

State Water Resources Control Board Delta Flow Criteria Report

August 3, 2010



Outline

- Legislative Directive
- State Water Board Processes and Limitations of the Criteria
- Summary Criteria
- Methodology and Examples
- Comments and Next Steps

Legislative Directive

- Water Code §85086 requires the Board to develop new flow criteria for the Delta ecosystem necessary to protect public trust resources within nine months
- Purpose is to inform future planning activities, the Delta Plan, and Bay Delta Conservation Plan

State Water Board Processes

- The Board routinely develops flow criteria with regulatory effect through formal processes that are specified in law
- This Delta flow criteria process is different
- This report answers a specific question: “What flows are necessary to protect fishery resources in the Delta under current conditions?”

Limitations of Criteria

- Technical assessment only of best available science on flow needs for fish under existing conditions
- Do not address upstream environmental needs, including cold water pool and terrestrial issues
- Criteria have no regulatory or adjudicative effect and are not pre-decisional to future Board actions
- Do not consider the public interest, other environmental needs, or competing demands for water

Summary Criteria

- Delta Outflows: 75% of unimpaired flow January to June, fall X2 in wetter years
- Sacramento River Inflows: 75% of unimpaired flow November to June, late fall/winter Wilkins Slough pulse flows, positive flows downstream of Georgiana Slough November to June, fall flows
- San Joaquin River Inflows: 60% of unimpaired flow February to June, fall flows
- Hydrodynamics: Old & Middle River flows, San Joaquin River flows to exports, Jersey Point flows

Other Summary Determinations

Actions should be taken to achieve:

- variability and the natural hydrograph
- floodplain activation and other habitat improvements
- improved water quality
- appropriate cold water pool management
- adaptive management

Methodology

Three step process:

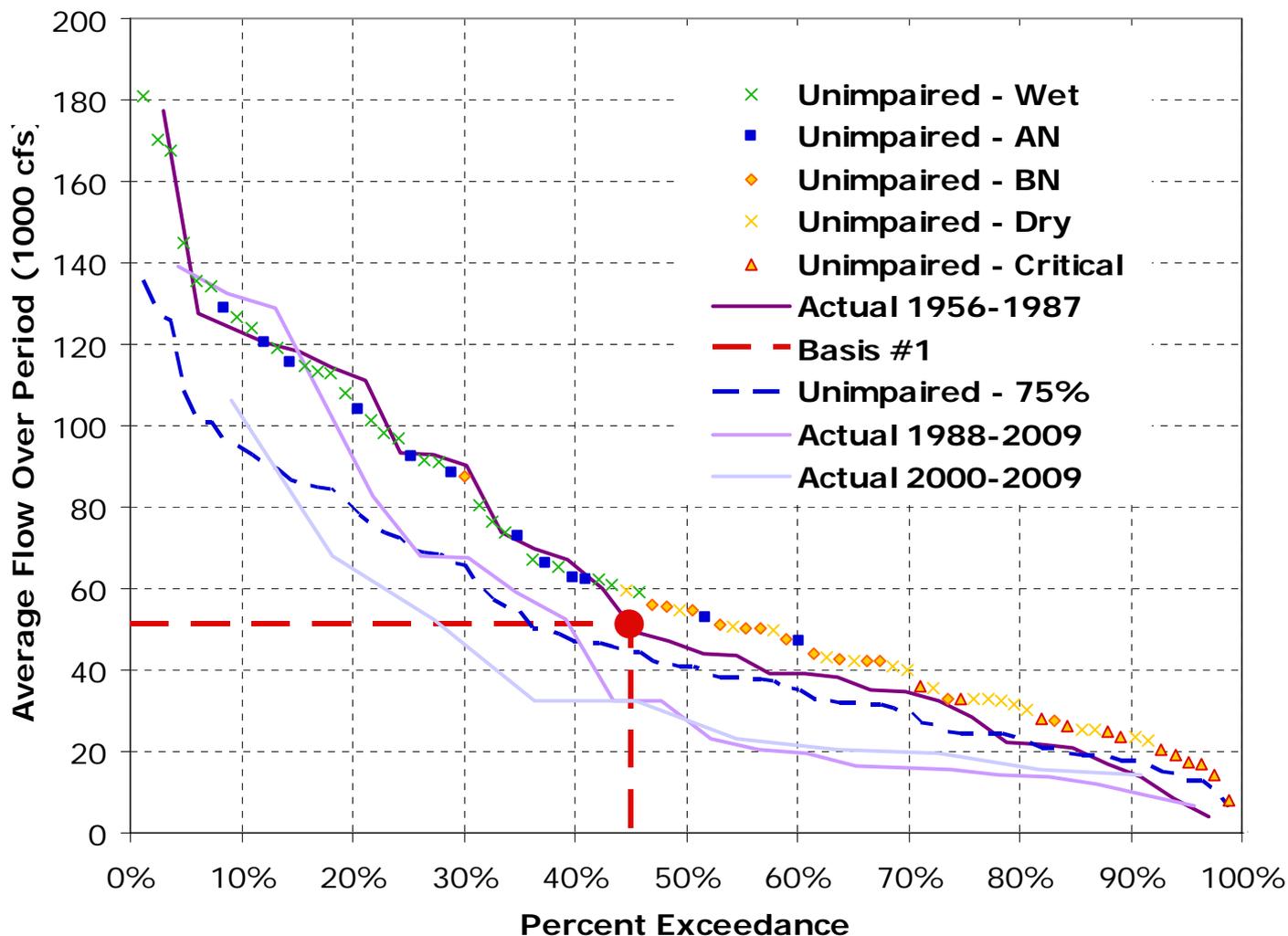
- 1) Identify the narrative goals and criteria for protection of aquatic resource
- 2) Identify threshold numeric flow values needed to achieve these goals
- 3) Determine flow criteria as a percentage of unimpaired flow that would achieve, in the context of an adaptive management framework, the numeric flow values and the goals.

Delta Outflow Criteria example

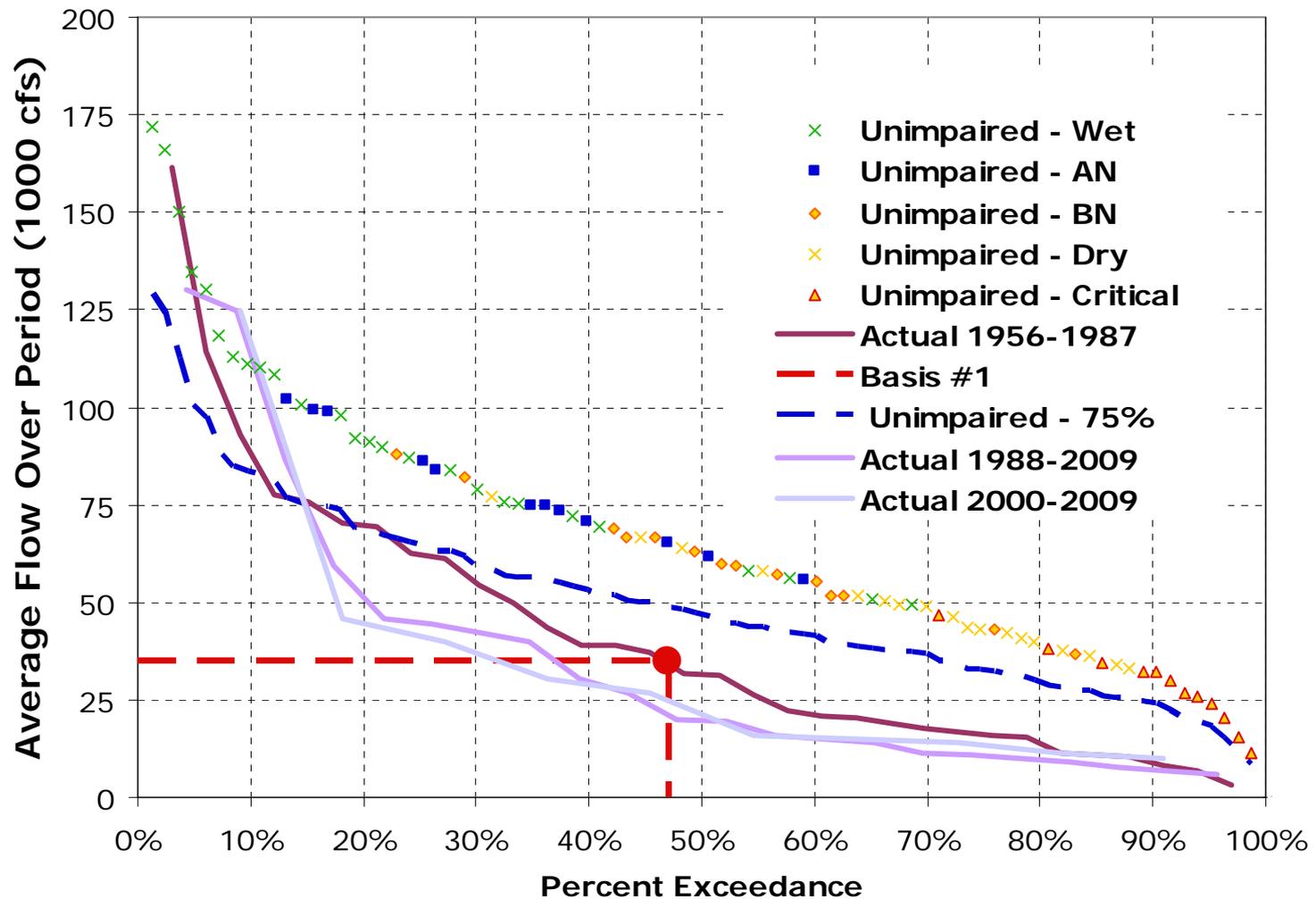
- Goal: increase abundance of longfin smelt in 50% of years (as measured by FMWT* index)
- Threshold flow: 9.1 maf (51,000cfs) and 6.3 maf (35,000 cfs) during January through March and March through May, respectively, based on statistical analysis of historic flows (post corbula) and FMWT indices
- Corresponds to 75 % of unimpaired flow to achieve a return frequency similar to 1956 to 1987

* Fall midwater trawl

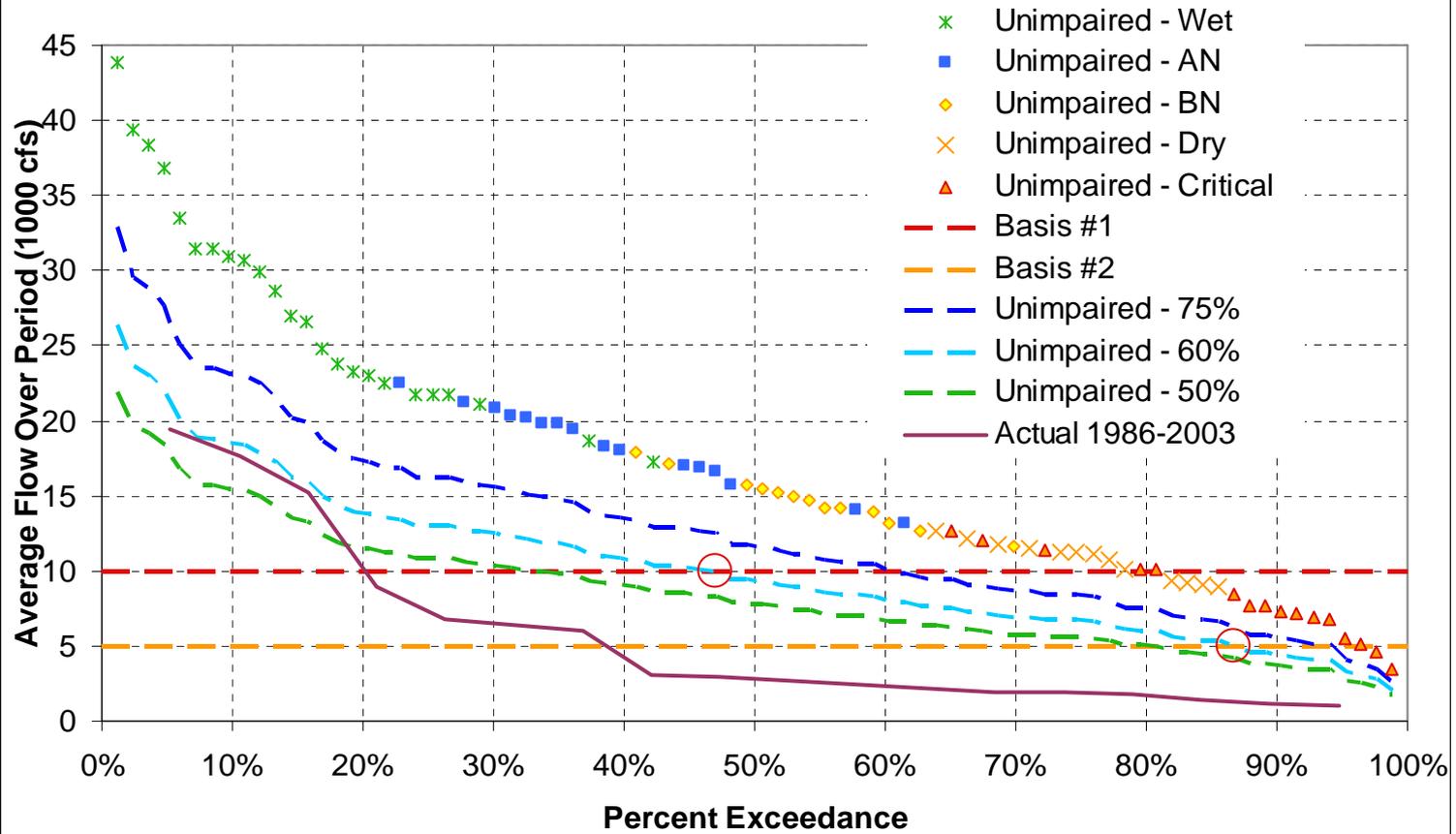
Average Net Delta Outflow for January through March - Total Unimpaired with Recommendation & Basis



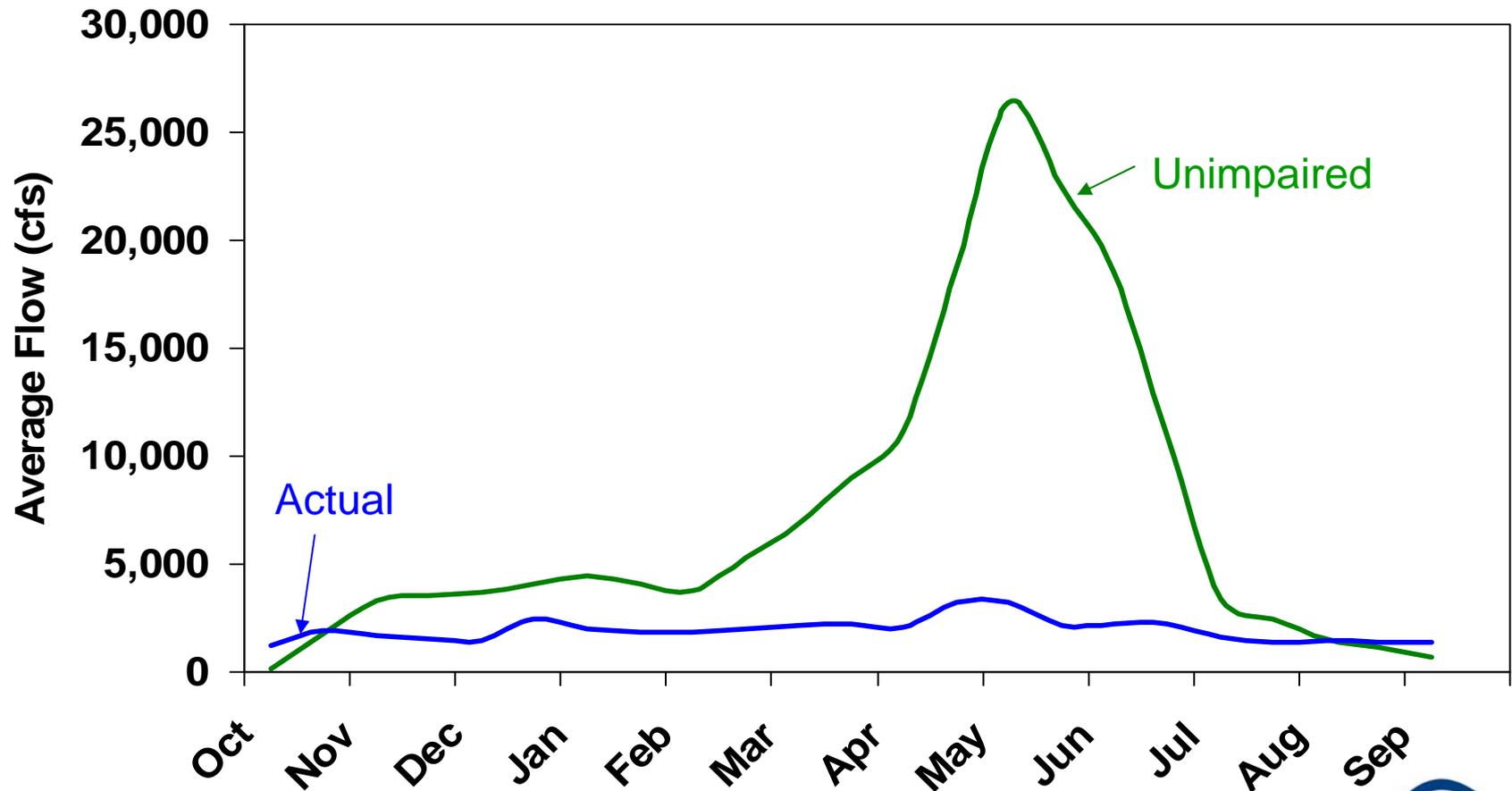
Average Net Delta Outflow for March through May - Total Unimpaired with Recommendation & Basis



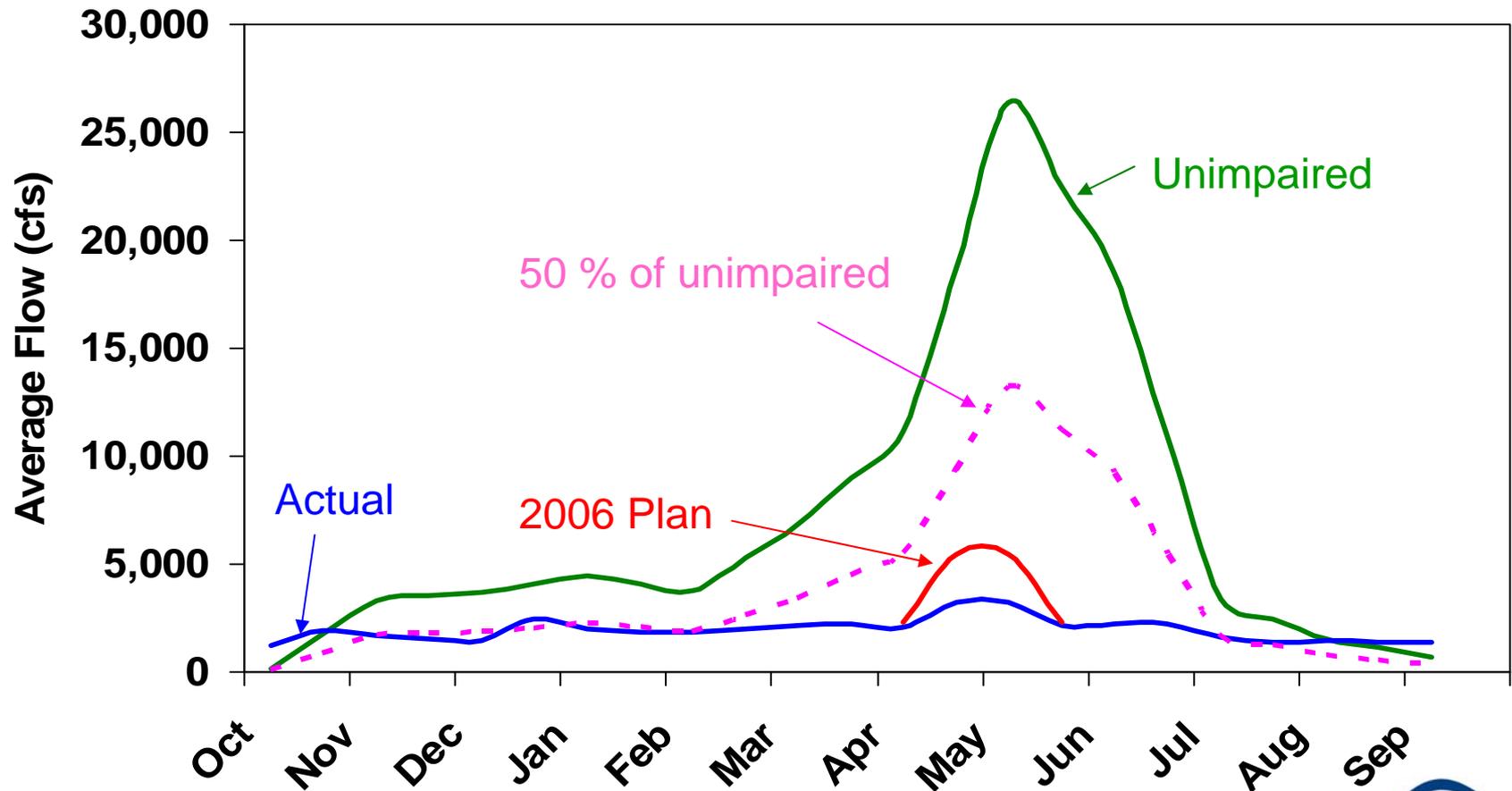
Average San Joaquin River Flow at Vernalis for March to June - Unimpaired and Observed with Recommendation & Basis



San Joaquin River Near Vernalis Flow Water Year 2003 (Below Normal)



San Joaquin River Near Vernalis Flow Water Year 2003 (Below Normal)



Comments and Next Steps

- 31 comment letters received (plus 5 late)
- Following adoption, criteria will be submitted to Delta Stewardship Council within 30 days
- Information will be used along with other information on competing uses of water, economics, CEQA etc. to inform State Water Board water quality and water rights processes