


Phase 4 of Bay-Delta Effort: Overview & Background



Method to Develop Flow Criteria for Priority
Tributaries to the Bay-Delta Workshop
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Presentation Outline

- Definitions
- General Background on State Water Board & Authority
- Phase 4 Overview – Flow Objectives for Priority Tributaries (Sacramento River focus)
- Next Steps
- Resources

DEFINITIONS

- Flow Criteria
- Flow Objective
- Public Trust
- Beneficial Uses

Flow Criteria

(focus of today's workshop)

- The range of instream flow needed to ensure the viability of aquatic dependent species, and to support geomorphic processes that create and maintain habitat
- Provide the technical basis for the development of flow objectives
- Do not consider competing uses of water
- Do not have regulatory effect

Flow Objectives

- The quantity of instream flow required to maintain ecologically sustainable watersheds, while concurrently balancing all beneficial uses of water
- State Water Board determination that has regulatory effect
- Tributary-specific flow objectives will be developed as a component of tributary-specific policies

Public Trust

- The State Water Board is responsible for the protection of public trust uses, including commerce, navigation, recreation, and habitat for fish and wildlife, which are held in trust for the public.
- The State Water Board must consider these responsibilities when planning and allocating water resources, and protect public trust uses whenever feasible.

Beneficial Uses of Water

- Beneficial uses of water, pertaining to water rights include: domestic; irrigation; power; municipal; mining; industrial; fish and wildlife preservation and enhancement; aquaculture; recreational; stock watering; water quality; frost protection; and heat control.
- California Code of Regulations (CCR) §659-672

Beneficial Uses of Water (con't)

- Water quality control plans (basin plans) also designate beneficial uses
- Beneficial uses of waters of the state that "may be protected against quality degradation include, but are not limited to: domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" - Water Code §13050
- Examples: water contact recreation, cold and warm freshwater habitat, cold and warm water spawning habitat, agricultural supply, commercial and sport fishing, etc.

State Water Board Background & Authority

State Water Board's Mission

To preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations

Authorities

- Dual authorities (water allocation and water quality protection) to provide comprehensive protection of California's waters
- Protect and enforce water quality standards (beneficial uses + water quality objectives + antidegradation)
- Protect public trust resources
- Balancing role

Recent History

- 2009 Delta Reform Act (Senate Bill X7-1)
 - Water Code §§ 85086 & 85087

Water Code (Delta Reform Act)

§85086

“For the purpose of informing planning decisions for the Delta Plan and the Bay Delta Conservation Plan, the board shall, pursuant to its public trust obligations, develop new flow criteria for the Delta ecosystem necessary to protect public trust resources”

§85087

“The board [...] shall submit to the Legislature a prioritized schedule and estimate of costs to complete instream flow studies for the Delta and for high priority rivers and streams in the Delta watershed [...] and for all major rivers and streams outside the Sacramento River watershed [...]”

History Continued

- 2010: State Water Board submittal to Legislature – *Instream Flow Studies for the Protection of Public Trust Resources: A Prioritized Schedule and Estimate of Costs*
 - Included 138 rivers and streams (28 Delta tributaries)
 - Determined which rivers and streams should be prioritized for instream flow studies

http://www.waterboards.ca.gov/publications_forms/publications/legislative/docs/2011/instream_flow2010.pdf

- 2010: State Water Board completed report: *Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem*

History Continued

- 2013: Delta Stewardship Council’s Final Delta Plan
 - Co-equal goals:
 - Provide a more reliable water supply for California
 - Protect, restore, and enhance the Delta ecosystem
 - Directs State Water Board “By June 2, 2018, adopt, and as soon as reasonably possible, implement flow objectives for high-priority tributaries in the Delta watershed that are necessary to achieve the coequal goals”

State Water Board Bay-Delta Activities

- **Phase 1:** Bay-Delta Plan review and update of the San Joaquin River flow and southern Delta salinity objectives and program of implementation
- **Phase 2:** Comprehensive review and update of other components of the Bay-Delta Plan and program of implementation
- **Phase 3:** Amendment of water rights and other measures to implement changes to the Bay-Delta Plan resulting from Phases 1 and 2
- **Phase 4: Development and implementation of flow criteria and flow objectives for priority tributaries to the Sacramento-San Joaquin Delta watershed, with a focus on the Sacramento River watershed**

Phase 4 Goal

- Focus on Sacramento River watershed
- Establish and implement flow objectives for a minimum of five priority tributaries in the Bay-Delta watershed by 2018 – as policies for water quality control
- Work to continue on remaining priority tributaries thereafter
- Consistent with Delta Stewardship Council’s *Final Delta Plan*

Phase 4 Objectives

- Achieve characteristics of a natural hydrograph
 - Inter-annual variability
 - Intra-annual events
- Restore natural fluvial processes
 - Inundate floodplains
 - Flush fines
 - Maintain channel habitat
- Restore natural high flow recession rates
 - Prevent juvenile salmonid stranding
 - Promote riparian seed dispersal
 - Trigger natural species reproduction patterns

Phase 4 Objectives

- Restore self-sustaining resilient populations of anadromous salmonids and other native species
- Preserve existing beneficial uses of water to the maximum extent possible
- Minimize impacts to water right holders

Phase 4 Process

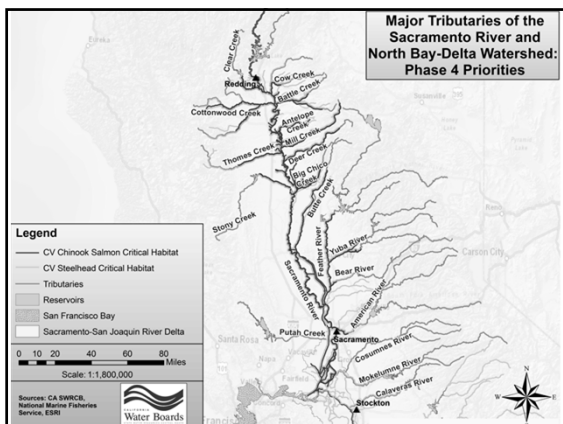
1. Development of non-binding flow criteria (**discussion of this workshop**)
2. Development of flow objectives and implementation plans
3. Development of policies for water quality control
4. Implementation of policies through conditioning of water rights and other measures as appropriate

Policies for Water Quality Control (Water Code §§13140-13147)

- Tributary-specific
- Include flow objective(s), implementation plan, and adaptive management
- Principles, guidelines, and requirements for maintaining instream flows and habitat connectivity to protect public trust resources, while minimizing impacts on other beneficial uses of water
- Complement or enhance existing efforts to make significant positive progress towards protection of public trust resources and other beneficial uses of water

Flow Criteria Method Objectives

- Leverage limited resources available to conduct needed studies over large geographic area
- Applicable to bulk of each tributary's watershed
- Address multiple species or life stages and fluvial processes
- Responsive to critical and time-sensitive need to address flow-related impacts contributing to the decline of threatened and endangered species



Major Tributaries in the Phase 4 Planning Area (in alphabetical order)

American River	Clear Creek	Mill Creek
Antelope Creek	Cosumnes River	Mokelumne River
Auburn Ravine	Cottonwood Creek	Paynes Creek
Battle Creek	Cow Creek	Sacramento River (below Keswick)
Bear River	Deer Creek	Stony Creek
Big Chico Creek	Dry Creek	Thomes Creek
Butte Creek	Feather River	Yuba River
Calaveras River	McClure Creek	

Flow Objectives to be developed as part of Phase 1 Bay-Delta Plan Update

Merced River
San Joaquin River
Stanislaus River
Tuolumne River

Flow Criteria Development (to date)

- July 2013: State Water Board submitted *Request for Recommendation of Method to Develop Flow Criteria for Priority Tributaries to the Sacramento-San Joaquin Delta* to the Delta Science Program
 - Scientifically Defensible
 - Cost-effective
 - Applicable to the bulk of each tributary's watershed
 - Can be implemented in a timely fashion

Flow Criteria Development (to date)

- February 2014: Delta Science Program transmitted the report developed by an independent review committee - *Recommendations for Determining Regional Instream Flow Criteria for Priority Tributaries to the Sacramento-San Joaquin Delta*

Phase 4 Next Steps

- Public Comment Period ends at Noon (12:00 pm) on April 18, 2014
- Staff will review comments received to develop a recommendation for the State Water Board regarding its process to develop instream flow criteria for priority tributaries as part of the Phase 4 process
 - Staff recommendation to be incorporated into Phase 4 Strategy document

Phase 4 Next Steps (con't)

- Develop *Strategy for Establishing Flows for Tributaries to the Bay-Delta* (Phase 4 Strategy); Anticipate Strategy will contain:
 - Goals and objectives of Phase 4 effort
 - Overview of process
 - Flow criteria methodology
 - Priority Tributaries
- **Timeframe:** Draft Strategy anticipated for release for public comment in Fall 2014

Phase 4 Resources

- Phase 4 Webpage:
 - http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/flow_objectives/index.shtml
- To receive email subscriptions:
 - http://www.waterboards.ca.gov/resources/email_subscriptions/
 - Select "State Water Resources Control Board"
 - Enter email address and full name
 - Under Categories, select "Water Rights Topics"
 - Select "Delta Watershed Flow Objectives (Phase 4 of Bay-Delta effort)"
 - Click "Subscribe" button at top

