The Bay Institute

Summary of Comments

San Joaquin River Flows and Southern Delta Water Quality Scoping Meeting

State Water Control Resources Control Board
June 6, 2011

February - June San Joaquin River Flows

- NOP finding that "*more* flow of a *more natural pattern* is needed from February through June from the San Joaquin River watershed to Vernalis to achieve the narrative San Joaquin River flow objective" is strongly supported by scientific record
- Requiring a greater percentage of unimpaired runoff than occurs under current objectives is most ecologically sound and hydrologically sensitive approach to protect beneficial uses and public trust values, as documented in SWRCB 2010 flow criteria report
- Objective needs to be much more specific regarding enforceable flow parameters, biocriteria, relationship to non-flow measures, initial requirements and adaptive range

February - June: “Flow Conditions”

- “Maintain *flow conditions*… sufficient to support and maintain the natural production of viable native San Joaquin River watershed fish populations migrating through the Delta” (NOP)
- Term “flow conditions” overly broad; if other specific flow parameters to be included, then specify which
- Be precise in narrative objective language: “maintain *percentage of unimpaired runoff*…sufficient to, etc”
- Designate starting gate (initial percentage based on full protection of fish and wildlife beneficial uses [attainment of biocriteria]) and adaptive range (as narrowly defined as possible)

February - June: Biocriteria

- "Maintain flow conditions... sufficient to support and maintain the *natural production of viable native San Joaquin River watershed fish populations migrating through the Delta*" (NOP)
- Express this broad goal as measurable biocriteria (cf. the Chinook salmon doubling objective) for target species
- Steelhead: 10,000 average annual abundance in San Joaquin basin; distribution in 2 or more San Joaquin tributaries
- Splittail: successful spawning one in three years
- Green and white sturgeon: successful spawning one in seven years
- Use adaptive management to adjust percent runoff within adaptive range to better attain the biocriteria

February - June: Non-Flow Measures

- "Maintain flow conditions... together with *other reasonably controllable measures* in the San Joaquin River Watershed" (NOP)
- Relationship between flow and non-flow measures in context of implementing narrative objective unclear and problematic
- Non-flow measures may also be important, but are not the parameter being regulated in this objective - aggregating the two types of measure in one objective makes no sense
- Use adaptive management to evaluate relative efficacy of flow and non-flow measures in supporting attainment of biocriteria, and adjust percent runoff within adaptive range based on best scientific evidence

February - June: Starting Gate

- Starting gate (initial percentage) should factor in best available information on flows associated with attaining biocriteria for target species
- Fall-run Chinook salmon: 5,000 cfs April-May all years = threshold for positive population growth
- Fall-run Chinook salmon: > 10,000 cfs 2 weeks in 80% of years = attainment of doubling objective

February - June: Starting Gate
(continued)

- Fall-run and splittail : > 20,000 cfs 2 weeks in 60% of years, longer in wetter years = floodplain inundation to support salmon rearing (2 wks) and splittail spawning (30 - 45 days)
- Sturgeon: > 6,400 cfs for one month in winter - spring period in one of seven years to stimulate spawning migration
- Sturgeon: > 20,000 cfs for one month in April - June period in one of seven years to support successful spawning

February - June: Adaptive Range

- Adaptive range should never result in winter-spring flows < 2,000 cfs
- Flows of < 2,000 cfs significant contributor to fish migration problems associated with low DO in SDWSC
- Temperature tolerances for salmonids (< 65º in April - May): ≥ 5,000 cfs

July - January: Minimum Flows

- Minimum flows of ≥ 2,000 cfs during period of low unimpaired runoff needed to offset highly degraded conditions in all years; requires reservoir releases in many years
- Flows of < 2,000 cfs significant contributor to fish migration problems associated with low DO in Stockton DWSC
- Revise minimum flows if non-flow measures successful in eliminating fish migration barriers
- Fall-run salmon adult upmigration (Oct - Dec): ≥ 2,000 cfs
- Steelhead spawning (10 day pulse flow during Aug - Nov): ≥ 3,600 cfs
- Sturgeon juvenile outmigration (Aug - March) and adult upmigration periods: ≥ 2,000 cfs