the causative source or sources identified?

No

Yes

4. CONCLUDE INVESTIGATION
Develop overall implementation plan, which includes quantitative effectiveness assessment and identification of most cost effective strategies

5. IMPLEMENTATION
Implement new or modified programs and controls, as necessary.

Yes

Were controllable, causative source or sources identified?

No

No further action by Water Board.

Draft trigger exceedance overview