Summary of Impacts and Key Points Relating to Proposed Sacramento Valley Unimpaired Flow Standards

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with Gratitude to the Northern California Water Association
for Its Past Impact Analyses and Excellent Advocacy on This Issue

General Summary of Impacts of a 50% Unimpaired Flow Scenario Identified by the Northern California Water Association in 2016[1]

- "An unimpaired flow approach would significantly impact reservoir storage necessary to serve cities, rural communities, farms, fish, birds and recreation, particularly during dry years."

- "Unimpaired flows would have **significant impacts on reservoir storage**, which would impact every one of these beneficial uses of water in the Sacramento Valley and throughout California."

- "[I]f a 50% unimpaired flow requirement were to be imposed impacts to the cold-water pools of Shasta, Oroville, and Folsom Reservoirs would be impacted in 80% of the years."

- "[R]eservoirs would reach their dead pools in 20 to 40% of the years."

- "[I]ncreases in spring time releases […] would deplete cold water supplies needed to protect salmon spawning downstream from reservoirs."

- "Such an approach would further limit California's ability to be prepared for future dry years, such as those we saw in 2014-15 [by]

    - "reducing cold water pools and management flexibility for salmon, […]"
    - "reduc[ing] deliveries for birds along the Pacific Flyway (ricelands, refuges), […]"
    - "reduc[ing] deliveries and reliability for cities, rural communities and farms."

Technical Conclusions Regarding Impacts of 50% and 40% January-June Unimpaired Flows in the Sacramento Valley[2]

[1] See NCWA's public comments dated December 16, 2016 on the SWRCB's October 2016 Draft Scientific Basis Report [accessed July 18, 2018 at https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/comments121616/docs/david_guy.pdf].

[2] See NCWA's public comments, dated December 16, 2016, on the SWRCB's October 2016 Draft Scientific Basis Report, Appendix 5, "Evaluation of Potential State Water Resources Control Board Unimpaired Flow Objectives," dated April 25, 2012, prepared by MBK Engineers for the Sacramento Valley Water Users Group [accessed July 18, 2018 at https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/comments121616/docs/david_guy.pdf].

"The overall conclusions regarding the estimated effects of implementing January-June minimum monthly Delta outflow requirements of 50% and 40% of unimpaired flows are as follows:

- Effects to the CVP and SWP reservoirs and operations would be severe and would result in the inability to maintain viable operations.
- Increases in average annual Delta outflows would be:
    - 1,100,000 acre-feet for a 50% of unimpaired flows requirement; and
    - 480,000 acre-feet a 40% of unimpaired flows requirement.
- The following reductions and decreases in Sacramento Basin CVP and SWP reservoir carryover storage would occur:
    - Significant reductions in cold water pools would occur under both the 50% and the 40% of unimpaired flows scenarios;
    - An average reduction of 2,200,000 acre-feet in reservoir carryover storage would occur under the 50% of unimpaired flows scenario;
    - An average reduction of 1,000,000 acre-feet in reservoir carryover storage would occur under the 40% of unimpaired flows scenario.
- The following increases in Sacramento Basin groundwater pumping to meet reductions in surfacewater deliveries would be necessary:
    - For the 50% of unimpaired flows scenario, groundwater pumping in the Sacramento Basin would have to increase by 250,000 acre-feet per year on average annual basis , and by an average of 1,000,000 acre-feet per year in Critical years;
    - For the 40% of unimpaired flows scenarios, groundwater pumping in the Sacramento Basin would have to increase by 100,000 acre-feet per year on average annual, and by an average of 400,000 acre-feet per year in Critical years.
- Such increases in groundwater pumping would not be realistic and therefore would not actually occur. Instead, there would have to be reductions in irrigated acreage:
    - Under both scenarios, there would be increased groundwater overdrafts in the export service area
- The following seasonal changes in river flows and Delta outflows and impacts would occur:
    - Increases in March through June
    - Decreases in July through December
    - Impacts to key instream temperature and habitat
- There would be regular and multiple violations of existing SWRCB standards and ESA Biological Opinion requirements
- There would be severe water supply impacts, including the following:
    - Water-supply impacts to CVP settlement and exchange contractors, and SWP settlement agreement holders, which have water rights senior to the CVP and the SWP;
    - Significant reductions in north-of-Delta CVP and SWP water-service contract deliveries;
    - Inability to meet public health and safety water deliveries;
    - Reductions in water deliveries to wildlife refuges."

Sacramento Valley Water User's December 2016 Key Takeaways Regarding Unimpaired Flows[3]

- "Sacramento Valley consumptive use of water has been essentially stable since the late 1950s."

- "Required Delta outflows have increased substantially since 1994, while Delta pelagic fish have continued to decline."

- "Delta flow requirements based on 50% or 40% of unimpaired flow would have significant adverse impacts on Sacramento Valley water resources, including significant reductions in reservoir storage."

- "Sacramento Valley water systems already are subject to comprehensive regulatory requirements."

- Rather than pursue the "percent of unimpaired flow" approach, SWRCB should embrace and implement the "functional flow" approach for the Sacramento Valley.

[3] See Sacramento Valley Water User's December 7, 2016 presentation to the SWRCB [accessed July 18, 2016 at https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/20161207_svwu_presentation.pdf.