

3-7-17 Board Meeting-Item 7  
Climate Change  
Deadline: 3/3/17 12 noon



March 3, 2017

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*via email*

Re: Comment Letter of Butte County on Proposed Resolution Adopting a  
Comprehensive Response to Climate Change (March 7, 2017 meeting, item 7)

This letter, submitted on behalf of Butte County, comments on the State Water Resources Control Board's draft resolution adopting a "comprehensive response" to climate change. The resolution provides the State Board's overdue sequel to the Board's Resolution 2007-0059, which ten years ago recognized the adverse consequences of climate change on water supply and quality, and announced the Board's commitment to "careful consideration" of climate change strategies.

As the host county of the Department of Water Resources' Oroville Facilities and the bearer of many of its major costs and risks, Butte County has sought for more than a decade to ensure careful review the full range of hydrologic conditions affecting their operation during DWR's proposed 50-year relicensing. Butte County concurs in the draft resolution's recognition that project review must accurately account for climate change, including study of hydrologic changes that include "declining snowpack and more frequent and longer droughts, more frequent and more severe flooding, and consequent impacts on water quality and water availability." (Preamble, ¶2.) Without attempting to cover all the numerous statewide implications of the draft resolution, Butte highlights several matters of particular importance to the county.

First, the resolution would benefit from a clear statement of the foundational importance of the Feather River Basin and its outlet reservoir, Lake Oroville, to the effective and equitable management of California's water resources, as well as the health, safety and welfare of the county and its constituents. This basin is "a major contributor to the California State Water

Project (SWP), which distributes water throughout California for domestic use, irrigation, and hydropower production. The basin outlet reservoir, Lake Oroville, holds 8 percent of the state's reservoir capacity and plays an important role in flood management, water quality, and the health of fisheries, affecting areas down-stream at least as far south as the Sacramento/San Joaquin River Delta.” K. Koczot, S. Markstrom, L. Hay, *Watershed Scale Response to Climate Change—Feather River Basin, California* (United States Geological Survey, 2011-1325, March 2012)(online); [https://pubs.usgs.gov/fs/2011/3125/FS11-3125\\_508.pdf](https://pubs.usgs.gov/fs/2011/3125/FS11-3125_508.pdf).) However, the basin is “sensitive to slight changes in temperature which affect the formation and melting of snow”; and is “recognized as one of the first in California anticipated to be affected by climate-induced change to the snowpack. Changes to the snowpack will have large effects on the timing and quantity of stream flow.” (*Id.*) In light of this sensitivity, any state determination on infrastructure or water management that fails to account for climate change would likely understate its impacts to beneficial uses served by the Feather River Basin.

Second, although the draft resolution's preamble mentions the vital importance of “coordination and working collaboratively” with state, regional and local agencies (§ 10), as well as with affected communities and other stakeholders, its substantive provisions addressing coordination and outreach are comparatively narrow (see, e.g., §§ 13, 18, 24-26). The resolution must expressly encourage DWR and other state agencies engaged in water decision-making to consistently account for and address impacts of climate change, and strengthen the State Board's commitment to engage counties, cities and other affected stakeholders and communities.

Third, extensive public discussion that has followed this season's major crisis at the Oroville facilities provides useful perspective on the vital need for state agencies to account for the hydrologic consequences of climate change in actions as well as words, and to mitigate the enormous local costs and risks stemming from failure to do so. Indeed, the lengthy history of proceedings on Oroville relicensing undermines the premise that state agencies only learned recently of the vital importance of considering the full range of twenty-first century conditions affecting their project decisions.

Butte and Plumas Counties' challenge to DWR's 2008 Oroville Facilities EIR and decision is fully briefed and remains pending in the Third District Court of Appeal. (*Butte County v. Department of Water Resources*, C071785). Recent reports on this season's Oroville crisis have noted that the counties' challenge focuses on DWR's refusal to analyze how the Oroville relicensing project would perform under twenty-first century hydrologic conditions, including greater risks from both floods and drought, which scientists, including DWR's own, anticipate due to climate change. DWR instead confined its Oroville Facilities review to a narrower range of conditions experienced in the twentieth century, defied its scientific experts in dismissing further analysis as speculative, and refused to acknowledge and mitigate other major local costs and risks. As background for considering the draft resolution, Butte County invites the State Board to consider two attachments. Attachment A lists recent articles addressing the Oroville dam crisis and the relationship between climate and hydrology. They either reference Butte and Plumas Counties' legal challenge or raise similar concerns. Attachment B provides Butte and Plumas's opening brief in the pending challenge.

Finally, although opinions differ on what policy outcomes should follow from a wider range of hydrologic extremes, this cannot excuse the hazardous and risky course of failing to analyze projects under a full range of twenty-first century conditions.

Respectfully,

/s./

Roger B. Moore

Counsel for Butte County

## Appendix A

J. Christian-Smith, *Learning from Oroville: Water Board Proposes Climate Change Resolution*, Water Deeply (online), February 20, 2017, <https://www.newsdeeply.com/water/community/2017/02/20/learning-from-oroville-water-board-proposes-climate-change-resolution> (“During the federal relicensing of the Oroville Dam, the California Department of Water Resources (DWR) *chose not to assess* how climate change might affect the dam’s operation. In response to this ‘foundational error’, Butte County and Plumas County sued the DWR. Their suit argues that the environmental analysis associated with the dam relicensing should be rejected as unscientific. It stated, “Rather than rigorously assessing climate change, DWR’s Oroville FEIR[Final Environmental Impact Report] presumes that hydrologic variability from the previous century ‘is expected to continue in the foreseeable future’ and that it would be ‘speculative’ to further analyze other climate change scenarios ... Due to this error, the FEIR is predicated upon a hypothetical future that DWR knows to be dangerously false.”)

J. Little, *California Dam Crisis Could Have Been Averted*, Scientific American (online), February 20, 2017; <https://www.scientificamerican.com/article/california-dam-crisis-could-have-been-averted/> (“The menacing floodwaters last week forced the emergency evacuation of 188,000 residents. Yet the impending disaster came as no surprise to officials in Butte and Plumas counties. The rural counties, which surround Lake Oroville, had challenged the state’s environmental review of dam operations in a 2008 lawsuit, arguing the state ‘recklessly failed’ to properly account for climate change in its long-term dam management plan”)

I. James, *Oroville Dam Unprepared for Climate Change, critics warned years before crisis*, The Desert Sun, February 20, 2017; <http://www.desertsun.com/story/news/environment/2017/02/14/dangerously-false-oroville-dam-isnt-prepared-global-warming-2008-lawsuit-says/97903842/> (“ For nearly nine years, two California counties have been waging a legal fight with the state’s Department of Water Resources over how the agency manages Oroville Dam. Plumas and Butte counties, which surround the reservoir and stretch from snowy peaks in the Sierra Nevada to farmlands in the Central Valley, sued in 2008 to challenge an environmental review that was part of the state’s application for a new federal permit for the dam. The counties accused state officials of recklessly failing to take into account the impacts of global warming in their long-term plans for operating the dam....Now county officials say the emergency of the past few days, including the sudden evacuation of more than 180,000 people, shows just how well-founded their concerns were – and how important it will be for California to change how dams are managed as rising temperatures shrink the average snowpack in the Sierra and change the timing of snowmelt runoff”)

R. Sabalow and A. Furillo, *Oroville Dam’s Flood Control Manual Hasn’t Been Updated for Half a Century*, Sacramento Bee (online), February 15, 2017; <http://www.sacbee.com/news/state/california/water-and-drought/article133030359.html>

(describing scientists' concerns that California "uses the hydrology of the past to design the infrastructure of the future," and noting that Butte and Plumas Counties raised "similar concerns" in their pending challenge to DWR's Oroville relicensing EIR for failure to properly account for climate change)

N. Diffenbaugh, *What California's Dam Crisis Says About the Changing Climate*, New York Times (online), February 14, 2017; <https://www.nytimes.com/2017/02/14/opinion/what-californias-dam-crisis-says-about-the-changing-climate.html>

("The juxtaposition of five years of hot, dry conditions followed by more rain than reservoirs can store may seem incongruous. However, this is exactly what climate scientists have predicted for California since at least the 1980s: protracted periods of warm, dry conditions punctuated by intense wet spells, with more rain and less snow, causing both drought and floods")

J. Mount, *Yesterday's dams face tomorrow's floods*, Public Policy Institute of California (online), February 15, 2017; [http://www.ppic.org/main/blog\\_detail.asp?i=2228](http://www.ppic.org/main/blog_detail.asp?i=2228)

("Part of the problem at Oroville is that the warm temperatures have meant there's more water to manage right now than usual because less of it is staying in the snowpack. The past seven years—which included five years of record warm, dry conditions bracketed by extremely wet ones—is a glimpse into our future. It is time to rethink how we are going to operate and maintain our dams to respond to these changes. ....By design, Oroville was relatively full when the latest floods arrived, reflecting its top priority (water supply) and compounding flood risk")

L. Feinstein and P. Gleick, *Big-Picture Questions Raised By the Oroville Dam Emergency*, Water Deeply (online), February 16, 2017; <https://www.newsdeeply.com/water/articles/2017/02/16/big-picture-questions-raised-by-the-oroville-dam-emergency> ("The problems at Oroville Dam are linked to unresolved issues we have with funding our infrastructure, adapting to climate change and restoring natural ecosystems")

D. Graham, *How Did the Oroville Dam Crisis Get So Dire?*, The Atlantic, (online) February 13, 2017; <https://www.theatlantic.com/national/archive/2017/02/how-did-the-oroville-dam-get-so-bad/516429/>

("[d]rought, climate change and aging infrastructure combined to create a looming catastrophe that forced 188,000 Californians to evacuate")

A. Nagourney and H. Fountain, *Oroville is A Warning for California Dams, as Climate Change Adds Stress*, New York Times (online), February 14, 2017; <https://www.nytimes.com/2017/02/14/us/oroville-dam-climate-change-california.html>

(the "threat of catastrophic flooding from the damaged Oroville dam" demonstrated that older dams may not be designed to deal with the severe weather patterns California has experienced due to global warming")

K. Phillips and R. Stork, *Lessons California should learn from the Oroville dam debacle*, Sacramento Bee (online), February 15, 2017; <http://www.sacbee.com/opinion/oped/soapbox/article132875519.html>; (“The Oroville Dam debacle is a wake-up call to California. If we heed the call, we may be able to avoid what could certainly be other disasters and wrong turns in the state water system as we head into an age typified by extreme weather events associated with climate change”)

E. Holthaus, *The dam truth: Climate change means more Lake Orovilles*, Grist (online), February 16, 2017; <http://grist.org/climate-energy/the-dam-truth-climate-change-means-more-lake-orovilles/> (“Atmospheric rivers are already responsible for roughly 80 percent of California’s flooding events — including the one at Lake Oroville — and there’s reason to believe they are changing in character. Since warmer air can hold more water vapor, atmospheric rivers in a warming climate are expected to become more intense, bringing perhaps a doubling or tripling in frequency of heavy downpours. What’s more, as temperatures increase, more moisture will fall as rain instead of snow, increasing the pressure on dams and waterways during the peak of the rainy season”)

R. Moore, et al., *Cry Me a Reservoir: Water Management and Climate Change Adaptation*, 22:1 Environmental Law News, Summer 2013, 3-30; <http://www.water.ca.gov/climatechange/docs/Cry%20Me%20A%20Reservoir--Water%20Management%20and%20Climate%20Change%20Adaptation%20-%20Published%20in%20Environmental%20Law%20News%20Vol%2022%20No%201%20Summer%202013.pdf> (discussing inability of twentieth century hydrology to guide twenty-first century project performance)

R. Shibatani, *State Water Resources Control Board releases its first water-related climate change resolution*, Maven’s Notebook (online), February 15, 2017; <https://mavensnotebook.com/2017/02/15/guest-commentary-state-water-resources-control-board-releases-its-first-water-related-climate-change-resolution/> (“Improving hydrologic fidelity is not a partisan act. It simply adheres to the belief that one should always follow best available scientific practice”).

COURT OF APPEAL OF THE STATE OF CALIFORNIA  
FOR THE THIRD APPELLATE DISTRICT

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COUNTY OF BUTTE, COUNTY OF PLUMAS, and PLUMAS COUNTY  
FLOOD CONTROL AND WATER CONSERVATION DISTRICT,  
Petitioners and Appellants

v.

DEPARTMENT OF WATER RESOURCES,  
Respondent  
STATE WATER CONTRACTORS, INC., et al.  
Real Parties in Interest and Respondents

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Appeal from Judgment Entered on June 8, 2012  
Yolo County Superior Court, Case No. CV09-1258  
[Butte County Consolidated Cases, No. 144283, 144282]  
Trial Judge: The Honorable Daniel P. Maguire (Dept. 15)

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**APPELLANTS' OPENING BRIEF**

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Craig, “Stationarity Is Dead” – <i>Long Live Transformation: Five Principles for Climate Change Adaptation Law</i> (2010) 34 HARVARD ENVTL. L. REV. 9.....	25
Mann, <i>Like Water for Energy: The Water-Energy Nexus Through the Lens of Tax Policy</i> (2011) 82 U. COLO. L. REV. 505.....	47
Milly et al., <i>Stationarity Is Dead: Whither Water Management?</i> (2008) 319 SCIENCE 573.....	20
Note, <i>NEPA and CEQA: Effective Legal Frameworks for Compelling Consideration of Adaptation to Climate Change</i> (2009) 82 SO. CAL. LAW REV. 769.....	1, 17
Sawyer, <i>Hydropower Relicensing in the Post-Dam Building Era</i> (1996) NAT. RESOURCES & ENV’T 12.....	16
<i>State Water Development: Legal Aspects of California’s Feather River Project</i> (1959) 12 STAN. L. REV. 439 .....	1
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# SELECTED ADMINISTRATIVE RECORD STUDIES

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## GLOSSARY OF ABBREVIATIONS

AA	Appellants' Appendix
ALP	alternative licensing process
AR	administrative record
BO	biological opinion
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CO <sub>2</sub>	carbon dioxide
CVP	Central Valley Project
CWA	Clean Water Act
DEIR	draft environmental impact report
DEIS	draft environmental impact statement
DWR	California Department of Water Resources
EIR	environmental impact report
EIS	environmental impact statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEIR	final environmental impact report
FEIS	final environmental impact statement
FERC	Federal Energy Regulatory Commission
FSA	FERC staff alternative
GHG	greenhouse gas
GHGE	greenhouse gas emissions
HFC	high-flow channel
maf	million acre feet
MW	megawatts
NEPA	National Environmental Policy Act

NMFS	National Marine Fisheries Service
OCAP	Operations Criteria and Plan
OEHHA	Office of Environmental Health Hazard Assessment
OWA	Oroville Wildlife Area
PCB	polychlorinated biphenyl
PDEA	preliminary draft environmental assessment
PM&E	protection, mitigation and enhancement
SA	Settlement Agreement
SWP	State Water Project
SWRCB (state board)	State Water Resources Control Board
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

## INTRODUCTION

In 2008, California’s Department of Water Resources (“DWR”) completed one of the most important and enduring tasks in the storied history of the State Water Project (“SWP”): its environmental review and approval, as state lead agency, of a proposed new 50-year operating license for DWR’s Oroville Facilities, which store rain and melting snow flowing through the Feather River to serve uses throughout the state.<sup>1</sup> Built in Butte County during the 1960s, the Oroville Facilities include the tallest dam in the United States (Oroville Dam), the major water storage reservoir serving the SWP (Lake Oroville), and a hydropower plant (the Hyatt-Thermalito complex), among others.<sup>2</sup> (*Alameda County Flood Control and Water Conservation District v. Department of Water Resources* (2013) 213 Cal.App.4th 1163, 1170.)

DWR’s environmental impact report (“EIR”) will guide Oroville operations for the next half-century under its proposed license conditions and also functions to justify the decisions of state agencies that must ensure compliance with laws protecting water quality and endangered species.<sup>3</sup> The reservoir must serve multiple uses ranging from water supply, flood control,

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<sup>1</sup> The SWP, which DWR manages on behalf of all Californians, originated as the Feather River Project. See Note, *State Water Development: Legal Aspects of California’s Feather River Project* (1960) 12 STAN. L.REV. 439; Wat. Code, § 12930, *et seq.* (Burns-Porter Act). The original 1957 license for the Oroville facilities (FERC Project No. 2100) expired in 2007. Since 2007, DWR has been operating the facilities on annual licenses.

<sup>2</sup> The Thermalito plant has been renamed the Ronald B. Robie Pumping-Generating Plant. *Alameda County Flood Control and Water Conservation District*, 213 Cal.App.4th at 1172, fn. 6.

<sup>3</sup> The State Water Resources Control Board (“SWRCB” or “state board”) reviews the project for water quality certification under section 401 of the Clean Water Act, 33 U.S.C. § 1313, and the Department of Fish and Wildlife (formerly Department of Fish and Game) reviews the project for compliance with the California Endangered Species Act (Fish & G. Code, § 2053). They serve, respectively, as responsible and trustee agencies for the project’s state law environmental review.



and electricity production, to water quality and environmental protection, while honoring existing water rights. Despite these many water-supply-dependent uses, DWR management made the shocking and risky choice to exclude from the EIR vital climate change information, developed by its own scientists and evaluated by its professional staff, discrediting the EIR's hydrologic assumptions and undermining the EIR's water projections. Against all the evidence and authoritative science, the EIR asserts that DWR expects the twentieth century's range of hydrologic conditions to "continue for the foreseeable future." (AR H000133.) Although the EIR concedes that climate change is occurring and will affect water resources, DWR refused to test how its Oroville Facilities project would operate, and whether it could meet its multiple and potentially conflicting uses, under the more challenging conditions that its own scientists expect. DWR abruptly dismissed further analysis as "speculative" and deferred a more probing assessment until the "*next Relicensing period*"—in other words, *half a century after project implementation*. (AR H000131-132 (emphasis added).)

DWR never disclosed that in 2008, scientists had long since discredited the key assumption in the EIR's water analysis, which relies solely on the twentieth-century hydrologic range and refuses to analyze how, or whether, the Oroville Facilities could meet the multiple required uses under conditions outside that range. DWR ignored warnings that refusing to adjust for climate change in tests of infrastructure performance would leave unstudied dangers of system failure and loss of reservoir control.

By 2008—three years after California's Governor, in Executive Order S-3-05, warned that climate change threatens to "greatly reduce the Sierra snowpack, one of the State's primary sources of water"—DWR's scientists had developed watershed-specific projections for the Feather River and had

confirmed that over the project term, climate change will impact flood control, reservoir storage, flow levels, water temperatures, power generation, water quality, fisheries, and recreation. DWR's Oroville relicensing program manager even noted privately the EIR's "inconsistency" with more forthcoming reviews that DWR had already conducted on other projects utilizing water forecasting. (AR L146902-906.) Yet the EIR based its benign account of the project on a vision of the future already shown to be false, vitiating the EIR's authority to justify decisions of statewide importance under the California Environmental Quality Act. ("CEQA," Pub. Res. Code, § 21000, *et seq.*)

DWR's EIR also fails to address the project's environmentally significant local consequences, including unmitigated toxic contamination and faulty public health and safety regulation. (AR G002538-2616.) DWR refused to provide any mitigation for government services costs, based upon DWR's indefensible conclusion denying significant direct or cumulative impacts—a premise refuted by Federal Energy Regulatory Commission ("FERC") staff and even by DWR's own estimates outside the EIR. (AR G002496-2535, H000125.) DWR also refuses to require feasible mitigation of these impacts, which would have imposed negligible costs on SWP beneficiaries. (AR H000212-214, H000289-290.)

Lastly, the EIR insulated much of the project from serious study, based on the specious assumption that DWR's Oroville operations protect beneficial uses and will continue to do so. (AR H000181-186.) That avoidance conceals major risks that could impair water quality and numerous uses served by the Feather River and Lake Oroville. DWR also underplays risks by disconnecting its Oroville Facilities analysis from their context as part of the SWP. DWR was aware that federal courts had invalidated the biological opinions serving as

the source of *all future operations assumptions* in its EIR, yet DWR persisted in relying on those invalid assessments. (AR L007198, H000143.)<sup>4</sup>

As confirmed in a prophetic 2007 memorandum from one of DWR's consultants, DWR was acutely aware of the key errors in the EIR.<sup>5</sup> Unfortunately, this three-page memorandum is more candid about the central problems in DWR's environmental review than anything in the EIR. An "aura of unreality" permeates DWR's environmental review of its Oroville project. (See *Planning and Conservation League v. Department of Water Resources* ("PCL v. DWR") (2000) 83 Cal.App.4th 892, 912 (criticizing DWR's unrealistic portrayal of the SWP).) Against the warnings of its own respected scientists, DWR refused to reconsider its outmoded hydrology. Aware that the state agency charged with water quality protection took issue with DWR's assumptions about beneficial uses, DWR kept further study "off the table" in its environmental analysis.<sup>6</sup>

As public entities and SWP contractors that will live with the consequences of DWR's denial and avoidance for the next half-century, Butte

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<sup>4</sup> Rejecting defenses by some of the same water contractors that here support DWR (as members of real party in interest State Water Contractors, Inc.), the federal-court opinions criticized both the Bureau of Reclamation's reliance on water forecasts based solely on historic hydrology and its avoidance of climate change in the environmental analysis. See section II.B.5, *infra*. The EIR fails to mention this deficiency. AR H000143.

<sup>5</sup> This October 2007 memorandum, entitled *DWR Oroville DEIR Policy and Legal Issue Summary*, was prepared by consultant David Olson (HDR/SWRI) and circulated among DWR staff. AR L0007197-7200; see also AR L007200 (further analysis needed from DWR's scientists on climate and water issues); L007198 (SWP operations "have now significantly changed from the Oroville Environmental Baseline"); L007198 (judicially rejected OCAP BO was "[u]sed as the basis for all future operations assumptions" in DWR's Oroville CEQA document, and there are "[n]o accepted common assumptions as basis for future scenarios without it").

<sup>6</sup> See AR L007199 (DWR views SWRCB as "obviously hostile" and stricter on "protection of beneficial uses"); AR H000181-186 (SWRCB comments).

and Plumas do not take this challenge lightly. Rather than seeking to curtail DWR's Oroville operations, they hold DWR to the standards of candor and accountability required under CEQA.<sup>7</sup> Enforcement of those standards is urgently needed to ensure for all Californians, northern and southern, urban and rural, that the State Water Project and its keystone facility are resilient enough to withstand the conditions of the present century, not simply the past one.<sup>8</sup>

### STATEMENT OF FACTS

#### **A. History: The Building of Oroville Dam; Promises Made to Butte County**

The Oroville Dam forms the key northern water storage facility in the State Water Project. (AR G000182.) The dam and related facilities ("Oroville Facilities") are located on the Feather River in the Sierra Nevada foothills in Butte County. (AR G002502.) Constructed between 1961 and 1968, the Oroville Dam is the second largest dam in California, and it is owned and operated by DWR. (AR G002498, G002502.) Oroville Dam lies five miles east of the City of Oroville and about 130 miles northeast of San Francisco. (AR G000128.)

The Oroville Facilities are an expansive complex, with facilities for power generation, water storage, environmental protection, and recreation. (AR G000184.) The Oroville Dam and two saddle dams impound water in

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<sup>7</sup> The project reviewed in this action arose from a 2006 Settlement Agreement ("SA"). AR D000422-576. Although Butte County and Plumas County participated in FERC's Oroville relicensing proceedings (Docket P-2100), they were excluded from the final stages of settlement discussions culminating in the SA, after DWR refused to mitigate major local costs and risks. AR F003847-49; F002488-96; F003863-64; F003871-74.

<sup>8</sup> Should it remain relevant after this Court's decision on the merits, section VI, *infra*, challenges the trial court's decision requiring full payment in advance to DWR for the most unreasonable, unnecessary, and unsupported administrative-record-cost claims in four decades of CEQA enforcement.

Lake Oroville, a 3.5 million acre-foot reservoir. (AR G000184.) Water is released from Lake Oroville to power three hydroelectric power plants: Hyatt Pumping-Generating Plant, with a capacity of 645 megawatts (“MW”), Robie Pumping-Generating Plant (114 MW), and Thermalito Diversion Dam Powerplant (3 MW). (AR G000184.) Oroville includes a number of smaller dams, canals, tunnels, pumps, and diversion pools, which assist in power generation operations by storing and moving water through the facility, regulating the power system, and providing water access for several irrigation districts. (AR G000184-85.)

The Oroville complex also includes facilities for fish and wildlife protection, including the Oroville Wildlife Area (“OWA”), Feather River Fish Hatchery, and Thermalito Fish Hatchery Annex, which provide room for spawning and incubation for salmon and steelhead. (AR G000194-197.) The Oroville Facilities area also accommodates boating, fishing, camping, picnicking, swimming, horseback riding, hiking, off-road cycling, wildlife watching, and hunting, as well as cultural information displays. (AR G000200.)

The Oroville Facilities play a vital role in the SWP, collecting water from California’s rainy, mountainous north and distributing it to agricultural, municipal, and industrial users in northern California, the San Francisco Bay Area, the San Joaquin Valley, the Central Coast, and southern California. (AR G000184.) Generally, the SWP consumes all the power that Oroville produces, but when generation exceeds SWP demand, the excess load is sold. (AR G000189.) The Oroville Facilities also provide flood management capabilities, water quality improvement in the Delta, and the abovementioned recreational amenities and fish and wildlife enhancement. (AR G000184.)

When Oroville Dam planning began in the 1940s, Butte County had owned and operated Big Bend Dam and Powerhouse on the Feather River for

almost forty years. (AR G002499, G002527.) Built in 1908 for flood protection, the dam also provided low-cost energy, a reliable county revenue stream, and jobs to residents of the then county seat, Las Plumas. (AR G002527.) A state water inventory identified the area as a prime reservoir location. (AR G002499.) The California Water Project Authority (predecessor to DWR) applied for, and the Federal Power Commission (predecessor to FERC) in 1957 granted, a 50-year license to build and operate a hydropower dam. (AR G002498.)

Oroville Dam proponents assured local residents that the impacts of a major water facility on their community would be outweighed by the benefits they would enjoy from the project. (AR G002498.) In its 1952 application to the Federal Power Commission for a hydropower license, the authority promised that “provision will be made to make payment for or replace improvements destroyed or injured by the proposed works.” (AR G002499.) Proponents argued that short-term losses to Butte, including loss of local lands and the resultant tax base, would eventually be outweighed by economic gains to Butte County and the state. (*Id.*)

While Oroville Dam’s operation has enriched the state elsewhere, benefits have not been returned to Butte County.<sup>9</sup> (AR G002502.) The county has incurred major administrative and environmental costs related to the

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<sup>9</sup> Farms, mines, homes, schools, roads, and historical sites were flooded by Lake Oroville. AR G002499. The state never compensated the county for the lost revenues of Big Bend Dam and Powerhouse, which had to be dismantled and now lie beneath Lake Oroville, along with the former community of Las Plumas. AR G002499. Butte County was never compensated for the investments it had made in improvements to its flood control infrastructure. Big Bend Dam withstood the great flood of 1955, whose damage elsewhere increased support for the State Water Project. AR G002436-37.

Oroville Facilities.<sup>10</sup> (AR G002549.) Water quality in the region has declined, and in some cases mercury content has risen to such a level that recreational fishers can no longer eat what they catch. (AR G002440.) The Oroville Facilities have altered the ecology of the Feather River itself and have changed the biology of the fishes that live there. (AR H001109.)

**B. FERC Relicensing: Alternative Licensing Process; Settlement Agreement**

DWR's 50-year federal license to own, operate, and maintain the Oroville Dam expired on January 31, 2007. (AR B035070.) DWR received permission from FERC in 2001 to apply to renew its license under the alternative licensing process ("ALP"), as defined in 18 C.F.R., section 4.34, subd. (i). (AR B000617-B000618.) The ALP is intended to expedite review, incorporating pre-filing consultation and federal and state environmental review into a single process. (AR D000428.)

On January 26, 2005, DWR filed an application with FERC to renew its license for an additional 50 years, pursuant to the Federal Power Act, 16 U.S.C. sections 791(a)-825(r). (AR B066039-66050.) Participants in this relicensing proceeding included Butte and Plumas Counties, as well as many other governmental entities, interest groups, and private citizens. (AR C001817-19, C000004-24.) In their ALP comments, Butte and Plumas

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<sup>10</sup> Butte must provide first-responder services, police, fire, criminal justice services, roads, traffic control, and other governmental services, though the county has one of the poorest tax bases in the state. AR G002501. County public safety agencies are underfunded and lack the personnel to patrol the Oroville project site, resulting in increased vandalism and illegal dumping and a degradation of the environment around Lake Oroville. AR G002499. Increased traffic and use of unpaved roads—the primary means of accessing Oroville's recreational facilities—have increased the amount of particulate matter in the air, including asbestos, and have caused a decline in air quality. AR G002593.

documented extensive impacts of the Oroville Facilities on the two counties. (AR C001817-19.)

On March 26, 2006, DWR filed an offer of settlement (“Settlement Agreement” or “SA”) with FERC. (AR D000422.) For purposes of federal environmental review, the SA replaced the action to relicense the dam that DWR proposed in its relicensing application on January 26, 2005. (AR E000839.) Although the SA records DWR’s concurrence with several dozen stakeholders, DWR did not reach agreement with principal parties, including Butte and Plumas Counties. (AR D000427-28.) The counties participated in earlier discussions but were excluded from the final discussions culminating in the SA. (AR F002488-96.)

In further filings, Butte and Plumas Counties posited that the SA failed to include key stakeholders, failed to consider important project impacts, imposed inappropriate impediments on FERC’s ability to monitor license implementation, and failed to protect public safety and the public interest. (AR F003847-49; F002488-96; F003863-64; F003871-74.)

**C. Federal Environmental Review: PDEA and EIS**

On September 27, 2001, DWR issued its scoping document (as required by the National Environmental Policy Act (“NEPA”)) and its notice of preparation (as required by CEQA). (AR C000027.) Along with its January 26, 2005 relicensing application, DWR submitted to FERC a preliminary draft environmental assessment (“PDEA”). (AR B066051 *et seq.*) On September 29, 2006, FERC issued its draft environmental impact statement (“DEIS”) for relicensing of the Oroville Facilities. (AR E000033.) Butte and other stakeholders submitted detailed comments on the DEIS (AR E001351-1427), and on November 8, 2006, commented on the DEIS at an Oroville public meeting. (AR E000553-716.) FERC issued its Final Environmental Impact



Statement (“FEIS”) on May 18, 2007. (AR E000815.) DWR’s license remains pending at FERC (Docket P-2100).

**D. State Environmental Review**

Acting as both project proponent and state lead agency, DWR determined that preparation and certification of an EIR addressing the March 21, 2006 SA would be required to comply with CEQA. (AR G000130.) On May 21, 2007, DWR issued its draft EIR (“DEIR”) addressing its pending application before FERC to obtain a new 50-year license for FERC Project No. 2100. (AR G000004.) The DEIR defined the SA as the project under review. (AR G000130.) DWR received more than 50 comment letters on the DEIR during the public comment period between May 21, 2007 and August 20, 2007. (AR G002381-6629.) DWR also received extensive comments at a public hearing in Oroville on June 21, 2007. (AR G001808-63.)

**1. Public Comments on the DEIR**

Butte and Plumas submitted timely written comments to DWR, addressing the DEIR for the project. (AR G002406-2813.) The counties identified several dispositive problems with the DEIR that thwarted its ability to inform decision-making under CEQA, including:

- Failure to study impacts of the Oroville Facilities in the context of climate change (AR G002419-26);
- Failure to account for the project’s relationship to the SWP and other water intensive uses (AR G002426-29);
- Erroneous assumption of compliance with standards for protection of beneficial uses in the Water Quality Control Plan for the Central Valley–Sacramento and San Joaquin River Basins (“basin plan”)(AR G002466-69);
- Failure to analyze and mitigate extensive local impacts of the Oroville Facilities’ operations (AR G002415-17); and
- Deficient assessment of the no-project alternative with an unreasonably narrow range of project alternatives (AR G002435).

Butte's comments on the DEIR and detailed studies showed major costs to the county's ecology and economy from Oroville project operations. (AR G002406-2813, G002492-2525, G002537-2617.) Butte and Plumas, among others, also cited numerous reports by DWR and others that recommended more rigorous assessment of climate change and water. (AR G002419-2429.)

**2. DWR Certification of the EIR; Findings Without Overriding Considerations; Mitigation Monitoring Plan; Notice of Determination**

DWR issued its Final EIR ("FEIR") on July 22, 2008. (AR H004699-4701.) The FEIR perpetuated most of the serious errors identified in comments on the DEIR. (AR H000203-362.) It denied the significance of, and refused to mitigate, the project's impacts on Butte County. (AR H000119-26.) The EIR posited that it would be "speculative" to evaluate project performance under conditions outside the twentieth-century hydrologic range. (AR H000132.) On July 22, 2008, DWR also filed its notice of determination, decision document, statement of findings, mitigation monitoring program, and decision makers' documentation for the project. (AR A000003-102.) DWR did not file a statement of overriding considerations.<sup>11</sup>

**E. The Present Litigation**

The present litigation was initiated on August 21, 2008, when Butte and Plumas Counties separately filed petitions for writ of mandate in Butte

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<sup>11</sup> In December 2010, the SWRCB issued the water quality certification under section 401 of the federal Clean Water Act, 33 U.S.C. § 1341, but only after finding the Settlement Agreement conditions alone insufficient, and after taking issue with assertions in the EIR and Settlement Agreement relating to protection of beneficial uses. See SWRCB, *Water Quality Certification for Federal Permit or License: Department of Water Resources Oroville Facilities Federal Energy Regulatory Commission Project No. 2100*, Order WQ 2010-0016 (2010), at pp. 1-3; available at <http://www.water.ca.gov/orovillerelicensing/docs/401cert/401certification.pdf>.

County Superior Court. The petitions were consolidated and transferred to Yolo County. After disagreements over the cost and content of the administrative record, as described below in part VI, the case went to trial on January 17-19, 2012. On June 8, 2012, Judge Maguire issued a final judgment against petitioners on all claims, despite rejecting some contentions of the respondents and real parties. Judge Maguire recognized “some support” for petitioners’ argument that DWR “could have analyzed the project’s effects in light of climate change,” but without discussing the evidence, accepted DWR’s premise that further analysis would have been speculative. (Appellants’ Appendix (“AA”) 3018.)<sup>12</sup> On June 20, 2012, Judge Maguire issued a corrected final judgment denying all claims after discovering that the court had failed to consider petitioners’ opposition to respondents’ proposed judgment. Petitioners timely filed a notice of appeal on August 6, 2012.

## **ARGUMENT**

### **I. THIS COURT INDEPENDENTLY JUDGES WHETHER DWR FAILED TO PROCEED AS REQUIRED UNDER CEQA TO ASSESS ITS FIFTY-YEAR OPERATION OF OROVILLE DAM.**

This Court independently judges, and must review *de novo*, whether DWR failed to proceed as CEQA requires. In CEQA cases, courts adjust their scrutiny to the nature of the alleged defect, depending upon whether the claim

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<sup>12</sup> Judge Maguire rejected respondent and real parties’ argument that DWR had no obligation to study the project in the context of changing conditions: “[T]he Petitioners here are requesting not an analysis of the effect of the environment on the project, but rather an analysis of the effect of the Project on the environment, given changes in the Project’s operating conditions as a result of climate change. Since a primary purpose of an EIR is to inform decision-makers about the environmental effects of the project, where feasible an EIR should address all such effects, regardless of whether they are solely caused by the project, or are materially caused by the project in conjunction with other known causal factors.” AA 3017 (distinguishing *Ballona Wetlands Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455). Neither the respondents nor the real parties cross-appealed this ruling.

is predominantly a factual dispute or a failure to proceed as required by law. (*Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 435.) CEQA “compels process. It is a meticulous process designed to ensure that the environment is protected.” (*PCL v. DWR*, 83 Cal.App.4th at 911.) Because “the EIR is the heart and soul of CEQA,” courts must ensure that the EIR “facilitated the environmental review process as envisioned by CEQA.” (*Id.*) Factual disputes are reviewed for substantial evidence. Exclusion of information necessary for informed discussion, or violation of a mandatory requirement, constitutes failure to proceed in the manner required by CEQA. (*Vineyard*, 40 Cal.4th at 435 (quoting *Sierra Club v. State Board of Forestry* (1994) 7 Cal.4th 1215, 1236). )

The “ultimate decision of whether to approve a project, be that decision right or wrong, is a nullity if it is based upon an EIR that does not provide decision-makers and the public the information required by CEQA.” (*Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 88 (quoting *Santiago County Water District v. County of Orange* (1980) 118 Cal.App.3d 818, 829).) Explanations to the Court or at the end of environmental review cannot cure an informational deficiency in the EIR. (See *Vineyard*, 40 Cal. 4th at 44 (information in briefs); *Save Our Peninsula Committee v. Monterey County Board of Supervisors* (2001) 87 Cal.App.4th 99, 118 (information at end of environmental review).) This Court must “scrupulously enforce all legislatively mandated CEQA requirements.” (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564.)

An EIR “must include detail sufficient for those who did not participate in its preparation to understand and consider meaningfully the issues raised by the proposed project.” (*Center for Biological Diversity v. County of San Bernardino* (2010) 185 Cal.App.4th 866; *Laurel Heights Improvement Association*

*v. Regents of the University of California* (1988) 47 Cal.3d 376, 405.) Agencies may support their own experts in a factual dispute,<sup>13</sup> but they receive no deference to exclude or misrepresent those experts, which would betray CEQA’s mission “to inform the public and responsible officials of the environmental consequences of their decisions before they are made.” (*Citizens of Goleta Valley*, 52 Cal.3d 553, 564; see also *Vineyard*, 40 Cal. 4th at 441; *Stanislaus Natural Heritage Project v. County of Stanislaus* (1996) 48 Cal.App.4th 182, 195-196.)

## **II. DWR BASED ITS IMPACT ASSESSMENT ON DISCREDITED HYDROLOGIC ASSUMPTIONS REJECTED BY DWR’S OWN AUTHORITIES.**

### **A. DWR’s Oroville Facilities EIR Depends Upon the Integrity and Accuracy of its Hydrologic Forecasting**

#### **1. CEQA Demands Transparent and Accurate Disclosure of the Hydrologic Constraints Affecting Project Operation.**

The Supreme Court’s directive in *Vineyard* that “speculative sources and unrealistic allocations” are “insufficient bases for decision-making under CEQA” follows a long history of CEQA jurisprudence, recognizing exclusion of vital water supply analysis from environmental review as a failure to proceed as required by CEQA. (See, e.g., *PCL v. DWR*, 83 Cal.App.4th at 910-920 (failure to analyze project operation with SWP contracts’ permanent shortage provision enforced); *California Oak Foundation v. City of Santa Clarita* (2005) 133 Cal.App.4th 1219, 1244 (absent additional water, as to which the EIR’s discussion was legally inadequate, “substantial evidence of sufficient

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<sup>13</sup> See, e.g., *Greenebaum v. City of Los Angeles* (1984) 153 Cal.App.3d 391, 413.

water supplies does not exist”).<sup>14</sup> Insulating an EIR from the context in which the project will operate artificially truncates the scope of project review, defeating the lead agency’s “essential mission under CEQA to present a full disclosure of the potential impacts of the proposal.” (*PCL v. DWR*, 83 Cal.App.4th at 916; see also *Stanislaus Natural Heritage Project v. County of Stanislaus* (1994) 48 Cal. App.4th 182, 195 (unlawfully excluding information needed to ascertain long-term water supply).)

Even where some expert evidence in the record supports the lead agency’s position, the lead agency’s failure to provide “full disclosure” of relevant information relating to water supply vitiates the EIR’s legality. (*Madera Oversight Coalition v. County of Madera* (2011) 199 Cal.App.4th 48, 85-104 (water supply analysis deficient under CEQA, despite inclusion of Professor Joseph Sax’s support for agency’s position).)

In *Voices for Rural Living v. El Dorado Irrigation District* (2012) 209 Cal.App.4th 1096, which rejected the district’s use of a CEQA exemption for an agreement to supply water to a tribal casino project, this Court recently considered the relationship between a changing climate and the availability of

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<sup>14</sup> See also *Preserve Wild Santee v. City of Santee* (2012) 210 Cal.App.4th 260, 282-286 (EIR failed to account for discrepancy between future projections, or to recognize the contingent nature of some of its supply sources); *Santa Clarita Organization for Planning the Environment v. County of Los Angeles* (2003) 106 Cal.App.4th 715, 723 (failure to undertake a “serious and detailed analysis” of available water supply failed CEQA as a matter of law); *Save Our Peninsula Committee v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 128-131 (EIR inadequately disclosed backup water supplies); *Napa Citizens for Honest Government v. Napa County Board of Supervisors* (2001) 91 Cal.App.4th 342, 371-74 (EIR failed to analyze backup water supplies); *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 724-730 (EIR failed to address source of water supplies); *Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3d 818, 829-831 (EIR failed to address water supply limitations and related infrastructure); *People v. County of Kern* (1976) 62 Cal.App.3d 761, 771-773 (deficient water supply analysis); *People v. County of Kern* (1974) 39 Cal.App.3d 830 (EIR failed to respond to comments about water supply).

water to serve required uses. The Court criticized the district, in part, for basing its water analysis “*simply on past historical use and supply*” when it projected the amount of water available. (*Id.* at 1113 (emphasis added).) The district compromised CEQA compliance by failing to heed its own Drought Preparedness Plan, which concluded that “*plausible future conditions associated with climate change expose all future plans and decisions to a level of vulnerability and risk that should be considered as part of rational policy setting.*” (*Id.* (emphasis added).)

Accurate disclosure of hydrologic constraints, including those from climate change, is particularly important in the environmental review of hydropower relicensing since dams, reservoirs and power facilities must operate differently in the context of these changing conditions, with correspondingly different implications for the assessment of impacts, alternatives, and mitigation over the new license period. Particularly where, as here, the now-expired license preceded any requirement of environmental review, “future long-term fixed licenses of hydropower operation will be ill-prepared to adapt if science-based approaches to incorporating reasonable and foreseeable hydrologic changes into study plans are not included.”<sup>15</sup>

In the analogous NEPA context, the Ninth Circuit rejected the premise that hydropower relicensing merely continues the facility’s operation, describing relicensing as “more akin to an irreversible and irretrievable commitment of resources than a mere continuation of the status quo ... [and]

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<sup>15</sup> Viers, *Hydropower Relicensing and Climate Change* (2011) 47 J. AMER. WAT. RESOURCES ASSN. 1 (noting the “rapidity of climate warming, and its anticipated impacts to natural and human communities”). See also Sawyer, *Hydropower Relicensing in the Post-Dam Building Era* (1996) NAT. RESOURCES & ENV’T 12 (when original licenses were approved, “Woody Guthrie sang the praises of Grand Coulee Dam”; relicensing “allows for reexamination of a project based on the laws and regulations currently in effect and based on contemporary views of the public interest”).

... involves new commitment of the resource.” (*Confederated Tribes and Bands of the Yakima Nation v. FERC* (9th Cir. 1984) 746 F.2d 466, 476-477, cert. den. (1985) 471 U.S. 1116.)<sup>16</sup> While DWR seized the mantle of resisting “speculation” when it refused to fully study the project in its operational context, DWR ultimately engaged in its own speculation: relying, against scientific advice and without study of changing conditions, on the wishful thinking that fifty years of new project operation will meet all regulatory requirements, satisfy all project purposes, and protect all beneficial uses, merely because DWR has said they will.<sup>17</sup>

**2. Operation of the Oroville Facilities Must Satisfy Conflicting Water-Dependent Uses Statewide, While Protecting Beneficial Uses Within the Counties of Origin.**

The Oroville Facilities’ uses include SWP water supply, as well as “flood management, power generation, water quality improvement in the Sacramento–San Joaquin Delta, recreation, and fish and wildlife enhancement.” (AR G000128; see also G000184, G000186.) Contracts apply to many uses, and numerical requirements govern operation of the Oroville Facilities for elements such as water supply and flood management. (See, e.g., AR G000160-163.) While meeting specific contractual and regulatory

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<sup>16</sup> CEQA has important similarities to NEPA, whose definition of the term “significantly” requires consideration of both context and intensity. 40 C.F.R. § 1508.27; see Note, *NEPA and CEQA: Effective Legal Frameworks for Compelling Consideration of Adaptation to Climate Change* (2009) 82 SO.CAL. L.REV. 769, 803; Brickely, et al., *How to Take Climate Change Into Account: A Guidance Document for Judges Adjudicating Water Disputes* (2010) 40 ENVTL. L.REP. 11125, 11223 (“Changes to water resources resulting from climate change” may “require far greater attention to water impacts in EAs and EISs, and may lead to more frequent mitigation and monitoring measures in RODs”).

<sup>17</sup> See *PCL v. DWR*, 83 Cal.App.4th at 915 (reliance on SWP contract entitlement worth little more than “a wish and a prayer”); *Woodward Park Homeowners Association v. Garreks* (2000) 77 Cal.App.4th 880, 890 (“may fortune favor the foolish” is not a philosophy that “provides an exemption to CEQA”).



requirements, the Oroville Facilities must also protect existing water rights and beneficial uses in the county of origin, including municipal and domestic water supply, irrigation, power, recreation, terrestrial and water-based wildlife habitat, spawning habitat, and fish migration. (AR G000291-295.) The EIR recognizes that as DWR generates electric power under the new license, it also has a duty to “*meet existing commitments and comply with regulations pertaining to water supply, flood management, the environment, and recreational opportunities.*” (AR G000158 (emphasis added); see also G000215 (proposed project designed to address many environmental impacts of project operations over new license term).) Meeting the many requirements requires frequent forecasting and balancing of needs. (AR G000190-191.)

**3. DWR’s EIR Serves as the Decision-Making Document Informing Compliance with Water Quality and State Endangered Species Law.**

The EIR serves as the CEQA-compliance document for the State Water Resources Control Board’s section 401 certification and for the Department of Fish and Wildlife’s California Endangered Species Act (“CESA”) review.<sup>18</sup> The SA even claimed, in advance of environmental review, to resolve “all issues that may arise in the issuance of all permits and approvals associated with the issuance of the New Project License, including but not limited to ESA Section 7 Biological Opinions, CWA Section 401 Certification, NEPA and CEQA.” (AR G001109.)<sup>19</sup>

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<sup>18</sup> See, e.g., AR G000130-131 (section 401 certification); G000134 (section 401 certification and CESA review); G001012 (section 401 certification); G001013 (CESA review); G001043 (section 401 certification).

<sup>19</sup> These statements in the SA cannot predetermine whether DWR’s EIR certification and approval two years later meet CEQA’s requirements, which this Court must determine. See *County of Inyo v. City of Los Angeles* (“*Inyo VT*”) (1984) 160 Cal.App.3d 1178, 1183.

**4. DWR's EIR Frequently Relies upon Water Forecasting in its Assessment of Hydropower Impacts, Alternatives, and Mitigation.**

Analyzing the impacts of the Oroville Facilities project depends on forecasting the timing and volume of incoming flows. (AR G000163.) DWR's EIR repeatedly relies on water forecasting in the analysis of environmental impacts:

- [O]perational modeling, including 'sensitivity analyses,' was conducted by DWR to help determine the feasibility of PM&E [protection, mitigation, and enhancement] measures that would affect project operations. (AR G000167.)
- [T]he assessment of effects for the No-Project Alternative used the CALSIM II, HYDROPS, WQRRS, and other modeling and technical studies completed for the 'benchmark' modeling scenarios to simulate existing and future hydrologic conditions. (AR G000208.)
- To help define existing project operations, complex modeling was undertaken.... CALSIM II, HYDROPS, WQRRS, and PHABSIM modeling was conducted to simulate project operations and related hydrology effects... (AR G000261.)
- Extensive computer simulation modeling of Oroville Facilities operations was performed to support the relicensing environmental study programs. (AR G000280; see also G000282-290 (graphs from modeling runs).)
- Hydrologic modeling based on historic hydrologic conditions for a 73-year period (1922-1994) has produced simulations of Lake Oroville elevations at several key end-of-month dates during the peak summer use season, for different water-year types (wet, above normal, below normal, dry, and critical) under existing operating conditions and levels of demand for water... (AR G000510.)
- [E]xtensive computer-based operations simulation modeling was performed .... to simulate existing and future operations under a wide variety of assumed conditions.... The hydrologic results also served as important information for the evaluation of power production, flood management, water quality, fisheries, recreation, and economic impacts. (AR G000638-639.)
- Extensive modeling of the Oroville Facilities operations was performed for the PDEA to evaluate effects on

energy generation, Lake Oroville water levels, Feather River flows and water temperatures. (AR G000646.)

- The CALSIM II modeling conducted for this analysis was designed to simulate existing and future cumulative water quantity effects of past, present, and reasonably foreseeable future actions. (AR G000952.)

Given this central role of water, DWR's refusal to study scenarios with greater variability than the twentieth-century range produces a domino effect within the impact assessment. DWR, which "recognize[d] the potential for significant impacts associated with climate change" (AR G000953), nonetheless made no revision in its central assumption rooted in static hydrology.

**B. DWR's EIR Irrationally Assumes that Hydrologic Variability Will Remain Within the Twentieth-Century Range, Without Disclosing the Scientific Consensus Rejecting that Premise.**

**1. DWR's EIR Assumes that Hydrologic Variability Will Remain Within the Twentieth-Century Range.**

The EIR repeatedly claims that the twentieth-century range of hydrologic conditions will continue in the twenty-first. "[The] same wide level of variability that has occurred over the last 100 years is expected to continue for the foreseeable future, and that variability is reflected in the studies conducted to analyze project operations over the anticipated 50-year term of the new FERC license." (AR H000133.)<sup>20</sup> This assumption, known as the "stationarity" hypothesis,<sup>21</sup> is both scientifically indefensible and dangerous. For CEQA purposes it undermines the environmental review, avoiding assessment of how "plausible future conditions associated with climate change" will compound project risks. (*Voices for Rural Living*, 209 Cal.App.4th at 1113.)

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<sup>20</sup> "Extensive operations modeling performed in support of both the PDEA and subsequent DEIR reflects the above variability, analyzing 73 different inflow years into Lake Oroville; this covers a truly wide range of hydrologic conditions, including those theorized by climate change scenarios." AR H000334. This latter claim is shown to be false in section II.C.

<sup>21</sup> Stationarity is "the idea that natural systems fluctuate within an unchanging envelope of variability." Milly et al., *Stationarity Is Dead: Whither Water Management?* (2008) 319 SCIENCE 573.

**2. DWR Refused Requests to Analyze Project Operation Under Hydrologic Conditions Outside the Twentieth-Century Range.**

Multiple parties commented during the CEQA review process that DWR could not defensibly rely on the twentieth century's hydrologic range alone to model conditions that will obtain during the next 50 years.<sup>22</sup> These commenters requested what the EIR lacks: “[The] analysis should consider the impact from changes in regional climate because the predicted outcomes over the entirety of the 50-year permit period are not speculative in nature, as suggested by the DWR.” (AR H000491 (Planning and Conservation League comments).)

The National Marine Fisheries Service (“NMFS”) similarly highlighted the gap in data and analysis during the project’s parallel NEPA review. “To ensure compliance with the [federal Endangered Species Act], we suggest that FERC ... work with the applicant (DWR) to provide the following information: .... *Provide an analysis of the effects of future climate change over the 50-year license period on water temperature control and flows downstream of the Oroville Project.*” (AR F001040 (emphasis added).) DWR refused the requested analysis, claiming that because the *last century’s inflows* varied considerably, no new analysis was needed. (AR H000132-133 (Master Response 3.4.2.); see also AR H000498 (“[m]odeling studies performed to support the DEIR are sufficient to study future operations under a wide variety of hydrologic conditions and assumptions.”).)

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<sup>22</sup> See, e.g., AR H000216-223 (Butte County); H000367-368 (Plumas County); H000491-492 (Planning and Conservation League); see also L001040-1044 (summary of climate change comments, including relevant comments from California Sportfishing Protection Alliance, Planning and Conservation League, Butte County, Plumas County Flood Control and Water Conservation District, Sutter County, Yuba City, Levee District No. 1 of Sutter County).

**3. DWR's EIR Fails to Disclose the Consensus of Scientific Authorities, Including its Own, that Rejected Sole Reliance on the Twentieth-Century Hydrologic Range.**

DWR's resistance to new analysis, and resurrection of the stationarity hypothesis, irrationally ignores the very scientists whose studies DWR reviewed in preparing the EIR. These scientists not only rejected the stationarity hypothesis, but explained why relying on it would be dangerous.

In 2002, a joint publication of the U.S. Army Corps of Engineers and the State of California Reclamation Board (entitled *Sacramento and San Joaquin River Basins, California Comprehensive Study*) considered the issue of climate change impacts on hydrologic models for the Sacramento River and San Joaquin River basins:

Recent scientific study suggests that projected climate changes would affect hydrologic conditions in the study area.... The high dependence on reservoir storage and snow pack for flood management and water supply make the State of California particularly vulnerable to these types of projected hydrologic changes. While specific estimates of these changes have not been quantified, future project modifications should consider the ability to adapt to changing climatic conditions.... *A wider range of climatic conditions will be considered in project evaluations to reduce system vulnerability and long-term costs.*

(AR H002634 (emphasis added).) The study recommends: "Just as you would not design a city's water system without considering future population growth, *future water control systems should not be designed without considering future hydrologic changes. Water management planning for future climatic and hydrologic conditions can significantly reduce system vulnerability and long-term costs.*" (AR Disc 5/Section-G/G01/Tech App A Information Papers 12-2002, pdf p. 25 [not Bates-stamped] (emphasis added).)

In a 2003 report (included in DWR's 2005 California Water Plan Update and entitled *Climate Change and California Water Resources: A Survey and Summary of the Literature*), Kiparsky and Gleick (Pacific Institute) noted that in a

1997 publication—*eleven years before DWR’s project approvals*—the American Water Works Association recommended that “Agencies should explore the vulnerability of both structural and nonstructural water systems to plausible future climate changes, *not just past climatic variability*.” (AR I042328 (emphasis added).) Kiparsky and Gleick explained the dangers of relying on stationary hydrology:

In the past, [decisions about long-term water planning] relied on the assumption that future climatic conditions would have the same characteristics and variability as past conditions. Dams are sized and built using available information on existing flows in rivers and the size and frequency of expected floods and droughts. Reservoirs are operated for multiple purposes using the past hydrologic record to guide decisions.... *This reliance on the past record now may lead us to make incorrect—and potentially dangerous or expensive—decisions.*

(AR I042359 (emphasis added).) Water managers, they noted, need to “explore the sensitivity of their system to a wider[] range of conditions than currently experienced.” (AR I042360.) That is exactly what DWR refused to do for the Oroville EIR.

In a 2004 publication, *Climate Change Impacts Uncertainty for Water Resources in the San Joaquin River Basin, California*, scientists from the U.S. Bureau of Reclamation, Lawrence Berkeley National Laboratory, and University of California, Berkeley’s Department of Civil and Environmental Engineering evaluated water infrastructure projects of at least 50 years’ duration and concluded: “*Any financial investment in infrastructure would be poorly spent if it does not accommodate for altered hydrology under climate change. Moreover, there is the risk that such infrastructure would fail to protect the public against the hazards of more severe flood events or water supply shortages under climate change.*” (AR I039809 (emphasis added).)

In a 2005 United States Geological Survey (“USGS”) study on water forecasting and climate change, *From Climate-Change Spaghetti to Climate-Change Distributions for 21st Century California*, the author underscored the urgency of incorporating climate analysis when addressing project terms of 25 and more years, noting that despite uncertainties: “(1) even the most benign of the projected climate-change scenarios are sufficient to significantly alter the [*sic*] California’s landscape, hydrology, and land and water resources, and (2) those alterations are likely to become significant within roughly the next 25 years.... The projected changes include sufficiently important near-term impacts, and the chances that projection uncertainties will decline precipitously in the near term are small enough, so that *delays may not be warranted.*” (AR I040118 (emphasis added).)<sup>23</sup>

DWR’s own chief hydrologist, Maurice Roos, concluded in an article (*Accounting for Climate Change*) for the 2005 California Water Plan Update: “[R]eservoirs and water delivery systems and operating rules have been developed from historical hydrology on the assumption that the past is a good guide to the future. With global warming, that assumption may not be valid.” (Water Plan Update 2005, p. 4.613.)<sup>24</sup>

A law review article offers this perspicacious summary of the state of scientific understanding in 2008, when DWR approved the Oroville EIR.

In February 2008, a group of researchers noted in *Science* that current water resource management in the

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<sup>23</sup> As discussed in section II.D, *infra*, DWR—by using the uncertainty canard to postpone more intensive and detailed assessments until 50 years later—did precisely what this author discouraged. AR H000131.

<sup>24</sup> This document—the California Water Plan Update 2005, Volume 4 (excerpts)—is in the administrative record (Disc 7/Section-I/I00/DWR\_Bulletin 160-05 Portion Volume 4.pdf) but bears no Bates stamps. Plaintiffs therefore cite the document as “Water Plan Update 2005,” and plaintiffs’ page citations refer to the document’s own page numbers.

developed world is grounded in the concept of stationarity—“the idea that natural systems fluctuate within an unchanging envelope of variability.” However, because of climate change, “stationarity is dead.” These researchers emphasized that impacts to water supplies from climate change are now projected to occur “during the multidecade lifetime of major water infrastructure projects” and are likely to be wide-ranging and pervasive, affecting every aspect of water supply. As a result, the researchers concluded that stationarity “should no longer serve as a central, default assumption in water-resource risk assessment and planning. Finding a suitable successor is crucial for human adaptation to changing climate.”

(Craig, “*Stationarity Is Dead*” – *Long Live Transformation: Five Principles for Climate Change Adaptation Law* (2010) 34 HARVARD ENVTL.L.REV. 9, 15-16 (footnotes omitted).) Remarkably, despite the contrary warnings of every germane scientific study in the administrative record, as well as many EIR commenters, DWR based its analysis solely on historic hydrology and never disclosed the scientific consensus discrediting this approach as excessively risky.

**4. DWR’s EIR Fails to Disclose the Department’s Own Contemporaneous Rejection in Other Major EIRs of Sole Reliance on Twentieth-Century Hydrology.**

The Oroville Facilities EIR never disclosed that, in internal communication, the project manager for the Oroville Facilities’ relicensing, Rick Ramirez, recognized the following: “[The ‘Climate Change and DWR Decision Making’ memo] appears to reveal an inconsistency between our approaches in the Monterey EIR and the Oroville EIR. *Either historical hydrology is sufficient to encompass the extremes of CC [climate change], or it is not.*” (AR L146902 (emphasis added).) Ramirez, also a member of the state’s Climate Action Team, literally highlighted the contradictory approaches:

- Regarding the Monterey EIR, the memo states: “[The EIR] concludes that future water planning can no longer rely on historical hydrologic patterns alone, but must recognize potential changes, trends and future conditions expected as part of ongoing climate change in the State.” (AR L146905.)



- Regarding the Oroville EIR, in contrast, the memo states: “DWR determined that the extreme historic hydrologic conditions on the Feather River, both very wet and very dry years, are sufficient to determine whether potential adverse effects of the proposed project and alternatives will change in the future under possible climate change conditions within the 50 year License time frame.” (*Id.*)

As Ramirez recognized internally, but the EIR ignored, *it is impossible to reconcile these two perspectives.*

Similarly, a DWR staff scientist working on Oroville relicensing forwarded to colleagues an internet link for the Lower Yuba River Accord EIR, noting: “[Other staff] had questioned how this may impact the Oroville Facilities.” (AR L004438.)<sup>25</sup> Another staff scientist responded with an analysis of the Lower Yuba River Accord EIR’s climate change modeling approach, noting that this EIR, while incorporating data from twentieth-century hydrology, also made a downward adjustment to inflow to account for climate change. As to Oroville, this scientist openly wondered, referring to that adjustment, whether “we may need to do similar calculations to get at our own 10%?” (*Id.*) The Oroville EIR never even disclosed that DWR, in contemporaneous CEQA reviews, tested project performance in light of potential future changes to hydrology due to climate change.

##### **5. DWR’s EIR Never Adhered to Two Leading Court Decisions Rejecting Sole Reliance on Twentieth-Century Hydrology.**

DWR was well aware of the scientific and legal indefensibility of stationarity before its 2008 decision-making.<sup>26</sup> In *NRDC v. Kemphorne* (E.D.

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<sup>25</sup> Days earlier, the same scientist forwarded an internet link for the Monterey EIR to several of her colleagues, explaining: “FYI - The Draft EIR for Monterey Amendment came up on AquaNet a short time ago. I have attached a link that takes you directly to the 21 pages of climate change and [greenhouse gas analysis].” AR L001110.

<sup>26</sup> One comment letter even references a DWR publication specifically addressing *NRDC v. Kemphorne*; this publication was attached to the comment

Cal. 2007) 506 F.Supp.2d 322, which arose in the federal Endangered Species Act (“ESA”) context, the plaintiffs challenged USFWS approval of a biological opinion that “project[ed] future project impacts in explicit reliance on seventy-two years of historical records. In effect, *the [biological opinion] assume[d] that neither climate nor hydrology will change. This assumption is not supportable.*” (*Id.* at 336 (emphasis added).) The court found this issue “potentially significant because the [biological opinion’s] conclusions are based in part on the assumption that the hydrology of the water bodies affected by the [project’s operation] will follow historical patterns for the next 20 years.” (*Id.* at 367.)

Mirroring the DWR EIR at issue here and DWR’s and SWC, Inc.’s arguments in superior court, the federal defendants and SWC, Inc.<sup>27</sup> in *NRDC v. Kemphorne* advanced the same defenses, asserting a “great deal of uncertainty that climate change will impact future precipitation,” and claiming that the federal defendants “responsibly refused to engage in sheer guesswork, and properly declined to speculate as to how global warming might affect delta smelt.” (*Id.* at 369 (internal quotations omitted).) Rejecting SWC, Inc.’s obfuscation, the court found that “[t]he [biological opinion] *does not gauge the potential effect of various climate change scenarios on Delta hydrology.* Assuming, *arguendo*, a lawful adaptive management approach, there is no discussion [of] when and how climate change impacts will be addressed, whether existing take limits will remain, and the probable impacts on CVP-SWP operations.”<sup>28</sup> (*Id.*

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letter (AR H000490) but does not appear to have been included in the record, although it should have been, pursuant to Public Resources Code, section 21167.6, subd. (e)(6).

<sup>27</sup> SWC, Inc. participated as an intervenor-defendant in *NRDC v. Kemphorne*,, much as it did as a real party in interest here.

<sup>28</sup> Notably, the court reached this conclusion in the context of a project that would operate for the next 20 years, less than half as long as the relicensing period for the Oroville Facilities.

(emphasis added).) Although DWR’s EIR even mentions *NRDC v. Kempthorne* in response to a letter that referred to the case, the EIR incredibly never discloses that the court came to the opposite conclusion from DWR. (AR H000490, H000497-498.)

In a case that concerned a different biological opinion for the same project at issue in *NRDC v. Kempthorne*, different plaintiffs raised essentially the same climate change argument, and the court came to the same conclusion.

[T]he [biological opinion] relies on past hydrology and temperature models that assume the historical monthly temperature, hydrologic, and climatic conditions experienced from 1922 through 1994 will continue for 25 years through the duration of the 2004 OCAP [Operations Criteria and Plan] operations. These assumptions were challenged as without basis in then-available science.... Plaintiff’s motion for summary adjudication is GRANTED as to the climate change claim issue based on [the National Marine Fisheries Service’s] total failure to address, adequately explain, and analyze the effects of global climate change on the species.

(*Pacific Coast Federation of Fishermen’s Ass’n v. Gutierrez* (E.D. Cal. 2008) 606 F.Supp.2d 1122, 1184.) As noted in section V.B, the same invalidated biological opinion was the basis for modeling used in the Oroville EIR.

DWR’s choice to rely solely on twentieth-century hydrology violated CEQA for the same reasons that the court in *NRDC v. Kempthorne* and *Gutierrez* held the U.S. Fish and Wildlife Service’s and National Marine Fisheries Service’s actions to be arbitrary and capricious. DWR’s stance was “without basis in then-available science.”<sup>29</sup>

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<sup>29</sup> The assumption of stationary hydrology, rightly rejected as “without basis” in *Kempthorne* and *Gutierrez*, cannot be resuscitated for the Oroville EIR. Those two cases arose under a federal Administrative Procedure Act standard of review that ordinarily *defers* to agency expertise, 5 U.S.C. § 706(2)(A)&(D). Both decisions reject sole reliance on twentieth-century hydrologic years as an error of law deserving *no* deference. *NRDC v. Kempthorne*, 506 F.Supp.2d at 348; *Gutierrez*, 606 F.Supp.2d at 1183-1184.

**C. DWR's Discredited Hydrology Undermines the EIR's Analysis.**

**1. The EIR Provides a Deficient Assessment of Direct and Cumulative Impacts.**

Because DWR refused even to study performance outside the twentieth-century hydrologic range, it rendered the EIR unable to test how climate change may alter and compound the project's environmental impacts, likely in a very adverse manner.

Climate change will almost certainly affect the project's ability to meet water supply, water temperature, water quality, flood management, and recreational requirements, thus severely impacting human populations and ecosystems. DWR's own report discusses several impacts<sup>30</sup> but never analyzes them in light of climate change due to the EIR's erroneous assumption of stationarity. The EIR should have analyzed these likely changes and measured impacts in comparison to the baseline. As an illustration, the EIR's assurance that the facilities can withstand extreme flood flows relies upon unnamed "extensive hydrological and climatologic" studies. (AR H0000135.) But this raises the same concern discussed earlier: namely, DWR's faulty reliance solely on now-obsolete twentieth-century hydrographs.

Climate change will bring overall higher air temperatures, with consequent impacts on water and aquatic resources. (Water Plan Update 2005, 4.624.) These temperature-related increases will create enormous problems for water managers attempting to operate the Oroville Facilities while meeting

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<sup>30</sup> "[R]eservoirs will likely experience changes in the rate and timing of inflow. Changes in reservoir operations and reduced annual storage in snowpack could result in less water being available in the summer and fall to meet Delta outflow and salinity control requirements." AR I040986; see also I040957 (carryover storage); Water Plan Update 2005, p. 4.568 (evapotranspiration).

requirements to maintain ecosystem health, with major implications for basin management and the protection of endangered species.<sup>31</sup>

The water quality problems that will result from higher temperatures bear further elaboration in the EIR. Areas such as Butte County, with their climatic extremes, are especially at risk for such problems. (Water Plan Update 2005, 4.572.) The Oroville Facilities' relicensing should have resulted in the creation of water temperature tools to be applied specifically to the question of climate change impacts at the Oroville facilities.<sup>32</sup> The EIR fails to include these modeling tools, which DWR and advisors discussed in the 2005 Water Plan Update, and DWR has not applied them to evaluate changed climate and runoff scenarios at Lake Oroville and on the Feather River. Moreover, the problems that climate change will cause for the Oroville facilities are often interwoven with each other.<sup>33</sup>

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<sup>31</sup> "Higher temperatures will likely result in increased environmental water demand for controlling water temperatures for sensitive aquatic species, including anadromous fish. Increased use of reservoir storage and thermal control releases from reservoirs will be required for controlling aquatic habitat temperatures." AR I040982. Additional ecological problems include: "critical effects on listed and endangered aquatic species;" "increased problems with foreign invasive species in aquatic ecosystems;" "adverse changes in water quality, including the reduction of dissolved oxygen levels;" and "increase[d] production of algae and some aquatic weeds." AR I040932, I040986.

<sup>32</sup> "New or upgraded temperature modeling is being developed as part of the Oroville power plant relicensing project.... A logical extension would be to apply the new temperature models to evaluate the affect [*sic*] of a changed climate and runoff scenario, beginning with Lake Oroville and the Feather River." AR I040939.

<sup>33</sup> "Lower early summer reservoir levels also would adversely affect lake recreation and hydroelectric power production, with possible late-season temperature problems for downstream fisheries." Water Plan Update 2005, p. 4.569. Extremely high precipitation events also pose dangers to facilities like Oroville that serve flood prevention functions. Unless such facilities "accommodate for altered hydrology under climate change," they may simply "fail to protect the public against the hazards of more severe flood events." AR I039809.

CEQA requires project proponents to analyze the significance of the project's incremental contribution to cumulative impacts. (*Communities for a Better Environment v. Resources Agency* (2002) 103 Cal.App.4th 98, 120.) The North Fork of the Feather River has “extensive hydropower generation development” (AR G000258) and will have to confront the same problems as the Oroville facilities.<sup>34</sup> These needs could conflict with those of the project and create additional cumulatively significant impacts. DWR makes excuses about “speculation” and “uncertainty,” without studying what cumulative impacts might occur based on the actions of other projects and water users. (AR G000945-47, G000954-56, G000969, G000987, G000989, G001000.) The EIR “only recites general potential impacts without making any attempt to determine whether those impacts qualify as significant or how they might be mitigated or avoided.” (AR H000222.) It offers general statements, and promises *future* analysis of climate change. (AR G000947.)<sup>35</sup>

## **2. DWR's Forecasting Errors Negated its Assessment of Hydropower Production and Greenhouse Gas Emissions.**

An EIR must analyze project impacts, even when there are other environmental advantages and benefits. (See *PCL v. DWR*, 83 Cal.App.4th at 908.) The EIR asserts that “the limited data available suggests that GHGE

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<sup>34</sup> The water requirements of the project and of upstream hydroelectric facilities could easily create cumulatively significant impacts on water supply, water temperatures, water quality, and other environmental factors. See AR I040957; Water Plan Update, p. 4.584. Downstream water users, including farmers and urban water purveyors, will also experience different or new needs as climate change affects their operations. See *id.* at pp. 4.583-4.585.

<sup>35</sup> For instance, addressing cumulative impacts to surface water, DWR blandly asserts that California agencies “will continue preparing for climate change impacts.” *Id.* DWR acknowledges that potential climate change impacts could affect project operations, but does not offer detailed discussion of the extent, consequences, significance, or measures that DWR might adopt to prepare for or mitigate the consequences. AR G000955-56, G000969.

[greenhouse gas emissions] from reservoirs in the western United States are lower than those from reservoirs in eastern and western Canada and South/Central America. Based on this information . . . the Oroville Facilities could produce about 19,170 tons of CO<sub>2</sub> emissions annually.” (AR G000159-160).<sup>36</sup> DWR argues that the Oroville facilities “help reduce the amount of generation that is needed from fossil fuel plants.” (AR G000159.)

However, the asserted benefit is never related to the baseline, no-project alternative, and alternatives, all of which assume twentieth-century operation of Oroville Dam.<sup>37</sup> As precipitation and temperatures change, the Oroville facilities will be able to generate less power, particularly in light of reduced snowpack. (Water Plan Update 2005, 4.584; see also AR I040933-I040934 (Progress Report).) This change will result in greater greenhouse gas (“GHG”) emissions compared to the baseline condition. (AR G000292.)

DWR makes no attempt to quantify loss of hydroelectric power from climate change in comparison to the baseline, which may have been deliberate. (AR L007402 (DWR senior engineer Ted Alvarez is “fairly certain [DWR Oroville program manager] Rick [Ramirez] would *want all quantitative references removed* as they were with the DEIR itself”) (emphasis added).) The EIR fails to analyze studies noted in staff comments and reveals no clear source for the EIR’s reference to 19,170 tons of CO<sub>2</sub>.<sup>38</sup>

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<sup>36</sup> The “literature cited” for this section includes six sources, but none of these documents contain the data cited. AR G001048.

<sup>37</sup> The comparison would be relevant only in comparison to two alternatives eliminated from further study in the DEIR (non-power license and decommissioning). AR G000251-252.

<sup>38</sup> Staff files reference studies not included in the EIR and data that do not match the figures used in the EIR. See AR L15100; L151065-80; AR L151069; G001071.

The EIR also fails to consider the project's cumulative impacts on GHG emissions. Chapter 5 states, "hydroelectric generation will play a role in meeting these statewide reduction targets by replacing power produced at higher GHG-emitting thermal power sources." (AR H000061-62)<sup>39</sup> Yet the EIR fails to analyze, for the Oroville project specifically, information from DWR's own studies about how climate change may negatively impact power productivity, which could have cumulative consequences with other hydropower projects if these facilities fail to produce the power that DWR anticipates. (AR I040934.)

**3. DWR's No Project Alternative Fails to Account for Reasonably Foreseeable Future Conditions.**

"The no project alternative must discuss the existing conditions at the time the notice of preparation is published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved." (Cal. Code Regs., tit. 14, §15126.6(e)(2).) The no project alternative is "based on current plans and consistent with available infrastructure and community services." (*Id.*) It is "a factually based forecast of environmental impacts preserving the status quo." (*PCL v. DWR*, 83 Cal.App.4th at p. 917.) In *PCL v. DWR*, the EIR failed to utilize DWR's modeling to project foreseeable enforcement of the SWP contracts' permanent shortage provision.<sup>40</sup>

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<sup>39</sup> The EIR assures that, "[w]ith extensive resource monitoring plans and adaptive management measures, the Oroville Facilities also provide managers with an ability to respond to the impacts of climate change upon resources associated with the Oroville Facilities." AR G000946. There is no explanation as to what these monitoring and measures are or how specifically they provide managers with the ability to respond to climate change.

<sup>40</sup> The Oroville EIR unrealistically assumes that "no changes in SWP water allocations" would occur under the no project alternative, and dismisses the missing analysis as "speculative." Compare *PCL v. DWR*, 83 Cal.App.4th at 908, 909; AR I040118 (significant change even under most benign scenario).



As in *PCL v. DWR*, DWR’s refusal to incorporate climate change into the EIR’s modeling and analysis creates a “huge gap” between what was promised and what can be delivered. (83 Cal.App.4th at 915.) The EIR refuses to include reasonable forecasts of the effects of climate change in the no project alternative. It improperly assumes that Oroville “would continue to be operated as it is now under the terms and conditions” in the existing license. (AR G000208.) This error undermines the most basic charge under CEQA, “to inform the decision maker.” (*PCL v. DWR*, 83 Cal.App.4th at 916.) DWR’s own reports, and the consistent advice of its scientific authorities, confirm that highly foreseeable risk, as do the rulings in *Kemphorne* and *Gutierrez*.<sup>41</sup>

**4. DWR Baselessly Refused to Analyze Climate-Change-Resilient Project Alternatives and Mitigation.**

DWR also fails to include the reasonable range of alternatives that CEQA requires. The EIR’s only project alternative is a mere minor variation on the project.<sup>42</sup> DWR baselessly rejects Butte’s and Plumas’s request to analyze a project alternative that accommodates operational variability

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<sup>41</sup> Since the no project alternative is a factually based forecast that is based upon *current plans* and is consistent with *available infrastructure*, it requires additional analysis considering climate change regardless of the resolution of petitioners’ other issues. Cal. Code Regs., tit. 14, § 15126.6(e)(2).

<sup>42</sup> Cal. Code Regs., tit. 14 § 15126.6 requires an EIR to “describe the range of reasonable alternatives to a project” that “would feasibly attain most of the basic objectives, but would avoid or substantially lessen any of the significant impacts of the project.” DWR includes the proposed project, the no project alternative, and selected one other alternative, the “FERC Staff Alternative” (“FSA”). DWR repeatedly asserts how similar this alternative is to the proposed project, making statements that the reader should assume similarities unless the differences are noted. AR G000630. In its description of the FSA, DWR asserts that “sufficient differences between” the proposed project and the FSA “warrant an evaluation as a separate alternative in this DEIR.” AR G000247. Yet, the very next sentence states “[t]he FSA includes nearly all of the measures described in the PP, including the SA....” *Id.*

resulting from climate change. (AR H000300-01; H000132-33.) Since climate change will likely alter conditions at the Oroville Facilities in a manner that could dramatically compound impacts during the 50-year FERC license term, the EIR should have identified climate-change-resilient mitigation measures that DWR should then have incorporated into the project.

To provide a “reasonable range” of alternatives, DWR should have analyzed an alternative that could “maintain project benefits as both California’s climate and SWP operations change.” (AR H000132-33; H000232; H000300-01; Cal. Code Regs., tit. 14, § 15126.6.) That alternative could have feasibly accomplished most or all project objectives while providing a crucial test of system resilience.<sup>43</sup>

DWR’s deferral of full study and complete mitigation until the “next relicensing period” (AR H000131) is a textbook case of impermissibly deferred mitigation. (*City of Richmond*, 184 Cal.App.4th at 96.) At trial, SWC, Inc. insisted that the more general standards referenced in the SA, where they existed, were not really even mitigation, underscoring their formidable enforceability problems. (AA 2481.) On key SA provisions, such as those addressing flow and temperature, the standards are too far nebulous to provide this assurance.<sup>44</sup>

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<sup>43</sup> DWR provides no effective response, simply repeating that the SA has operational flexibility, based on twentieth-century hydrology. AR H000302.

<sup>44</sup> For example, the SA only promises *evaluation* of the coldwater pool in the reservoir, does not define the term “optimize,” and is infected by the loaded term “continue to operate.” H000134-135. A key SA provision addressing flow releases hinges on the nebulous “normal operation” of the Oroville Reservoir. AR G001167.

**D. DWR's EIR Even Fails to Analyze Project Operations Under the Full Range of Twentieth-Century Hydrologic Conditions.**

**1. The EIR Failed to Disclose DWR-Staff and EIR-Consultant Warnings of the EIR's Flawed Analysis of the Twentieth-Century Hydrologic Range.**

The EIR repeatedly claims that DWR analyzed project operations under a broad range of conditions, including the extremes of hydrologic variability experienced during the twentieth century. Discussing the range from 1906-2007, the EIR notes a low of 994,460 acre-feet (af) in 1977, and a high of 9,492,400 af in 1907. (AR H000132.) The EIR asserts that “operations modeling performed in support of both the Preliminary Draft Environmental Assessment (PDEA) and subsequent DEIR reflects the above variability, analyzing 73 different inflow years into Lake Oroville,” and DWR congratulates itself for having analyzed a “truly wide range of hydrologic conditions.” (AR H000132.)

However, DWR communications not disclosed in the EIR highlight concerns that the EIR failed even to assess the full 73-year range. Addressing a proposed response to climate change comments, staff inquired:

Due to several diversions upstream, actual annual inflow into Lake Oroville is about 4.0 maf [million acre-feet]. Annual flows are variable and depend upon precipitation. From SRI history, annual inflows ranged from a minimum of 1.7? maf to as high as 10? maf (*what about longer SRI 73-year history? What is this runoff range?*)

(AR L001632 (emphasis in original).) DWR staff were concerned that the EIR relied on a much more restricted data set, instead of the 73-year data set upon which the EIR claimed reliance: “Any thoughts on the attached? One outstanding question is the 1.7MAF-10MAF annual [Feather River] runoff range. The text originally said this was from 1979-2000, but shouldn't we be citing the longer SRI 74 year data set?” (AR L001630.)

A DWR staff environmental scientist inserted the following query in a proposed FEIR response to comments regarding modeling scenarios:

Although hydrology post-1994 was not used in model simulations, Lake Oroville inflows during the 1995-2000 period and during the 2000-2006 period were within the range of inflows already modeled, so additional modeling is unwarranted [WE WOULD NEED TO CONFIRM IF THIS IS CORRECT - CAN SOMEONE FIND OUT WHAT THE RESERVOIR INFLOWS WERE FOR EA[CH] OF THESE YEARS?]. Shouldn't we cite the 1.7 MAF to 10 MAF annual inflow range modeled?

(AR L001217 (emphasis in original).)<sup>45</sup> These email communications and draft responses to comments make clear that even DWR staff had reservations about the appropriateness of the hydrologic data sets applied in the EIR's modeling exercises and were concerned that those hydrologic ranges failed to live up to the EIR's analytical representations.

**2. Despite its Staff's Warnings, DWR Never Ensured that its Project Modeling and Analysis Covered the Full Range of Twentieth-Century Conditions.**

As discussed above, the FEIR's responses to comments identify the unimpaired twentieth-century extreme low and high flows of the Feather River at Oroville as "a low of 994,460 acre-feet (af) in 1977 to a high of 9,492,400 af in 1907." (AR H000132.) The FEIR later claims that "[m]odel run results for the Oroville Facilities [were] based on 73 years (i.e., 1922-1994) of historical hydrology..." (AR H000373.) These two statements already indicate an internal contradiction in the EIR: the twentieth-century historical high flow occurred in 1907, but the 73-year range commences in 1922. Despite contrary claims in the EIR, the 73-year range does not actually include

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<sup>45</sup> The final text of the FEIR response to comments remained the same: "Although post-1994 hydrology was not used in model simulations, Lake Oroville inflows during the 1995-2000 period and during the 2000-2006 period were within the range of inflows already modeled, so additional modeling is unwarranted." AR H000373. It is unclear why DWR did not include the most recent hydrologic data in its analyses.

the twentieth century's highest flow.<sup>46</sup> Worse still, DWR apparently also excluded analysis of the twentieth century's historical low flow of 1977—994,460 acre-feet. The EIR discloses that the project was designed to function with a low flow nearly *double* the magnitude of the historical low flow of 1977. “The PM&E measures in the [Settlement Agreement] were all developed and formulated to be effective under an extremely broad hydrologic range (*1.7–10 million acre-feet of annual inflow to Lake Oroville*) that mimics not only inflow changes, but a variety of release scenarios.” (AR H000144 (emphasis added).)

A project designed to be effective from 1.7-10 million acre-feet (“maf”) of annual inflow may well *not* be effective at an annual inflow of 994,460 acre-feet, as occurred in 1977, not to mention a potentially lower inflow under climate change. The project's impacts will also likely prove significantly different because the project was not designed to operate at an amount even close to the historical low flow.

The truncated 1.7-10 million acre-foot range actually represents a completely different data set than the data set that DWR claimed to have used in developing and modeling the project. This data set derives from the years 1979 to 1999: “From 1979 to 1999, annual inflows ranged from a minimum of 1.7 maf to as high as 10 maf.” (AR G000282; see also I002322.) The record corroborates that this truncated range formed the basis of DWR's analyses. An internal DWR memo, *Oroville Facilities Relicensing Program Responses to DEIR*

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<sup>46</sup> See Trial Trans., p. 247, ¶¶ 3-7 (“[T]he driest year was in 1977. The wettest year, under the modeling scenario, was 1983/84. And [DWR] looked at how the Oroville facilities operated underneath those conditions and used that [as] their guidepost.”); Trial Trans., p. 325, ¶¶ 6-11 (“What the Department did was to go back to that extreme analysis that Ms. Barnes talked about, the wettest year, the driest year”). The EIR claims that the historical high flow occurred in 1907 (AR H000132), yet DWR's counsel stated at trial that the historical high flow, “under the modeling scenario,” occurred in 1983/1984.

*Policy and Legal Questions Posed by Staff* and “substantial[ly] edit[ed]” by the chief of DWR’s Division of Environmental Services (AR L147837), states:

- The [measures] in the SA were are [sic] all developed and formulated to be implementable and effective under an extremely broad hydrologic range (1.7 MAF to 10 MAF of annual inflow to Lake Oroville), so we have in fact already “modeled” and [sic] broad array of future conditions that may result from either climate or regulatory changes. (AR L147838.)
- Our PDEA and CEQA modeling utilized an extremely broad hydrologic range (1.7 MAF to 10 MAF of annual inflow to Lake Oroville), so we have in fact already “modeled” a potential broad array of potential future annual conditions that may result... (AR L147839.)
- [W]e expect to continue to be able to meet all downstream requirements based on that mode of operation because we modeled our preferred alternative to be effective from 1.7 MAF to 10 MAF of annual inflow that also varied widely in temporal aspects. (AR L147840.)

These attempts to justify DWR’s approach betray the internal contradictions of the EIR and its supporting studies. The EIR variously claims to have analyzed the extremes of the entire twentieth-century range, the 73-year period from 1922 to 1994, and the 1.7-10 million acre-foot range from 1979 to 1999. Adding to the confusion, one of the supporting studies for the EIR mentions even another range from 1963 to 1993, which it asserts is a “wide enough range.” (AR F003295.)

Ultimately, DWR utterly failed to satisfy even the low bar that it set for itself. DWR claimed that the extremes of twentieth-century hydrologic variability sufficed as bookends for its analysis of the project’s effectiveness and impacts. (AR H000133.) But DWR’s analyses did not encompass the actual extremes of the twentieth century. The extreme low flow modeled and evaluated was twice as high as the historic low flow (compare AR H000132 to H000144); the range used to develop the project was a 21-year range from 1979 to 1999 (excluding the extreme low of 1977), instead of the 73-year range

DWR claimed to use (compare AR G000282 and H000144 to H000373); and at least one of the supporting studies based its analysis on a 30-year range from 1963 to 1993 (AR F003295).

Troublingly, the inflow data applied in DWR's modeling studies also likely overstate the actual reservoir inflow. The twentieth-century extremes mentioned above are "the historical annual *unimpaired Feather River flow* at Oroville." (AR H000132 (emphasis added).) However, the *unimpaired* Feather River flow is not representative of the *actual* flow.<sup>47</sup> The unimpaired historical low flow of 994,460 acre-feet would thus likely result in even less inflow to Lake Oroville because of upstream storage and diversions. The gap between DWR's modeled low flow of 1.7 million acre-feet and the actual historical low flow is therefore even greater than the EIR discloses.

Ultimately, assuming *arguendo* that DWR could defensibly rely on the twentieth-century hydrologic range alone, internal contradictions in the EIR and its supporting documents reveal that the project was not even designed to be effective within that twentieth-century range and within the actual (and not the unimpaired) historical extremes, nor were its impacts analyzed under the full range of historical conditions that DWR claims to have evaluated.<sup>48</sup>

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<sup>47</sup> "The full unimpaired inflow ... is the inflow to Lake Oroville that would have occurred if there were not upstream storage or diversion operations. The actual inflow is the inflow that occurred after all upstream operations. As the data in the figure indicate, *there are many periods where the computed full unimpaired inflow to Lake Oroville is considerably higher than the actual inflow*. This is due to upstream storage and/or diversion of flows that otherwise would have flowed into the reservoir." AR C000658 (emphasis added).

<sup>48</sup> While the EIR's exclusion of crucial hydrologic information is a classic example of an "error of law" under CEQA, DWR's failure to support its analysis with "facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts" would also fail the substantial evidence test. Cal. Code Regs., tit. 14, § 15384(b); see also *Ctr. for Biological Diversity v. County of San Bernardino* (2010) 185 Cal.App.4th 866, 884-85.

**E. The Consensus of Authorities, Including DWR's Own Studies, Undermines the EIR's Conclusion that Modeling and Assessment Beyond the Twentieth-Century Range Would Prove Meaninglessly "Speculative."**

**1. CEQA Requires Thorough Investigation, Objective Support, and "Best Efforts" at Disclosure Before Refusing Analysis as "Speculative."**

Before refusing analysis as "speculative," CEQA requires the agency first to conduct a "thorough investigation" of climate change and support its statements "by scientific or objective data." (*Berkeley Keep Jets Over the Bay Comm. v. Bd. of Port Comm'rs* (2001) 91 Cal.App.4th 1344, 1370-71 (rejecting non-analysis of air quality problem even where no universally accepted protocol yet existed).) While not expected to foresee the unforeseeable, an agency must use its "best efforts to find out and disclose all that it reasonably can." (Cal. Code Regs., tit. 14, § 15144; see also *City of Richmond*, 184 Cal.App.4th at 96; *Vineyard*, 40 Cal.4th at 428.) As in *Vineyard*, failure to provide the analysis omitted from the EIR would leave uncertain the project's long-term ability to furnish water for its referenced uses. (*Id.*) Although DWR considers it "speculative" to incorporate its own climate change science into project analysis (AR H000132), it does not come close to the "thorough investigation" and "best efforts" at disclosure that CEQA requires. (See *Berkeley Keep Jets*, 91 Cal.App.4th at 1370-71; *City of Richmond*, 184 Cal.App.4th at 96; Cal. Code Regs., tit. 14, § 15144.)

**2. The EIR Rejects as "Speculative" any Requirement to Study Project Performance Under Climate-Change-Influenced Hydrologic Conditions.**

DWR contends that forecasting and analyzing the potential consequences of climate change would be senselessly "speculative." (AR H000132.) "The nature and severity of climate change are not known with enough certainty for an analysis with the specificity that the commenter



suggests. The nature of potential climate change and resulting effects are as fully discussed as reasonable scientific certainty of the potential future conditions allows.”<sup>49</sup> (AR H000294-295.) The main EIR appendix on modeling repeats the same argument. (AR G001747.) In the FEIR’s responses to comments, DWR went further in its criticisms and labeled the requested forecasting “purely hypothetical.” (AR H000498.)

Counsel for SWC, Inc. at trial, relying on arguments that failed them four years earlier in *Kemphorne* and *Gutierrez*, stridently asserted: “[W]hat [petitioners are] really suggesting here is [DWR] should have done what we don’t think we have to do, you know, fudge some numbers, come up with some numbers, hypothesize what conditions in the near future years and then plug those numbers into your model.” (Trial Trans., p. 296, ¶ 27 to p. 297, ¶ 4.) “You could go ahead and pick some numbers and run a model, but the results would effectively be meaningless. They’re just a scientific guess. There’s a term for that, it’s “SWAG” “Scientific Wild-Ass Guess.” (*Id.* at p. 275, ¶¶ 21-25.) Counsel for the San Bernardino Valley Municipal Water District also seized on this colorful term and added his own: “rank speculation.” (*Id.* at p. 323, ¶¶ 1-3.) In light of the scientists’ exhortations and DWR’s own actions in other CEQA reviews, these claims embrace both disrespect and deceit.<sup>50</sup>

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<sup>49</sup> Since all of the scientists quoted above, including DWR’s own chief hydrologist, admonished agencies to begin modeling the impacts of climate change by extending their analysis past the historical hydrologic record, DWR cannot advance “reasonable scientific certainty” as an excuse to avoid confronting twenty-first-century challenges.

<sup>50</sup> Unlike DWR’s EIR, the California Legislature recognizes climate change as a “serious threat” that will pose major new constraints on dam and reservoir operation. See Health and Safety Code, § 38501, subd. (a); see also Pub. Res. Code, § 75041 (adopted by Prop. 84 (Nov. 8, 2006), § 1) (funding for study of climate change and water supply); Wat. Code, § 83002 (funding for climate change adaptation strategies).

**3. The Scientific Authorities that DWR Consulted, Including its Own, Discredit the Claim that Including Climate Change Analysis Would Have Been “Speculative.”**

Far from suggesting that assessment of conditions outside the twentieth-century range would be “speculative,” the scientists DWR consulted, including its own, urged the examination of different climate change scenarios through the application of modeling tools, such as CALSIM II, that DWR was already using for the Oroville Facilities EIR. (AR I039796, I039810.) DWR’s chief hydrologist Roos led the charge in explaining how studies should be conducted:

For water systems in California and elsewhere, climate model precipitation is probably the most important parameter. This must be developed at the watershed level for a representative set of future scenarios. The major tool for evaluating the impact on major water project systems would be the CALSIM reservoir system operation (simulation) model developed jointly by DWR and [the U.S. Bureau of Reclamation]. Development of modified monthly input to CALSIM from the climate models will require help from the research community.

(Water Plan Update 2005, p. 4.623.) The EIR did not repeat this advice, nor explain why it was not followed. Roos also noted that DWR was preparing new temperature models for the Oroville relicensing proceeding at issue here. “New or upgraded temperature modeling is being developed as part of the Oroville power plant relicensing project. Once these tools are selected or developed, researchers can apply them to other streams and reservoirs. *A logical extension would be to apply the new temperature models to evaluate the affect [sic] of a changed climate and runoff scenario, beginning with Lake Oroville and the Feather River.*” (*Id.* at p. 4.624 (emphasis added).) Nonetheless, DWR never applied these models to develop altered climate change and runoff scenarios. The EIR does not even reveal that DWR had worked on new temperature modeling that

could have been applied to climate change around Lake Oroville and the Feather River.

Roos concluded: “There is serious scientific evidence that global warming will pose serious challenges to our water infrastructure. *It is time to try to quantify the effects of projected climate change on California’s water resources.* Being aware of potential climate changes should help in preparing better for an uncertain 21st century.” (*Id.* at p. 4.625 (emphasis added).) DWR’s 2006 *Progress Report* also highlighted legislative and internal DWR mandates to perform *quantitative* analyses of climate change. (AR I040920.) Nonetheless, DWR in the Oroville EIR did not even try to develop quantitative assessments.

Scientists consulted for DWR’s 2005 Water Plan Update also addressed the uncertainties of climate change and explicitly cautioned against DWR’s approach of doing nothing and avoiding quantitative assessment under the guise of awaiting greater certainty.

Although many uncertainties remain, responsible planning requires that the California water community work with climate scientists and others to reduce those uncertainties and to begin to prepare for those impacts that are well understood, already appearing, or likely to appear.

(Water Plan Update 2005, p. 4.555.)

There are two critical issues associated with using existing facilities to address future climate change: can they handle the kinds of changes that will occur; and at what economic and ecological cost? .... [W]ithout precise information on the characteristics of future climate, the best that water managers can hope to do may be to *explore the sensitivity of their system to a wider range of conditions than currently experienced* and to develop methods or technologies that can improve operational water management.... Other steps should include *determining quantitative impacts from climate change on water supply and flood control including a systematic review and evaluation of all major multi-purpose reservoirs for water supply and flood control and their ability to adapt under current operating rules....* Forecasting peak flows under different climate scenarios remains

highly uncertain because of difficulties in projecting the details of regional precipitation patterns.

(*Id.* at pp. 4.593 to 4.594.) These researchers concluded that it would be prudent to “re-evaluate design and management practices of existing infrastructure.” (*Id.* at p. 4.594.) But DWR here refused to follow any of these recommendations.

**4. Prior to Preparation of DWR’s Oroville Facilities EIR, Scientists Had Already Modeled California-Specific Impacts of Climate Change.**

As previously discussed, the scientists whose studies appear in the record all urged the adjustment of hydrologic forecasting to account for climate change. Documents in the record went further, though, and actually modeled the hydrologic ramifications of climate change on a statewide basis. Beginning with observed trends, DWR’s own analysis indicated in 2006 that climate change was likely causing several alterations in the state’s precipitation and temperature patterns, including: more extreme wet and dry years (AR I040947); less runoff in the April through July period, especially in the northern Sierra where Lake Oroville is located (AR I040953); significant reductions in snowpack, again especially in the northern Sierra around Lake Oroville (AR I040956-40957);<sup>51</sup> and considerable increases in air temperatures (AR I040939).

The 2004 study *Climate Change Impacts Uncertainty for Water Resources in the San Joaquin River Basin, California* modeled the possible consequences of climate change in the San Joaquin River basin. The researchers created a “climate change scenario and projections” by “considering two ‘bracketing’ climate

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<sup>51</sup> “Climate model studies support projections for continued reductions in the State’s snowpack as the result of warming. Simulations under various amounts of temperature rise indicate that California’s snowpack is very vulnerable to warming.” AR I040956-40957.

projections of the same CO<sub>2</sub> increase scenario.” (AR I039798.) “These precipitation projections are reasonable choices for bracketing the uncertainty of California hydroclimatic response to global warming.” (AR I039810.) The researchers then applied the CALSIM II model, and modified some of the input data (reservoir inflows and hydrologic year types) to account for climate change. (AR I039801.)<sup>52</sup>

The Oroville EIR, in diametric contrast, asserts that DWR in 2008 could not do what these researchers did in 2004, namely calibrating CALSIM II to investigate climate change. “In Section 6.2.5.1 (Water Quantity) the DEIR acknowledges the inability to model climate change effects utilizing CALSIM II.” (AR H000132.) DWR cannot argue its way out of this fundamental contradiction between the EIR and the evidence in the record; scientists, including DWR’s own, whose work DWR reviewed in preparing the EIR, performed precisely the modeling task that the Oroville EIR subsequently deemed impossible.

The Pacific Institute’s 2003 literature review, discussed above in section II.B.3, remarked on the then-existing large number of California-specific climate change studies, many of which addressed topics relevant to the Oroville Facilities’ relicensing, such as adapting reservoir operations to a changing climate: “More than 150 peer-reviewed scientific articles on climate and water in California have now been published, with many more in preparation, addressing everything from improvements in downscaling of

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<sup>52</sup> Although the authors of this 2004 study noted its limitations, they highlighted that, despite uncertainties, “San Joaquin River region and Central Valley water resources planners can proactively focus their efforts on preparing mitigation strategies. This action of contingency planning will require application of their planning tools (e.g., CALSIM II) and consideration of a variety of CO<sub>2</sub> increase scenarios, climate model projections, land use projections, and allocation policy assumptions.” AR I039811.

general circulation models to understanding how reservoir operations might be adapted to new conditions.” (AR I042328.) The literature review highlighted studies (dating back as much as 20 years before the Oroville EIR was approved) that utilized available modeling to illuminate such climate change-related water concerns as changes in snowpack (AR I042334), increasingly intense storms (AR I042337), changes in regional runoff (AR I042338), and losses in hydroelectric generation (AR I042340.)<sup>53</sup> This literature reveals that scientists began investigating and modeling the potential water supply ramifications of climate change in California long before DWR refused to do any climate change-specific modeling of its own.

In his 2005 article *From Climate-Change Spaghetti to Climate-Change Distributions for 21st Century California*, Michael Dettinger of the U.S. Geological Survey addressed the many different climate models’ predictions by generating “projection distribution functions” that would approximate the probability of a given climate change scenario. (AR I040120.) The study’s results describe the likelihood of various changes in annual temperatures and precipitation in northern California (AR I040122) and then specifically apply those results to model changes in annual stream flow and median flow dates on the North Fork American River (AR I040124).

Against this body of work that has predicted climate change-induced alterations in California hydrology, DWR’s decision not to attempt any

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<sup>53</sup> See also Mann, *Like Water for Energy: The Water-Energy Nexus Through the Lens of Tax Policy* (2011) 82 U.COLO. L.REV. 505, 512 (“A 2004 study cited climate models forecasting a 14 to 18 percent reduction in Colorado River stream flow that could drain water storage by 32 to 40 percent, reducing hydroelectric productivity by 45 to 56 percent. This prediction has already partially come true. In 2004, power-generating capacity at the Glen Canyon Dam fell to 60 percent of full capacity due to the ongoing drought that reduced Lake Powell water levels to 40 percent of capacity.”).

modeling of the consequences of climate change for Oroville operations finds no scientific support in the record.

**5. Although their Conclusions Were Excluded from the EIR, Scientists Undertook Watershed-Level, Quantitative Climate Change Analyses in the Feather River Basin.**

At trial, the Attorney General and SWC, Inc. defended DWR's decision to ignore climate change in the EIR's hydrologic modeling, by claiming that nothing in the record indicated the feasibility of such modeling on a watershed scale. (See, e.g., Trial Trans., p. 292, ¶¶ 14-19 (“[One] thing that’s really clear from the reports is the forecasting they’re talking about, [at] the current time is on the regional level. You cannot predict it watershed-by-watershed, which is what we would need to do to have any kind of meaningful assessment of impacts of this particular project.”); Trial Trans., p. 247, ¶¶ 25-26 (asserting “lack of specificity of how specifically [climate change is] going to affect that watershed”).)

The record discredits this premise entirely. Years before the EIR's issuance, scientists (including authorities at DWR) had performed watershed-specific modeling analyses that examined some of the ramifications of climate change in various California watersheds, including the Oroville Facilities' own Feather River watershed. One 2003 study, entitled *Potential Impacts of Climate Change on California Hydrology*, evaluated the Feather River's hydrologic sensitivity to climate change (measured at Oroville Dam). (AR I039799.)<sup>54</sup> The researchers' techniques directly contradict DWR's claims that “local effects are not clear and [that] the current models lack the resolution needed to determine impacts on a watershed level.” (AR H000295.) These researchers—five years

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<sup>54</sup> The Miller et al. study described here, although not in the record, is described by several other record sources. See, e.g., AR I040128, I041004, I041181.

before DWR's EIR asserted the infeasibility of climate change modeling—were able to apply then-existing models to generate their results, using “statistical downscaling of global climate model output over the California region to a spatial scale that was compatible with the basin areas.” (AR I039799.)

In 2004, other researchers applied these climate change projections to model State Water Project and Central Valley Project reservoir operations, which include Lake Oroville, under different climate change scenarios. “Those [data] served as a basis for generating time series of reservoir inflow data under each projection period case for the reservoir operations model used in this assessment.” (AR I039799.) These efforts thoroughly vitiate SWC, Inc.'s defense at trial that it is “too speculative at this time to come up with any meaningful data about climate change .... [including] its effect on reservoirs.” (Trial Trans., p. 292, ¶¶ 2-3, 11.) As shown above, scientists did come up with meaningful data that specifically targeted SWP reservoir operations.

More troubling still is DWR's avoidance of its *own* analyses in the record. DWR's July 2006 *Progress Report* (AR I040889-41227) recognized the uncertainties in predicting climate change but made “[a]n initial attempt ... to *quantify the impacts of climate change* on some aspects of California's water resources.” (AR I041001 (emphasis added).) The report, in startling contrast to DWR's claims in this litigation, models hydrologic changes that may accompany climate change at the Oroville Facilities, as well as nine other locations in California. The methodology section of the report explains precisely how the researchers utilized an “intermediate” hydrologic model to provide data that would fit within DWR's CALSIM II model, ultimately allowing them to use both “historic and projected time references” to create local-scale data from regional models. (AR I041025-41026.)



The report lists the climate change data that were then available, including everything that DWR would have needed to undertake the requisite climate change analysis for the Oroville Facilities: “For hydrologic analysis, the VIC model output also provides stream flow, snow pack, snowmelt timing and soil moisture content.... Available climate data for a simulation period from 1950-2100 are: [p]recipitation; [a]ir temperature; [w]ind speed; [s]urface air humidity; [and s]oil moisture in three layers. Stream flow data for the simulation period 1950-2100 are available at the following locations: ... Feather River at Oroville...” (AR I041016.) This presents an extreme contrast to the respondents’ claims, quoted above, that no meaningful climate change-related data existed for the Feather River watershed when the Oroville EIR was approved. (See, e.g., AR I040932 (listing major “expected consequences”).)

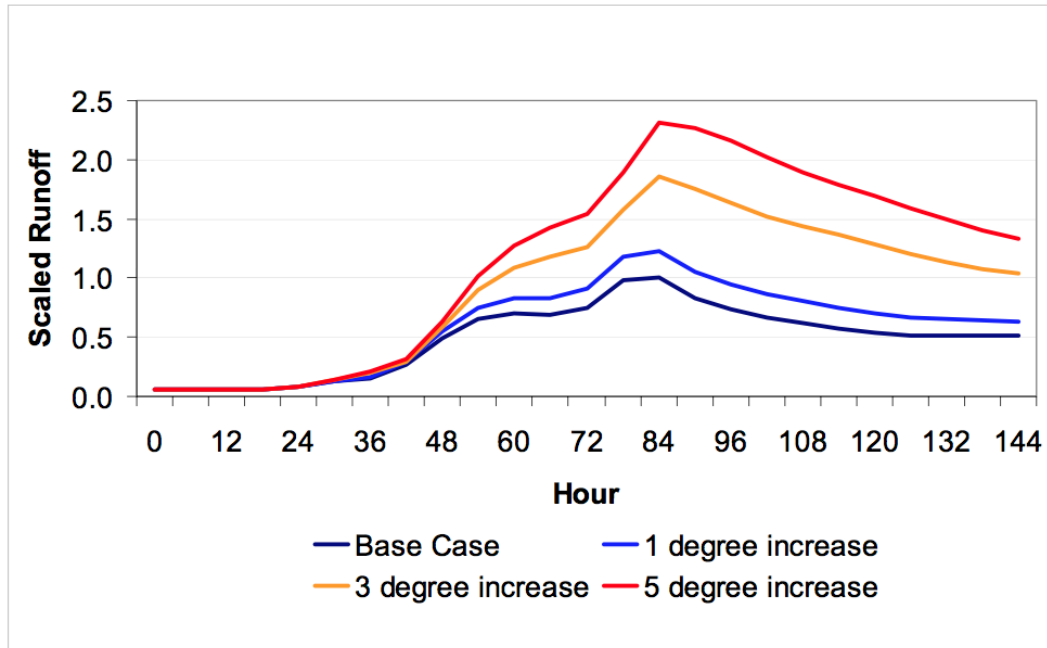
DWR’s 2006 *Progress Report* also evaluated different consequences of climate change, many of them germane to the Oroville relicensing. The report’s results include specific and detailed information on the consequences of climate change for California water, including changes in hydroelectric generation (AR I041070); water and air temperature changes (AR I041068); and hydrologic shifts (AR I041175), utilizing a hydrologic model of the Feather River watershed in the latter discussion:

A simple hydrologic model of the Feather River watershed, HED71 (Buer, 1988), is used to illustrate the effects of greater contributing area on direct runoff.... Three scenario simulations were run with snow elevations at 5000, 6000, and 7000 feet which are associated with a respective 1, 3, and 5 degree Celsius rise in mean atmospheric temperature.... Based on these simulations, the peak runoff from this storm increased 23 percent, 83 percent and 131 percent respectively...

(AR I041175.) The report presents altered hydrographs (Figure 1, below; Figure 6-25 in the original text) for the Feather River based on these three scenarios, as well as calculations of changes in snow-covered area for 25

watersheds (Table 1, below; Table 6-15 in the original text), including the Feather River. (AR I041175.)

**Figure 1 – Feather River Watershed (AR I041176)**



**Figure 6-25 Direct runoff changes due to increasing contributing area of watershed**

**Table 1** (AR I041177)

**Table 6-15 Snow Covered Area Changes with Temperature for Selected Watersheds**

Basin	Mean elevation	Average Apr. 1 snow line	Total area	Snow Covered Area	1° C Rise	2° C Rise	3° C Rise	4° C Rise	5° C Rise
	[ft]	[ft]	[mi2]	[ percent of basin]	[% of basin]	[% of basin]	[% of basin]	[% of basin]	[% of basin]
Trinity	4,740	4,000	700	63%	56%	47%	36%	24%	11%
Sac/Delta	4,130	4,000	418	48%	36%	26%	19%	10%	7%
McCloud	4,370	4,000	607	56%	40%	25%	16%	10%	6%
Pit	4,830	4,000	4,768	81%	62%	42%	24%	11%	6%
Shasta	4,550	4,000	6,400	71%	54%	36%	21%	10%	6%
Bend	3,870	4,000	9,030	54%	41%	28%	17%	8%	5%
Feather	4,940	4,500	3,624	72%	56%	36%	20%	9%	2%
Yuba	4,470	4,500	1,191	50%	42%	34%	28%	17%	8%
American	4,300	4,500	1,900	48%	42%	34%	26%	19%	12%
Cosumnes	3,100	4,500	530	25%	15%	9%	6%	3%	1%
Mokelumne	5,030	5,000	575	50%	43%	38%	31%	26%	20%
Stanislaus	5,530	5,000	935	60%	55%	48%	42%	33%	26%
Tuolumne	5,960	5,000	1,530	60%	54%	49%	44%	39%	35%
Merced	5,470	5,500	1,020	47%	43%	42%	38%	32%	26%
San Joaquin	7,130	5,500	1,640	72%	67%	62%	57%	49%	43%
Kings	7,700	5,500	1,540	76%	73%	69%	64%	59%	54%
Kaweah	5,600	6,000	563	44%	39%	34%	27%	23%	18%
Tule	3,950	6,000	390	23%	15%	13%	8%	6%	3%
Kern	7,410	6,000	2,080	73%	65%	56%	49%	41%	33%
Truckee	6,790	5,500	430	100%	84%	58%	35%	17%	8%
Tahoe	7,030	6,000	510	100%	55%	41%	29%	18%	8%
W. Carson	8,050	6,000	70	100%	100%	100%	71%	51%	25%
E. Carson	7,530	6,000	350	86%	77%	66%	54%	47%	22%
W. Walker	8,650	6,500	180	100%	94%	83%	67%	53%	41%
E. Walker	8,250	6,500	360	97%	83%	69%	50%	36%	26%
Average	5,735	5,120	1,654	66%	56%	46%	35%	26%	18%

Based on these watershed-specific analyses, the report presents several sobering conclusions that ought to have raised concerns for DWR during the CEQA review for the Oroville Facilities. “[O]ne significant issue was the critical shortages of water in reservoirs north of the delta that occurred when present operating rules were applied. Future directions would include examining increases in carryover storage in Shasta and Oroville reservoirs to *prevent loss of operational control of the Sacramento and Feather rivers during droughts*. Corresponding reductions to delivery allocations would be required.” (AR I041218 (emphasis added).)

Another concern is the impact of universally acknowledged increases in air temperatures, which will result in increases in water temperatures. “High temperatures can be hazardous to salmon and steelhead.... [T]he climate change scenarios resulted in warming of river temperatures at several key locations on an annual average basis. The timing of impacts will have to be explored in future studies.” (AR I041070.) DWR’s scientists even began the report with a cautionary statement against reliance on the concept of stationarity “[A]t a climactic timescale of 30 years or more, [water planners have historically] assumed that the average of the weather patterns would remain about the same; the frequency and severity of future droughts would be much like that of the past; precipitation would continue to fall as winter snow, and the snow would continue to melt in the spring and early summer to fill our reservoirs. That was the assumption, and *a changing climate may threaten to destabilize the infrastructure and operations dependent on that assumption.*” (AR I041021.)

It is baffling that DWR’s EIR slighted the work of two dozen DWR engineers and scientists who prepared this report (see AR I040892-40893) when the department was considering appellants’ admonitions to do what these DWR engineers and scientists had already begun doing. DWR’s claiming that such work was impossible and refusing to pursue it in the Oroville relicensing context created a dispositive legal error.

### **III. DWR’S EIR FAILS TO ANALYZE AND MITIGATE THE PROJECT’S DAMAGING LOCAL IMPACTS.**

#### **A. DWR’s EIR Fails to Analyze and Mitigate Project Impacts on County Safety and Government Services.**

CEQA requires mitigation of the adverse environmental impacts of a project, which includes providing or funding infrastructure and government services that the project necessitates. (*City of Marina v. Board of Trustees* (2006)

39 Cal.4th 341.) *City of Marina* rejected the lead agency’s argument that the trustees had no obligation to quantify local fiscal impacts because local governments would supposedly carry out the environmental mitigation. (*Id.* at 359-61, 366-67.)

DWR’s EIR lacks any quantitative analysis of the costs that Butte County will incur to accommodate the project’s environmental impacts, thus avoiding any analysis of mitigation that might be necessary. (AR G000816-825.)<sup>55</sup> This deficiency plagues the EIR, despite evidence in the record—including DWR’s own study “R-19” (AR I048648-779)—that demonstrates the project’s significant adverse effects on Butte County.

Even worse, the EIR fails to disclose information from the FERC EIS that is inconsistent with the EIR’s benign account of local services costs, which DWR recounts as CEQA lead agency. FERC’s EIS concluded that the Oroville project has a direct negative net fiscal impact on Butte County to sustain the project’s recreation, operation, and maintenance activities. (AR E001229.) Moreover, FERC noted in its Final EIS that “DWR and staff estimates” of the county’s total project-related costs “ranged from \$1.5 to \$1.7 million.” (AR E001191.) While not recognizing the considerably greater costs noted in Butte’s own studies, FERC’s estimated costs are clearly significant. By contrast, in its CEQA review, DWR acknowledged far lower figures and

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<sup>55</sup> The EIR uses an arbitrary formula to determine significance, which effectively enables DWR to escape responsibility for *any* public services mitigation to the county. The EIR concludes that any impacts must be less than significant merely because the overall project-generated increase in persons requiring public services would be 0.6 percent relative to the entire county’s population. AR G000823-24, I048654. DWR’s study further found that the projected deficit from additional residents would increase 26 percent by 2020, a date far short of the end of the new license’s 50-year term. AR I048657. This analysis completely misses the mark. The issue is not the *relative* percentage increase in service demand costs, but rather whether the magnitude of that increase in service demand costs creates a significant local impact.

concluded that “[t]he increased demand for public services would be small and not trigger the need for new or expanded facilities.” (AR H000121.)<sup>56</sup>

The EIR further fails in assuming that these cost impacts would not involve any adverse impacts on the environment requiring mitigation under CEQA. (See AR H000121-22.) The EIR and record, though, document physical impacts on Butte County that the county is incurring costs to address.<sup>57</sup> As studies in the record confirm, the county’s resources devoted to public services for the Oroville Facilities relate to physical impacts of the project-generated increase in accessibility and recreational use.<sup>58</sup> Under CEQA, mitigation may include funding government services and infrastructure that, as here, are tied to adverse physical impacts. (*City of Marina*, 39 Cal.4th at 365.)

The EIR attempts to evade the significance of the project’s physically based fiscal impacts by advancing various theories for which the record is

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<sup>56</sup> Other costs and fiscal conclusions were also not disclosed in the EIR, whereas they were discussed in the federal EIS. “[E]stimates of lost tax revenue in the range of \$1.0 and \$6.9 million annually are reasonable estimates of the County’s foregone tax revenue.” AR E001188. “Construction and continued operation of the Oroville Facilities resulted in an *on-going loss of tax revenue* associated with the Big Bend Project that has not been offset by *any* project-related gains in Butte County’s annual property tax revenues.” AR E001189 (emphasis added).

<sup>57</sup> “Examples of illegal activities that take place in the project area include illegal dumping of trash and vandalism of cultural resource sites.” AR G000532. “[I]llegal dumping, squatters and dispersed site impacts, OHV impacts, and litter accumulation [are] problematic in the OWA.” AR I048398. “[F]ires frequently start in the OWA, primarily due to accidental fires starting from recreational activities such as camping or the shooting range, or arson.” AR B031596. “The use of roads by visitors ... to access the Oroville Facilities generates costs to Butte County by increasing the need to regularly maintain these roads.” AR I062887. “[T]he need to build or change existing facilities to accommodate the demand for public services could result in physical effects on the environment.” AR G000817.

<sup>58</sup> “Local fiscal effects primarily result from recreation activity and O&M of the Oroville Facilities.... [C]hanges in visitation to the Oroville Facilities may generate increased demand for law enforcement, fire protection, and other governmental services such as roads, parks and recreation.” AR I062901.

devoid of evidentiary support. The FEIR claims that “[t]he increased demand for public services would be small and would not trigger the need for new or expanded facilities.” (AR H000121.) DWR’s study of fiscal impacts, however, concedes that it did not even consider the need for new or expanded facilities.<sup>59</sup>

Another study commissioned by DWR found annual capital improvement costs of \$18,500, (*i.e.*, approximately \$1,000,000 over the 50-year life of the proposed project, not adjusted for inflation). (AR I062110.) Butte County’s own estimates show much higher impacts of over \$10,500,000 in one-time costs. (AR I062809.) Regardless of which estimate is more appropriate, the low end of this range still would entail \$1,000,000 or more in capital improvements, hardly a “small” sum. There is no substantial evidence in the record to support the EIR’s position that the project would not necessitate spending on new or expanded facilities.

The FEIR also states that “[t]he small increase in demand would be spread among many potential responders, including State agency law enforcement.” (AR H000121.) But the lowest estimate in the record is a *net* cost of \$386,900 per year for Butte County alone, and other estimates in the record are higher. (AR I062110, I062809, I062915-62917).

Finally, the FEIR asserts that “[t]he Proposed Project itself includes provisions for additional law enforcement personnel described in SA Article B111.” (AR H000122.) While this measure may alleviate some law enforcement costs for Butte County, nothing in the record indicates that it will

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<sup>59</sup> “[C]apital improvement costs were left out of the Butte County fiscal model.” AR I062892. “The study plan for Study R-19, Fiscal Impacts, ... was designed to address ongoing fiscal effects of the Oroville Facilities and not the costs of one-time capital improvements potentially associated with recreation visitation.” AR I062109.

fully or even partially address the project's impacts to Butte County. Indeed, DWR's fiscal impacts study considered three types of fiscal impacts *in addition to* law enforcement: "fire protection," "road maintenance," and "other." (AR I062911.) Furthermore, none of the studies of fiscal impacts in the record considered Article B111's effectiveness because the Settlement Agreement was concluded after the principal studies' completion. (AR I062741-820, I062845-976, I062092-117.) Thus, there is no evidence in the record to demonstrate that this measure would suffice to "reduce or fully offset negative public services impacts," as the EIR claims. (AR G000824.)

Since the EIR failed to consider these project-related effects, it came to the unjustified conclusion that the project requires no mitigation for public service costs incurred by Butte County. (AR G000825.) The project's lack of any mitigation provisions violates CEQA, improperly leaving to Butte County the obligation to cover the project's costs for significant project-related expenditures on services. (See *City of Marina*, 39 Cal.4th at 359-61, 366-67.)

**B. DWR's EIR Fails to Address Fully the Impacts of Toxic Contaminants on Local Public Health.**

The EIR also mischaracterizes the toxic contaminants present in the environmental setting. "Knowledge of the regional setting is critical to the assessment of environmental impacts." (*San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 723.) The EIR must provide a realistic assessment of the existing setting regarding contaminants such as methyl mercury, PCBs (polychlorinated biphenyls), and pathogens that can impact local fish, the food chain, and humans. These contaminants, if present, pose an obvious public health threat to the citizens of Butte County. The EIR's failure to analyze human health dangers in the environmental setting also creates a cascade of other failures.



The EIR acknowledges that “mercury consistently exceeds USEPA guidelines in most fish species and locations sampled.” (AR G000310.) The EIR also acknowledges that “the Oroville Facilities increase sportfishing opportunities in the project area,” but DWR has undertaken no analysis of who consumes sportfish from Lake Oroville and in what quantities. (AR G000311.)

In an effort to moderate disclosure of the risk, the EIR cites a fact sheet for fish consumers prepared by the Office of Environmental Health Hazard Assessment (“OEHHA”). (AR G000310, I005910-5915.) The fact sheet cautions that the fish consumption guidelines were designed with a specific purpose in mind: “to protect against *subtle effects* that would be difficult to detect but could still occur following unrestricted consumption of California sport fish.” (AR I005913.) These effects especially endanger fetuses and children. The EIR, contrary to this warning, assumes that only acute mercury poisoning represents a hazard to consumers of sportfish. (AR G000310, H000376.) The fact sheet also highlights that various commercially available fish contain hazardous concentrations of mercury, and consumers must carefully monitor their combined consumption of sportfish and commercial fish. (AR I005914.) The EIR has not even mentioned this potential exposure pathway that could exacerbate the impacts of consuming fish from the project area.

One other document addressing mercury-related public health concerns underscores the seriousness of the issue. “The Feather River has several species of fish that are very high in methylmercury.... In particular, striped bass and pikeminnow caught from the Feather River *should not be eaten at all* by women of childbearing age and children. Consumption of catfish or large predatory fish such as largemouth, smallmouth, or spotted bass *should also*

*be avoided* by this population or, at most, restricted to no more than one meal a month.” (AR I059343 (emphasis added).)

The OEHHA fact sheet offers the inconclusive caution that poisoning is unlikely “unless someone eats more than what is recommended or is particularly sensitive,” without commenting on the actual risks to sensitive individuals or those who eat more than the recommended quantities. (AR I005913.) Instead of squarely addressing the risks from high consumption, the EIR merely repeats OEHHA’s tautological advice that the risk is low “unless the consumption rate is considerably higher than recommended.” (AR G000311.) In the end, the many exceedances of health standards in the fish tissue samples indicate that local populations, as well as visiting sportfishers, may experience pernicious “subtle effects,” yet the EIR entirely ignores this concern.

The EIR also should have acknowledged mercury exposure risk as an impact of the Oroville Facilities because “[i]mpoundment of the reservoir” has created the conditions that led to bioaccumulation of contaminants. (AR I05373.) The EIR attempts to finesse this by attributing bioaccumulation to “*operation* of the Oroville facilities.” (AR G000311 (emphasis added).) This discussion is misleading and ignores the project’s inducement to recreationists. (See, e.g., AR G000311 (“[T]he Oroville Facilities increase sport fishing opportunities in the project area.”).) Based on its avoidance of responsibility, DWR’s EIR ultimately fails to provide adequate mitigation for the impacts of the project’s inducement to sport fishers. Under the SA, DWR has limited itself to paying only a few thousand dollars per year to post warning notices at boat ramps and other unidentified locations. (AR G001179.) This SA “protection, mitigation, and enhancement” measure—which DWR claims is not mitigation in the first place (AA 2350)—is not calibrated to the impacts

anticipated since DWR never even studied the current risks. This fails as CEQA-mandated mitigation.

Similar problems plague the EIR's assessment of bacteria. The EIR describes the level of bacteria in the existing setting as "potentially affecting" the beneficial uses of water contact recreation and water supply. (AR G000317.) The EIR also recognizes "high bacterial counts," likely due to human and wildlife fecal waste, during seasonal peaks in recreation and wildlife activity. (*Id.*) Yet the EIR avoids analysis of these impacts and includes inconsistent statements about project impacts on bacteria levels. (AR G000672, H000334.)

The SA's provisions cannot remedy the EIR's deficiencies regarding bacteria levels. First, the SA proposes monitoring that DWR is apparently already obligated to perform. (AR G001178.) Second, the SA requires DWR to post notices announcing unsafe conditions and explaining how to reduce contamination. (AR G001178-1179.) DWR, however, has provided no analysis of how effective such measures would be, and the SA ignores more effective mitigation measures, such as closing recreation areas and intercepting bacterial contaminants from humans and wildlife before they reach the water.<sup>60</sup> Third, the SA establishes that DWR *may* develop a public education program if it determines that one "is needed." (AR G001179.) A central purpose of the EIR, however, is to determine whether mitigation *is* needed. DWR's promise to study this issue later highlights the EIR's deferred mitigation problem. (See *City of Richmond*, 184 Cal.App.4th at 89-90.)

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<sup>60</sup> The EIR admits the advisability of closing recreation areas if unhealthy bacteria levels persist. AR G000654. The SA does not require this, however. DWR must commit to this measure in the project itself rather than simply mentioning it in passing in the EIR.

**IV. DWR'S EIR UNLAWFULLY FAILS TO DEMONSTRATE THAT THE PROJECT WILL PROTECT WATER QUALITY AND BENEFICIAL USES.**

**A. The EIR's Statement of Project Objectives Failed to Ensure Analysis of the Project in its Entirety.**

A sense of disconnect pervades the EIR's characterization of the Oroville Facilities project, which DWR portrays as massive and important, yet inherently benign. The project proposes "future license conditions for the Oroville Facilities for the next 50 years." (AR G000108.) DWR's EIR also delineates a formidable list of the project's environmental, contractual, statutory, and flood management commitments that water from the Oroville Facilities *must* meet. (AR G000110, G000158.) The EIR further recognizes that "the scheduling of water releases to meet all these delivery obligations requires a tremendous amount of planning, forecasting, and interagency coordination." (AR G000163.) The "commitments" referenced here include requirements involving power production, water supply, flood management, environmental protection, and recreation. (AR G000158-163.)

Remarkably, however, DWR portrays the project as largely innocuous for CEQA purposes. DWR rationalizes this nonchalance by relying upon a misleading statement of project objectives. Characterizing the project as "*continued* operation and maintenance of the Oroville Facilities," the EIR assumes by definition that new project is "consistent" with DWR's existing commitments under the now-expired license term; thus, the EIR merely asserts that DWR does not "anticipate" changes to the "general pattern" of releases of water stored in Lake Oroville to meet these commitments. (AR G000109 (emphasis added).)

By contrast, DWR highlights all parts of the project that it considers environmentally beneficial, including "protection, mitigation and enhancement"

(“PM&E”)<sup>61</sup> measures DWR proposes for inclusion in the new FERC license (AR G000118-120) and other commitments not proposed for the new license (AR G000121-122). The EIR’s selective portrayal of the project thus resembles a CEQA version of Lewis Carroll’s Cheshire Cat because it lets the most consequential aspects of the project fade away until nothing is left but the smile.

In keeping with this selective focus on project elements, DWR labored at trial to portray the Oroville relicensing project as a “parade of enhancements,” rather than a “parade of horrors.” (Trial Trans., p. 231.) DWR’s trial brief insisted that the project has *nothing to do* with many of its ostensible objectives, such as “operating the Oroville Facilities for water supply, flood control, or Delta water quality,” nor does it even test whether DWR can meet all its contractual and regulatory duties. (AA 2327.) Even more stridently at trial and in briefing, SWC, Inc. used the same sleight of definition to deny that this proceeding provides the “proper forum or mechanism” to *seek* mitigation for the Oroville Facilities’ “alleged impacts.” (AA 2493; see also Trial Trans., p. 293 (summarizing the EIR’s assessment of water quality and beneficial uses in terms of “what is going on currently”).)

DWR in fact heavily relies upon the 2006 Settlement Agreement’s PM&E measures to address the “environmental impacts of continued Oroville Facilities operations.” (AR G000622.) At the same time, DWR erroneously used the ALP negotiation process to evade the CEQA-mandated analysis that

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<sup>61</sup> The term “protection, mitigation and enhancement” is included in section 10(j) of the Federal Power Act, 16 U.S.C. § 803(a)(1). As DWR recognized at trial, these measures, developed to comply with Federal Power Act requirements, are not synonymous with CEQA’s standards for mitigating potentially significant impacts to the environment from a project covered under CEQA. Trial Trans., p. 231.

should have identified project impacts, alternatives, and mitigation.<sup>62</sup> A settlement agreement negotiated under the ALP, without environmental assessment and representing a compromise of competing interests, cannot substitute for CEQA’s “meticulous process” of identifying specific environmental impacts and mitigation. (See *PCL v. DWR*, 83 Cal.App.4th at 911.)

The EIR’s selective definition of project objectives—effectively framing DWR’s Oroville relicensing project to exclude any serious consideration of how the project will operate, or might operate differently, in the next half-century—cannot be reconciled with the clear requirements of CEQA. CEQA requires the EIR to analyze the “whole” of an action. (*Nelson v. County of Kern* (2010) 190 Cal.App.4th 252, 271.)<sup>63</sup> Here, DWR has repeatedly defined its project as including the *operation* of the Oroville Facilities project (AR A000060, G000117, G000128, G000160-162), and the EIR challenged here serves as the decision-making document to inform that operation under a new license proposed to last for fifty years. Completion of the full analysis that CEQA requires cannot be avoided either by comparing project impacts with impacts under a hypothetical unconditional renewal of the prior license, or by labeling that hypothetical the no-project alternative. (See Cal. Code Regs., tit. 14, §§ 15125(a), 15126.6(e); *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal. App. 4th 931, 955.)

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<sup>62</sup> Relying on the ALP, DWR’s EIR did not, for example, find a single impact on aquatic resources requiring CEQA mitigation. AR G000692-693.

<sup>63</sup> The project, in pertinent part, includes “the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment...” Cal. Code Regs., tit. 14, § 15368.

DWR's assumption of an innocuous project prejudicially circumvents analysis, allowing DWR to escape serious inquiry into the feasibility of protecting beneficial uses and mitigating potentially harmful local impacts. An "EIR may not define a purpose for a project and then remove from consideration those matters necessary to the assessment whether the purpose can be achieved." (*County of Inyo v. City of Los Angeles* ("Inyo V") (1981) 124 Cal.App.3d 1, 9.)<sup>64</sup> Against the advice of the State Water Resources Control Board, as explained below, DWR disabled the EIR from informing decision-makers and the public (other than by fiat) both whether water quality, beneficial uses, and various legal commitments were protected in the project baseline; and how the impacts of the project and no project alternative compare to that baseline. (AR H003742-43.) DWR's analysis fails to provide an "interactive process of assessment of environmental impacts and responsive project modification which must be genuine." (*Inyo VI*, 160 Cal.App.3d at 1183.)

Put another way, the EIR's statement of project objectives is prejudicially misleading because it merely assumes that project conditions are sufficiently rigorous to meet the listed "commitments" involving power production, water supply, flood management, environmental protection, and recreation. (AR G000158-163.) The statement that DWR will, under its new license, "continue" to meet its commitments and comply with regulations (AR G000158), fails to "help the lead agency develop a reasonable range of

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<sup>64</sup> In an analogous NEPA context, federal courts found legally inadequate the use of a truncated "purpose and need" statement, in which the articulation of objectives is defined in a manner that curtails full assessment of the project and alternatives. *City of Carmel-by-the-Sea v. United States Department of Transportation* (9th Cir. 1997) 123 F.3d 1147, 1155; *Friends of Southeast's Future v. Morrison* (9th Cir. 1998) 153 F.3d 1059, 1066.

alternatives to evaluate in the EIR [that] will aid the decision-makers...” (Cal. Code Regs, tit. 14, § 15124(b).) “A curtailed or distorted project description may stultify the objectives of the reporting process.” (*County of Inyo v. City of Los Angeles* (“*Inyo IIP*”) (1977) 71 Cal.App.3d 185, 192; see also *Inyo VI*, 160 Cal.App.3d at 1186 (project cannot be defined to set up “a CEQA turkey shoot”).)

In its trial briefing, DWR argued that exclusion of operational issues from analysis is permissible because post-relicensing facility operations will be a “normal, intrinsic part of the ongoing operation” of the Oroville Facilities. (AA 2327 (citing *Nacimiento Regional Water Management Advisory Committee v. Monterey County Resources Agency* (1993) 15 Cal.App.4th 200, 205).) But *Nacimiento* addresses an *exemption* from CEQA (the “ongoing project” exemption) that, on its terms, applies only if the project’s operative approval predated CEQA adoption in 1970 and *remained unchanged*.<sup>65</sup> Here the “ongoing project” exemption could only be relevant if the *original* license approval remained the operative one. But not even DWR actually believes that this exception applies here since DWR unambiguously undertook a new project approval whose entire term is covered by CEQA.<sup>66</sup>

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<sup>65</sup> See Cal. Code Regs., tit. 14, § 15261. In *Nacimiento*, an annual reservoir release schedule, for a dam still operating under California’s 1955 dam approval, did not qualify as a proposed modification that might have taken the project outside the exemption.

<sup>66</sup> DWR “has determined that preparation and certification of an environmental impact report (EIR) to satisfy the California Environmental Quality Act (CEQA) (Pub. Res. Code §21000, et seq.) is required before implementation of the Proposed Project (that is, the SA).” AR G000110.



**B. The EIR's Environmental Setting Erroneously Assumes Compliance with Water Quality Standards.**

The EIR's description of the environmental setting must include a description of “the physical environmental conditions in the vicinity of the project’ which constitute the ‘baseline physical conditions’ for measuring environmental impacts.” (*San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 658 (quoting Cal. Code Regs., tit. 14, § 15125(a).) In its seminal CEQA baseline ruling, the California Supreme Court concluded that “[a]n approach using hypothetical allowable conditions as the baseline results in illusory comparisons that ‘can only mislead the public as to the reality of the impacts and subvert full consideration of the actual environmental impacts,’ a result at direct odds with CEQA’s intent.” (*Communities for a Better Environment v. South Coast Air Quality Management Dist.*, (2010) 48 Cal.4th 310, 322 (quoting *Environmental Planning & Information Council v. County of El Dorado* (1982) 131 Cal.App.3d 350, 358); see also *Save Our Peninsula Committee v. Monterey County Board of Supervisors* (2001) 87 Cal.App.4th 99, 128 (discussing importance of baseline in meeting CEQA’s information disclosure requirements).) Reliance on a hypothetical construct of assumed regulatory compliance amounts to failing to proceed as required by law.<sup>67</sup> (*Communities for a Better Environment*, 48 Cal.4th at 322.)

The EIR fails to clearly disclose that Oroville Facilities operations do not protect beneficial uses identified in the regional basin plan (AR I030085-I030412), and falsely assumes that both the project and alternatives discussed in the EIR will adequately protect beneficial uses. This error undermined the

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<sup>67</sup> This rule, preventing assumptions of *compliance* to substitute for analysis, is distinct from the “future baseline” issue pending before the California Supreme Court in *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority*, Cal. No. S202828, which involves assumptions of *projected future conditions* as the baseline.

EIR's credibility to inform both lead and responsible agencies, including the state board's review of project compliance with the Clean Water Act and related water quality standards.<sup>68</sup>

Moreover, the EIR's flawed presentation interfered with CEQA's information disclosure function, failing to provide the transparency that CEQA requires.<sup>69</sup> As described above, DWR identifies the proposed project as made up of "protection, mitigation, and enhancement measures," which "are designed to address the environmental impacts of continued Oroville Facilities operations." (AR G000622.) Yet DWR repeatedly asserts that current operations meet and comply with existing environmental regulations. DWR fails to address why it is proposing a project that addresses impacts but refuses to recognize the impacts in the EIR's environmental setting.

In contrast to its EIR, DWR's data suggest that current operation does not protect beneficial uses. (AR G000292-93.)<sup>70</sup> The scope of existing

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<sup>68</sup> The state board is commanded by section 401 of the Clean Water Act (33 U.S.C. § 1341) to fully enforce the water quality standards and implementation plans that it promulgates under 33 U.S.C. § 1313. Federal regulations implementing section 401 require water quality certification to include "[a] statement that there is a reasonable assurance that the activity will be conducted in a manner which *will not violate applicable water quality standards*." 40 C.F.R. § 121.2(a)(3)(emphasis added).

<sup>69</sup> "An EIR must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project." *Laurel Heights*, 47 Cal.3d at 405. "The decisionmakers and general public should not be forced to sift through obscure minutiae or appendices in order to ferret out the fundamental baseline assumptions that are being used for purposes of the environmental analysis." *San Joaquin Raptor*, 149 Cal.App.4th at 659.

<sup>70</sup> "The data in an EIR must not only be sufficient in quantity, it must be presented in a manner calculated to adequately inform the public and decision makers, who may not be previously familiar with the details of the project." *Vineyard*, 40 Cal.4th at 422. The EIR asserts in a generalized statement that "[c]urrent operations of the Oroville facilities supports [*sic*] and reasonably protects [*sic*], or has no adverse effect on ... all beneficial uses specified in the Basin Plan for Project waters." AR G000292. In *San Joaquin Raptor*, the court found that the EIR failed to adequately describe the environmental setting

violations is often considerably greater than the EIR suggests. The EIR fails to specify which metals other than mercury exceeded water quality standards within the project area, avoids mentioning what percentage of samples exceeded a given standard, and does not disclose the potential risks associated with these violations.<sup>71</sup> DWR data, however, show *consistent violations of the lawful standard*, while the EIR never identifies the attendant public health implications.<sup>72</sup> For phosphorus, the EIR's characterization of the environmental setting is even more contradictory to the evidence in the record. The EIR claims: "Phosphorus ... concentrations did not exceed Basin Plan criteria or objectives." (AR G000316.) DWR's own separate study flatly rejects this assertion, noting that the phosphorous standard "has been *exceeded numerous times at all sampling sites*." (AR I053280 (emphasis added).) The EIR

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because the description was a similar "generalized statement" and "the existing conditions are not defined or quantified." *San Joaquin Raptor*, 149 Cal.App.4th at 659.

<sup>71</sup> "The SP-W1 report (DWR 2004b) indicates that *some* water samples analyzed exceeded the Basin Plan objectives.... The SP-W2 report (DWR 2004d) indicates that metal concentrations in tissue samples are *generally below or occasionally above* recommended levels included in the guidelines and criteria of various regulatory agencies. Phase 2 confirms that mercury consistently exceeds USEPA guidelines in most fish species and locations sampled for SP-W2." AR G000309-10 (emphasis added).

<sup>72</sup> "Several metals *consistently exceeded* various criteria during the study.... Total recoverable arsenic exceeded the Cal/EPA *cancer potency factor* for drinking water as well as the USEPA NAWQC *in all samples collected*." AR I053283 (emphasis added). "While total mercury and methylmercury levels in project area waters did not exceed any criteria, significant contamination in fish was identified. Mercury was reported in fish at *levels that exceed criteria to protect human health as well as wildlife*." AR I053711 (emphasis added). "The USFWS recommendation for protection of wildlife from methylmercury ingested from prey (USFWS 2003) was exceeded in fish from all sampling sites except Mile Long and Potter's ponds." AR I053706.

also ignores evidence in assigning responsibility to the project for having created unhealthy conditions.<sup>73</sup>

DWR further fails to disclose that the legal standard for compliance with beneficial uses *requires* basin plan objectives to be met. DWR explains that “the operation of the Oroville facilities *must reasonably comply* with the San Francisco Bay Sacramento-San Joaquin Delta Estuary Basin Plan.” (AR G000685 (emphasis added).) Based on a study reporting that “water quality in the Project area is generally good”<sup>74</sup> (AR I053244), the EIR concludes, “current facility operations are reasonably protective of Basin Plan objectives.” (AR H000192.) DWR assumes that “generally good” and “reasonably protective” meet compliance standards. In so doing, DWR fundamentally misstates the legal standard.<sup>75</sup>

The basin plan objectives are not just aspirational targets; compliance is mandatory. (*State Water Res. Control Bd. v. Office of Admin Law* (1993) 12 Cal.App.4th 697, 701-702) (holding that water quality objectives are a form of regulations).) The Ninth Circuit has roundly rejected the legal standard here assumed by DWR.<sup>76</sup> Even DWR’s own consultant advised the department

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<sup>73</sup> Regarding bacteria, the EIR acknowledges that “[o]ccasionally there are elevated bacteria concentrations at certain areas within the Oroville facilities.” AR G000318. Studies in the record are much more forthcoming about responsibility: “The Project has contributed to bacteria levels by creating water contact recreational sites used by humans as well as wildlife that could be contributing bacteria.” AR I053340.

<sup>74</sup> Project Effects on Water Quality Designated Beneficial Uses for Surface Waters (Study Plan W1).

<sup>75</sup> The “reasonable protection” standard, used for setting water quality objectives, cannot substitute for “reasonable assurance” that the project will “not violate applicable water quality standards.” 40 C.F.R. § 121.2(a)(3).

<sup>76</sup> When considering a district court’s decision that “a few” exceedances could be “excused,” the Ninth Circuit found that “[t]he Clean Water Act and the regulations promulgated under it make no provision for ‘rare’ violations. Our legal system would be quite different if one’s behavior were evaluated using

that the “SWRCB uses ‘impaired’ in water code as an interpretation that there must be no compromise on the potential of beneficial uses in order for them to be ‘protected’ – in other words they are asking for ‘perfection’ of the full potential of a beneficial use.” (AR L007199.)<sup>77</sup>

The state board’s EIR comments highlight the EIR’s deficiency, noting that DWR “does not provide an evaluation of beneficial uses under the existing conditions.” (AR H000184.) DWR responds that it concluded it did. (AR H000191.) Nonetheless, the EIR actually concedes at least six beneficial uses that are not currently being met. (AR G000292), but DWR again uses misleading and legally inapposite qualifying terms, such as “generally” “reasonably,” and “normal,” as euphemisms that mislead the reader to believe that current standards have been met:

- Feather River cold-water freshwater habitat: “When temperature exceedances do occur, they are *minor*.” AR G000299 (emphasis added).
- Feather River cold-water spawning: “Provision of the flows and water temperatures . . . *generally* supports the spawning of Chinook salmon in the fall and steelhead in the early winter.” AR G000295 (emphasis added).
- Feather River wildlife habitat: “The Oroville Facilities *reasonably protect* this beneficial use designation.” AR G000295 (emphasis added).
- Lake Oroville contact recreation: “During *normal* operations, reservoir drawdown *can affect* the beaches and their accessibility, particularly when the water surface level decreases to the point where steep and muddy shorelines are exposed.” AR G000292 (emphasis added).

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the aggregative method the district court applied.” *Sierra Club v. Union Oil Co.* (9th Cir. 1987) 813 F.2d 1480, 1491 (vacated and cause remanded for further consideration in light of *Gwaltney v. Chesapeake Bay Foundation* (1987) 484 U.S. 49; opinion reinstated by *Sierra Club v. Union Oil Co.* (9th Cir. 1988) 853 F.2d 667).

<sup>77</sup> The quote appears in the October 2007 memorandum entitled *DWR Oroville DEIR Policy and Legal Issue Summary*, prepared by one of DWR’s consultants and circulated among DWR staff. AR L007198. See fn. 5, *infra*.

- Lake Oroville warm-water spawning: “During *normal* operations, reservoir water level fluctuations (in particular decreasing water levels) in Lake Oroville *can affect* black bass nest survival.” AR G000293 (emphasis added).
- Lake Oroville cold-water spawning: The “fishery *is not* self-sustaining, possibly due to insufficient spawning and rearing habitat in the reservoir and accessible tributaries.” AR G000293 (emphasis added).

The EIR also fails to analyze how compromised surface water quality in the environmental setting impacts beneficial uses. The EIR identifies many specific failures, but dismisses them with general assertions of compliance. Areas in which failure to comply with standards affects beneficial uses include:

- Water temperature: irrigation, recreation, warm and cold freshwater habitat, migration, and spawning (AR G000299; G000301; G000302).
- Dissolved oxygen and pH: warm and cold freshwater habitat (AR G000305-306).
- Conductivity and minerals: warm and cold freshwater habitat (AR G000307).
- Sedimentation, turbidity, suspended solids: all beneficial uses (AR G000307-308).
- Metal contamination: contact recreation, warm and cold freshwater habitat (AR G000309-311).
- Pesticide use: municipal and domestic water supply and warm and cold freshwater habitat, and wildlife habitat (AR G000311-312).
- Nutrients: warm and cold freshwater habitat (AR G000315-317).
- Pathogens: water contact recreation and municipal and domestic water supply (AR G000317).
- Aquatic toxicity: warm and cold freshwater habitat and spawning, reproduction, or early development (AR G000312-318).
- Municipal and domestic water supply (AR G000317).

Although DWR discloses some of the failures listed above, it obscures from the reader their import: the Oroville Facilities *do not meet beneficial uses*. Failing to identify this fact does not constitute a good faith effort at disclosure. (Cal. Code Regs., tit. 14, § 15151.) An EIR is not an informative document if

its “conclusions call for blind faith in vague subjective characterizations.” (*City of Richmond*, 184 Cal.App.4th at 85.)

Addressing fisheries, DWR determines that “[t]he water temperature regime associated with the baseline operations of the Oroville facilities may expose pre-spawning adult salmonids to elevated water temperatures that can adversely affect production (e.g., increased pre-spawning mortality, decreased fertilization, increased egg retention).” (AR G000345.) DWR also reports the vulnerability of the cold water pool when “[p]roject peaking and pump-back operations, especially during the summer, potentially can increase water temperatures in the Diversion Pool.” (AR G000336.) DWR assures the reader that “the hatchery water temperature requirements limit the water temperature effects to ranges below salmonid water temperature requirements.” (AR G000336.) However, the EIR fails to address what happens when the hatchery does not achieve water temperature requirements.

The baseline errors noted here are crucial to the EIR’s integrity because assessment of the impacts of the proposed project and other alternatives are grounded in this baseline, which rests upon the hypothetical construct that Oroville Facilities operations meet compliance standards. That assumption undermines the EIR as a decision-making document for the lead and responsible agencies. (*Communities for a Better Environment*, 48 Cal.4th at 322.)

**C. In Contravention of CEQA, the No-Project Alternative Merely Presupposes Future Compliance with Water Quality Standards and Beneficial Use Requirements.**

Under CEQA, the no project alternative must represent “the existing conditions, supplemented by a reasonable forecast.” (*PCL v. DWR*, 83 Cal.App.4th at 911.) “The description must be straightforward and intelligible,

assisting the decision maker and the public in ascertaining the environmental consequences of doing nothing.” (*Id.*)

Rather than assessing whether the no project alternative would actually protect beneficial uses, DWR assumes that “[w]ith implementation of the No-Project Alternative, baseline conditions identified ... would continue into the future.” (AR G000630.)<sup>78</sup> The SWRCB’s comment letter observes that the DEIR “fails to adequately disclose the baseline condition of the anadromous fishery” and does not address likely impacts to the fishery in the no project alternative. (AR H000183.) DWR responds that, “[i]n general, the project is in compliance” and advises the public that, “the effects ... are presented” in a separate Study Plan Report F10. (AR H000189.) A sufficiently informative CEQA document analyzes impacts and does not relegate decision makers or the public to separate, unreviewed studies.

The DEIR discloses that SWP demands are expected to rise with the California population, but it does not address how this change could result in significant impacts when compared to existing conditions. The SWRCB reasoned that an “[i]ncrease in quantity or timing of water deliveries could have an impact on the cold water pool available in Lake Oroville that will be used to protect anadromous fish in the Feather River.” (AR H000185.) DWR failed to analyze this impact or explain why it cannot do so. Instead, DWR assumed that no foreseeable changes in operation from changes in climate or in SWP or Central Valley Project management would impact the Oroville

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<sup>78</sup> The EIR simply concludes, “[t]here would be no substantive difference between the Existing Conditions and the No-Project Alternative relative to Basin Plan beneficial uses.” AR G000648. In the EIR discussion of environmental impacts from each alternative, DWR often refers to the no project alternative as “Existing Conditions/No-Project Alternative.” AR G000647.



Facilities’ ability to meet beneficial uses. DWR also assumed that no aspect of the current operations could be slowly decreasing in effectiveness, possibly leading to an inability to meet beneficial uses. DWR appears to envision the future world in a vacuum where no environmental change requiring operational adaptation is foreseeable. In *PCL v. DWR*, the EIR’s no project alternative was defective because it assumed “no changes in SWP water allocation will occur.” (83 Cal.App.4th at 909.) Infected by the same flaw here, the EIR disables comparison among the no project alternative, the baseline, and the proposed project.

**D. The EIR’s Wrongful Assertion of Existing Compliance Allowed DWR to Evade Proof that Future Project Operations Will Protect Water Quality and Beneficial Uses.**

The proposed project and alternatives must meet the demanding list of beneficial use conditions that the project must serve, viewed “in light of what is reasonably feasible.” (Cal. Code Regs., tit. 14, § 15151.) “A legally adequate EIR... must contain sufficient detail to help ensure the integrity of the process of decision making by precluding stubborn problems or serious criticism from being swept under the rug.” (*Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 733.)

DWR presumes that “[a]ll programs described in the Proposed Project would be implemented to continue and enhance the reasonable protection of the designated beneficial uses in the [basin plan].” (AR G000665.) DWR also repeatedly asserts that the proposed project measures meet beneficial uses because they are “more protective and [enhance] water quality beneficial uses and aquatic resources.” (AR G000646.) This subjective comparison is meaningless. “More protective” does not equate to basin plan compliance.

DWR asserts that “the Proposed Project specifically protects and enhances beneficial uses of coldwater habitat, migration ... and spawning.” (AR G000647.)<sup>79</sup> The SWRCB comments that the “[i]nformation to support this statement is not provided in the DEIR” and “[t]he DEIR does not correctly interpret many of the beneficial uses and the impact of the Proposed Project on the beneficial uses.” (AR H000184.) Butte’s comments point out that the DEIR concludes temperatures will be lower in the proposed action than under the existing condition, but “does not state whether the improvements will be sufficient to eliminate exceedances of temperature criteria.” (AR H000264.) It also “does not explain how DWR will avoid future inconsistencies with the Basin Plan’s dissolved oxygen objective” (*Id.*) or “how DWR will mitigate or avoid the project’s contributions to elevated concentrations of mercury in fish tissues” (AR H000265). The EIR does not address EPA’s warning of a “direct link to the presence of mercury in the Lake Oroville food web that has occurred as a result of the construction of the Oroville Facility.” (AR H000265.)<sup>80</sup>

DWR repeatedly asserts that its conclusions are based on its studies, but the EIR does not present the analysis. Instead, the SA simply establishes monitoring programs for certain contaminants, while DWR heavily depends

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<sup>79</sup> The EIR bases this conclusion on a dizzying trail of assumptions. DWR concludes without explanation that the existing conditions protect beneficial uses. Second, “the PDEA Proposed Action would result in increased beneficial effects over Existing Conditions.” AR G0000647. Third, the CEQA proposed project “provides additional protection” compared to the PDEA. *Id.* Finally, based on that chain, “no further quantitative analyses of modeling comparisons is necessary;” therefore, the proposed project “specifically protects and enhances beneficial uses.” *Id.*

<sup>80</sup> Butte quotes from Environmental Protection Agency (“EPA”), Letter to Magalie R. Salas, December 19, 2006, at 6. DWR did not include EPA’s letter in the “Butte Comment Letter Literature Cited.” AR I062702-72.

on SA articles 108, 112, 113, and 114 as measures that were “developed to protect and enhance coldwater beneficial uses,” without demonstrating that they actually do so. (AR H000334, G000647.) DWR responds merely by concluding that the proposed project “would continue to meet all Basin Plan beneficial uses.” (AR H000192.) This conclusory approach cannot meet CEQA’s informational requirements. (See *City of Richmond*, 184 Cal.App.4th at 85; *Berkeley Keep Jets*, 91 Cal.App.4th at 1371 (criticizing “conclusory” responses).)

**E. The EIR Neglected to Analyze Mitigation Measures and Alternatives to Alleviate Risks to Water Quality and Beneficial Uses.**

“An EIR shall identify and focus on the significant environmental effects of the proposed project.” (Cal. Code Regs., tit. 14, § 15126.2.) The Oroville facilities are operated, in part, for fish and wildlife enhancement and “fish species of primary management concern,” including spring-run Chinook salmon, fall-run Chinook salmon, and Central Valley steelhead. (AR G000108, G000341.) DWR identifies “major issues” for anadromous fisheries, including “project effects on populations, habitat quantity and quality, fish passage, and recruitment to ocean populations.” (AR G000327.)

Despite these operational requirements and concerns, DWR avoids any serious assessment of alternatives or mitigation, based upon the disingenuous conclusion that the project’s impacts are entirely beneficial or have a less-than-significant impact because the proposed project improves upon the existing setting, which DWR contends already protected beneficial uses. (AR G000693, G000630, G000646.) Several inadequate aspects of the EIR are outlined below.

First, DWR failed to acknowledge that the California Water Plan Update 2005 predicts formidable challenges to meeting beneficial use

objectives in the future. (Water Plan Update 2005, p. 4.616.) DWR asserts that “any future changes in SWP operations materially affecting water deliveries, is outside the current authorizations, would be subject to a separate environmental review and likely a separate EIR.” (AR H000296.)

Second, DWR’s deficient assessment of beneficial uses could result in the project’s lacking carryover storage requirements for Lake Oroville, leaving open the prospect of dropping the reservoir, for downstream needs, below levels needed to maintain the coldwater pool.<sup>81</sup> DWR fails to acknowledge that “increased releases from storage to protect the delta smelt could have deleterious effects on salmon, in particular threatening the cold water pool in the major storage reservoirs, including Oroville.” (AR H000417.) The project’s water temperature conditions might indirectly force DWR to maintain the coldwater pool, but the EIR offers no clear guidelines or rules on what is required of DWR and provides no enforcement measures detailing compliance or consequences for failing to comply.<sup>82</sup>

Lastly, DWR concedes that it “cannot predict at this time what the interim remedies will be or what the new BO [biological opinion] will contain to protect these fish,” yet DWR asserts that neither the interim remedy “nor

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<sup>81</sup> DWR’s master response addressing OCAP speculates, “if the new OCAP were similar to the current remedy, it is plausible that the increased carry-over storage in Lake Oroville and the later releases would make it easier to meet the new Feather River water temperature targets specified in the SA.” AR H000144. DWR does not propose the alternative; if the new OCAP were “similar,” that it would also “be plausible” that this impact would make meeting the standards more difficult. And DWR does not assess the possibility that the OCAP could be different.

<sup>82</sup> DWR’s response to a comment on coldwater fisheries protection (AR H000415) states that it “already demonstrated compliance *with the terms of the SA.*” AR H000419 (emphasis added). This response simply confuses the issue; the commenter expressed concern over DWR’s compliance with CEQA, not its compliance with the Settlement Agreement.

the future OCAP BO will affect the majority of release requirements from Oroville.” (AR H000143-144.) DWR goes on to predict, “the only changes would be in amounts and timing of release from Oroville for Delta export purposes,” and this might increase “carry-over storage in Lake Oroville,” but “[t]hese differences would be minor and would not have an effect on the ability to meet future water temperature or flow objectives in the Feather River below Oroville.” (*Id.*) DWR does not explain how it “cannot predict” interim remedies or the future Operations Criteria and Plan biological opinion (“OCAP BO”) but can simultaneously assure decision-makers and the public that any differences will be minor. These inscrutable claims illustrate why CEQA does not allow an EIR’s conclusions to “call for blind faith in subjective characterizations.” (*City of Richmond*, 184 Cal.App.4th at 85.)

**V. DWR’S EIR REFUSED TO ANALYZE CONSTRAINTS FROM OROVILLE’S PIVOTAL ROLE IN THE STATE WATER PROJECT.**

**A. As the State Water Project’s Keystone Storage Facility, Oroville’s Future Operation Heavily Depends on its Relationship to that Project.**

The Oroville dam and reservoir were “developed as a major part” of the State Water Project and, among other things, serve as the SWP’s keystone water storage facility, accounting for a “large portion of the SWP’s water capture and storage each year.” (AR G000159; see also G000528 (Oroville Facilities serve as “the major storage facility of the SWP”); Wat. Code, § 12934(d).) These facilities also provide a “large portion” of the electricity required to pump water through the SWP, although the facilities’ power operations are “heavily constrained by SWP-related agreements and other commitments.” (AR G000158-159, 186.)<sup>83</sup> In the SA, DWR expressly sought

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<sup>83</sup> DWR recognizes that operation of its project would “continue to commit the lands and waters previously developed for energy production” AR

to resolve in advance “all issues that may arise” in connection with its proposed new project license, “including but not limited to ESA Section 7 Biological Opinions, CWA Section 401 Certification, NEPA and CEQA.” (AR D000432.)

Releases from Lake Oroville must serve a variety of purposes, including: (1) compliance with Bay-Delta water quality standards; (2) satisfaction of obligations under environmental laws such as the Clean Water Act and federal and state Endangered Species Acts; and (3) release of water, as available, to meet the needs of State Water Project contractors. (See AR G000162.) Operation of the Oroville project is therefore closely tied to downstream needs. If those downstream constraints change, or if DWR discovers that operational changes are necessary to meet existing constraints or comply with legal requirements, changes to the Lake Oroville release schedule will inevitably follow and must be addressed.<sup>84</sup>

**B. The EIR’s Operational Assumptions Are Founded in Judicially Rejected Biological Opinions.**

DWR fails to analyze how changing conditions in the remainder of the State Water Project could affect the timing or volume of water releases from

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E000388. Waters discharged from the Oroville Facilities are a “critical part of the SWP, providing much of the system’s water collection and storage, flood management, and power production capacity.” AR G000259.

<sup>84</sup> An August 2, 2001 staff memorandum set forth DWR’s strategy—to be able to claim *economic benefits* out of the service area before FERC, but not to have accountability for SWP-related consequences of project operation. AR L143809. Staff anticipated a “likely stakeholder question: “If the Oroville facilities were built as part of the SWP, why would you refuse to address questions related to other SWP facilities and their impacts.” *Id.* The proposed response was that “any questions related to facilities outside the geographic scope of the license shall be addressed by ???” *Id.* While staff did not answer the question, it is DWR that manages the SWP, serves as CEQA lead agency, and must ensure that its EIR properly informs the SWRCB and Department of Fish and Wildlife for their decisions.

its Oroville Facilities over the proposed project term, adding to the risk that the project will not serve its multiple uses. DWR's omission disregards both its reliance on the Oroville Facilities to meet Delta water requirements and the role of the 2004 SWP OCAP BOs as the basis for "all future operations assumptions" in DWR's EIR. (AR L007198, H000144, H000420 (modeling and operational assumptions, including those about basin hydrology and reservoir operation).)

DWR took no steps in the FEIR to adjust or refine its Oroville operational analysis, even though it already knew by then that the federal court decisions described in section II.B.5 had invalidated the EIR's indispensable source of modeling for Oroville operations.<sup>85</sup> In its master response (AR H000143-44), DWR admitted knowing that the OCAP biological opinions had been judicially rejected, yet DWR refused to revisit its models, projecting blind faith that the "structure of the settlement" will ensure satisfaction of the project's multiple uses without changing operations. (AR G000110.)

DWR vaguely asserts that the "majority" of release requirements from Oroville would remain unaffected, recycling its assumption of continued regulatory compliance without studying the changes. (AR H0001144.) Notably, the SWRCB—the agency with relevant expertise in this area—expressly disagreed with the Draft EIR's premise that project-specific changes in the "quantity or timing" of water deliveries would not have an impact on the Lake Oroville coldwater pool that protects fisheries. (AR H000185.) But DWR avoided this issue, assuming that project operations could be ignored. (AR H000195.)

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<sup>85</sup> *Kemphorne*, 506 F.Supp.2d 322; *Gutierrez*, 606 F.Supp.2d at 1183-1184.

Finally, DWR's master response attempted to marginalize Oroville Facilities releases as just "one of many" inputs to Delta hydrology (AR H000143) and asserted that "DWR cannot predict at this time ...what the new BO will contain to protect these fish." (*Id.*)

DWR's argument gives short shrift to the EIR's recognition of State Water Project operations' high level of dependence on Oroville Facilities constraints (AR G000186) and efforts in the Settlement Agreement to address "all issues that may arise" in connection with the proposed new project license (AR D000432). The EIR ultimately relies, again, on the canard that measures in the Settlement Agreement "were all developed and formulated to be effective under an extremely broad hydrologic range." (AR H000144.)

**C. DWR's Project Assessment Depends on Undefined "Normal" Operation of the Project.**

The 2006 Settlement Agreement, addressing the role of flows and temperature to support anadromous fish in the high flow channel ("HFC"), illustrates the inescapable connection between Oroville and downstream SWP operations. The provision states:

If the April 1 runoff forecast in a given water year indicates that, *under normal operation of Project 2100*, Oroville Reservoir will be drawn to elevation 733 feet (approximately 1,500,000 acre-feet), minimum flows in the HFC may be diminished on a monthly average basis, in the same proportion as the respective monthly deficiencies imposed upon deliveries for agricultural use from the Project; however, in no case shall the minimum flow releases be reduced by more than 25 percent.

(2006 Settlement Agreement, Condition A108.2, AR G001167.) Notably, neither the EIR nor the draft certification defines the "normal operation" of the Oroville project. In light of such recent developments as the Delta species decline, enforcement of endangered species law, and the onset of climate



change, considerable controversy could ensue over whether the “new” normal or some older version should prevail.

**D. DWR’s Environmental Review Disconnects Assessment of the Oroville Project from State Water Project Operations.**

The FEIR implausibly portrays the Oroville project and the SWP as analytically distinct. The DEIR describes the Oroville project as “consistent” with existing commitments and assumes that “no changes to the contractual obligations or to the general pattern of these releases are anticipated.” (AR G000110.)<sup>86</sup>

The SWRCB faulted the DEIR for failing to “include an adequate discussion of the impact of [SWP] operations on the Proposed Project.” (AR H000185.) The SWRCB noted that changes in the quantity or timing of water deliveries could affect the coldwater pool in Lake Oroville, used to protect anadromous fish in the Feather River, and could result in cumulative impacts in combination with the proposed project. (*Id.*) But the FEIR responds with the evasion that “[a]nalysis of future changes to State Water Project (SWP) statewide operations is outside the scope of the EIR.” (AR H000195.) To the contrary, SWP-related downstream pressures will affect upstream demands on project operation in the Feather River and Lake Oroville. By curtailing project analysis addressing Oroville’s relationship to the SWP, DWR “failed to inform decision-makers and the public of the project’s significant environmental impacts, as CEQA mandates.” (*Communities for a Better Environment*, 48 Cal.4th at 329; see also Pub. Res. Code, § 21100.)

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<sup>86</sup> The EIR also assumes that the SA was structured “so as not to affect the SWP’s ability to meet future water supply needs.” AR G000110, G000649.

**VI. EVEN IF IT PREVAILS ON THE MERITS, DWR MAY NOT RETAIN UNCONSCIONABLE ADMINISTRATIVE RECORD COSTS.**

**A. The \$675,000 Obtained by DWR Far Exceed Record Costs in any Known CEQA Case.**

Where the items referenced in a cost bill “are properly objected to, they are put in issue, and the burden of proof is upon the party claiming them as costs.” (*Wagner Farms v. Modesto Irrigation District* (2006) 145 Cal.App.4th 765, 774 (quoting *Oak Grove School Dist. v. City Title Ins. Co.* (1963) 217 Cal.App.2d 678, 698).) A public agency is bound by the “statutory mandate to minimize costs, which the trial court enforces by taxing unreasonable costs.” (*St. Vincent’s School for Boys v. City of San Rafael* (2008) 161 Cal.App.4th 989, 1016); see also *Wagner Farms*, 145 Cal.App.4th at 775.) As detailed below, the record costs challenged here are the largest and most unjustified in CEQA history.

In order to proceed to trial, Butte and Plumas were required to pay DWR’s claimed \$675,087.80 for preparation of an administrative record spanning 327,261 pages. DWR certified the record in September 2009 (AA 139-151) and initially requested only \$220 for the costs of preparing two 11-disc sets. (AA 644, 1188-89, 1205.) That price (\$10 per disc) was set “in accordance” with Department of Justice Administrative Bulletin 09-25. (AA 1220.) In February 2010, however, DWR for the first time demanded that petitioners pay for hundreds of hours of staff and outside consultant time to review each of the documents. (AA 335-349.) After two hearings and months of deliberation, a pro tem judge ultimately found DWR entitled to recovery of the whole amount if trial was to proceed. (AA 1132-1139.) Prior to trial, Butte and Plumas collectively paid the costs under protest, reserving their right to challenge them. (AA 2655-2665.)

The length and cost of this CEQA record far exceed those granted in any published authority or any others in the experience of seasoned CEQA practitioners whose declarations were presented to the superior court.<sup>87</sup> The oppressive demands of DWR and its surrogate SWC, Inc., acceded to by the superior court, represent an unprecedented abuse of power to award costs for record preparation. (See Pub. Res. Code, §§ 21167.6, subds. (b)(1), (f).)

**B. At No Cost to the Public, DWR Already Prepared and Maintained its Parallel FERC Record.**

Thousands of documents included in DWR's CEQA record, including those relating to CEQA compliance, already appear in FERC's official docket for the pending federal Oroville relicensing proceedings (Docket P-2100). [http://elibrary.ferc.gov/idmws/docket\\_search.asp](http://elibrary.ferc.gov/idmws/docket_search.asp). (AA 638-639.) As DWR conceded, the CEQA record includes "*literally thousands of documents that have been publicly accessible on the Oroville Facilities relicensing website for many years*." These documents have been and continue to be available to the public and to the water board for its administrative process." (AA 487, 643-644 (emphasis added).) Butte and Plumas identified 74,348 record pages in this overlap, which would amount to \$153,156.88 at DWR's claimed cost of \$2.06 per page.<sup>88</sup>

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<sup>87</sup> Neither appellants' nor respondents' declarants could identify a CEQA record in a prior action costing more than \$239,825.22. AA 490-491, 637, 711, 731-732. That bill, for the CALFED program's administrative record, was shared by multiple parties and was not adjudicated in a published ruling. CEQA records, even in complex proceedings, typically cost far less. See, e.g., *Wagner Farms*, 145 Cal.App.4th at pp. 775-776; AA 711, 731.

<sup>88</sup> DWR arrived at \$2.06 per page only by misapplying paper copy costs to the fully electronic record here. Appellants calculated that it would have cost over \$24,000 to produce *each* hard copy of a record this size, compared to \$192.50 to produce an electronic copy. AA 735-737. DWR's own government-set figure was even less (\$110 per 11-disc set). AA 1220.

Through the federal FERC docket and DWR's own records, appellants and the public were already entitled to every FERC relicensing record bearing upon the appellants' CEQA claims. (AA 726.) Under FERC's alternative licensing process, DWR was required to "maintain a *public file of all relevant documents*, including scientific studies, correspondence, and minutes or summaries of meetings, compiled during the pre-filing consultation process." (18 C.F.R. § 4.34(i)(6)(iii) (emphasis added).) ALP protocols also required "public access" to DWR's files (AR B000381) and obligated DWR to maintain hard copies and charge only nominal (10 cents per page) copying costs (AR B000385). DWR was also required "to publish this material on its Oroville Facilities relicensing website." (AR B000381.) For these reasons, appellants believed that DWR had similarly and contemporaneously maintained its record as CEQA required and therefore anticipated that DWR's claim for disc copying charges would represent the additional cost of record preparation for the superior court. Appellants also anticipated that DWR would act responsibly and with integrity as a state agency in litigation against its political subdivisions. (See *Hayward Area Planning Association v. City of Hayward* (2005) 128 Cal.App.4th 176, 184.) On these reasonable expectations, appellants requested DWR to prepare the record in this proceeding. (AA 53-55.)

**C. DWR Charged Butte and Plumas Exorbitant Sums to Prepare the Record that DWR Certified It Had Maintained at the Time of Project Approval.**

CEQA requires the lead agency to maintain its record of proceedings, and at the time of project approval to inform the public where that record is maintained. (Cal. Code Regs., tit. 14, § 15094(b)(9) (lead agency to specify "[t]he address where a copy of the final EIR and the record of project approval may be examined").) In this case, DWR's July 22, 2008 notice of

determination asserted, as required by CEQA, that the “record of project of approval is available” in DWR’s Sacramento headquarters. (AR A000102.)

But DWR apparently did not maintain its record as CEQA requires, and instead imposed the cost of that duty, and far more, on Butte and Plumas. After the fact and solely for this litigation, DWR claimed and recovered almost half a million dollars in staff time that it claimed necessary to assemble and scrutinize each record document. DWR claimed \$487,572.17 in “internal costs” for DWR staff work. (AA 498, 502-503, 506-507.) Six employees within one unit of DWR (the State Water Project Analysis Office) collectively claimed to have spent 3,510.5 hours, accounting for \$416,640.53 of the cost claim (AA 506, 565-566), to assemble the record that the CEQA Guidelines required them to have maintained during the administrative proceedings.

Indeed, abandoning CEQA’s additional duty to keep costs reasonable, DWR undertook a monumental reshuffling of internal information that, among other things, involved over 200 interviews with employees *simply to determine if they had records*. (AA 564.) As reflected in DWR’s declarations, staffers charged both for hundreds of hours to perform such tasks as reviewing their own emails and files and for a “second level” review. (AA 506-507.)

DWR also brazenly claimed and secured recovery for health care plans, pensions, vacations, and sick time. Other charges referred to moving services, facilities operation, private car mileage, and rent. (AA 645, 670-675.)

**D. DWR Succeeded in Charging Butte and Plumas for Litigation Preparation as Well as Record Preparation.**

Any justifiable claim for record preparation—“assembling, organizing, and indexing”—must be separated out from “the time [respondents] spent with the [record] that furthered their own interests.” (*Wagner Farms*, 145

Cal.App.4th at 768.) To support cost recovery, DWR needed to present “enough detailed information about the time expended by its own staff member[s] and the employees of the consultant to carry its burden of proving the time spent and the rates charged were reasonable and necessary.” (*Id.* at 778.) That evidence “would not be sufficient” if it did not show (1) “how the time of [the] employee was spent; (2) “how the hourly rates were calculated”; (3) “how the time of the consultant’s employees were spent”; and (4) “the hourly rates the consultant charged for each employee.” (*Id.* at 788, n. 13.) Time spent on merits review or creation of post-approval documents is not recoverable. (*Id.* at 779.)

DWR’s documentation applied its SWP accounting procedures that rendered huge amounts of staff time effectively unaccountable, providing no day-to-day accounting for tasks performed by dozens of DWR employees. Thousands of hours were classified simply under a broad and nebulous SWP cost category known as “Litigation Expenses.” (AA 645, 670-675.) Failing to distinguish between “costs” of ministerial record assembly and “costs” of litigation defense vitiates a claim for recovery of any of these dollars.<sup>89</sup>

Similar problems should have precluded recovery for time spent by DWR’s private consultant. In addition to staff time charges, DWR sought almost \$100,000 for work performed by consultant MWH/EDAW, to whom DWR has paid more than \$36 million as a FERC/CEQA consultant. (AA 645-646, 679-691.) The consultants’ task orders similarly fail to segregate work

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<sup>89</sup> As representative examples, DWR’s spreadsheets summarize the 1,059 hours spent by Susan Larsen as follows: “Review own files and emails; review hard copy staff files; coordinated compilation and posting of record.” AA 506. Lori Brown’s 591 hours, in addition to reviewing files and emails, included an unspecified amount of time assisting with “modeling,” unrelated to record preparation but quite related to merits defense. AA 506, 566.

on the merits from work on CEQA review.<sup>90</sup> (AA 647-648, 679-691.) The “Architectural & Engineering Contract, Task Order Amendment,” dated February 18, 2009 (AA 683-685) also undermines DWR’s cost bill, assigning *the same task and billing number for both record preparation and litigation support*, and often muddling the two tasks, and even suggesting that DWR seeks reimbursement for CEQA merits work. (AA 679-703.) Moreover, MWH/EDAW timesheets indicate substantive work regarding support for the project’s merits defense rather than preparing the record. (AA 693-703.)

**E. By Securing a Superior Court Order to Pay More Than Half a Million Dollars Before Trial, DWR and SWC, Inc. Perpetuated their Attempted Oppression of the Counties of Origin.**

Butte and Plumas, the northernmost state water contractors—the only two who are not members of real party SWC, Inc.—and the Feather River’s counties of origin, have (as FERC’s assessment of the inequities imposed upon them by the Oroville Project relates (AR E001229)) stood out as those classically “not invited to the table” of the State Water Project. (See *PCL v. DWR*, 83 Cal.App.4th at 905 (Plumas a co-petitioner with PCL).) The disrespect that the SWC, Inc. contractors have consistently displayed toward the two dissenters in the project—coupled with the contract terms that make the contractors rather than DWR actually incur the expenses of litigation here (AA 652-654)—explain SWC, Inc.’s animus in insisting on payment of an exorbitant cost claim as a condition of petitioners’ access to judicial review. That two otherwise-respected State agencies—DWR and the Attorney General—would enable and support this oppression of fellow public agencies represents one of the darkest passages in California’s storied water history.

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<sup>90</sup> The task orders specifically relating to CEQA provided at least for an additional \$100,000. AA 646.

In this case, despite the extraordinary complexity of the facts and legal issues, the two counties were brought to the brink of being deprived of their opportunity for judicial review of one of the most momentous project decisions in their histories. Simply to cover the record costs as a prerequisite to trial, the two counties came close to, or even exceeded, their entire annual budgets for outside fees and costs. (AA 720-722, 743-746.) This case means enough to Butte and Plumas that they assumed that risk. Not all CEQA petitioners, however, will be capable of sustaining the oppression displayed here. Whether appellants prevail on the merits—and especially if they do not—such cost abuse must be forcefully condemned and set aside.

### CONCLUSION

The Court should reverse the trial court's judgment, and direct the superior court to issue its writ of mandate setting aside DWR's certification of the FEIR and DWR's approval of the Oroville Facilities project. DWR's project application should be withdrawn until the Department fully analyzes project impacts, alternatives and mitigation, and renders project findings in the manner required by CEQA. The award of record and other costs to DWR and real parties in interest should be set aside and reimbursed to appellants.

Dated: March 27, 2013

Respectfully submitted,

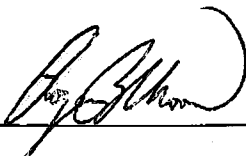
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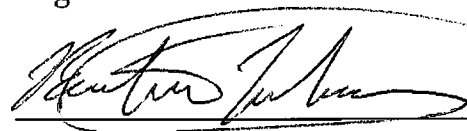
Antonio Rossmann





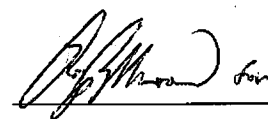
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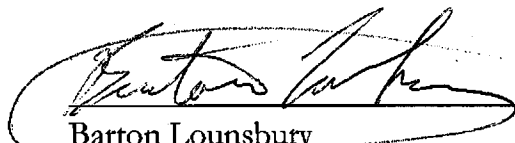
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## **CERTIFICATE OF BRIEF FORMAT COMPLIANCE**

Counsel of Record hereby certifies that pursuant to rule 8.204(c)(1) of the California Rules of Court, the foregoing appellants' opening brief of the County of Butte, County of Plumas, and Plumas County Flood Control and Water Conservation District is produced using 13-point type and contains approximately 26,360 words, including footnotes but excluding front matter and certificates, as calculated by Microsoft Word.

Dated: March 27, 2013



Barton Lounsbury  
Attorney for the County of Butte

C071785

COURT OF APPEAL OF THE STATE OF CALIFORNIA  
FOR THE THIRD APPELLATE DISTRICT

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COUNTY OF BUTTE, COUNTY OF PLUMAS, and PLUMAS COUNTY  
FLOOD CONTROL AND WATER CONSERVATION DISTRICT,  
Petitioners and Appellants

v.

DEPARTMENT OF WATER RESOURCES,  
Respondent  
STATE WATER CONTRACTORS, INC., et al.  
Real Parties in Interest and Respondent

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Appeal from Judgment Entered on June 8, 2012  
Yolo County Superior Court, Case No. CV09-1258  
[Butte County Consolidated Cases, No. 144283, 144282]  
Trial Judge: The Honorable Daniel P. Maguire (Dept. 15)

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## **PROOF OF SERVICE**

I, **Tiffany Poovaiah**, hereby declare under penalty of perjury as follows:

I am over the age of 18 years and am not a party to the within action. My business address is 380 Hayes Street, Suite One, San Francisco, California 94102.

On **March 27, 2013**, I served the following document:

### **APPELLANTS' OPENING BRIEF**

and the following CD:

### **APPELLANTS' APPENDIX VOLUMES 1-15**

by first class mail, postage prepaid at San Francisco, California by depositing in sealed envelope a copy to each of the following persons on the attached service list. Those marked with an asterisk will also receive a hard copy of the following document:

### **APPELLANTS' APPENDIX VOLUMES 1-15**

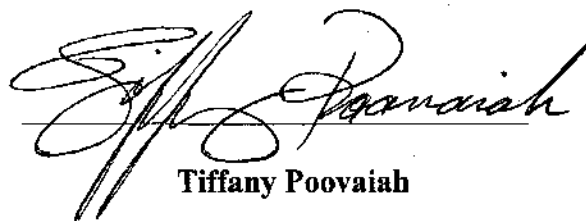
by first class mail, postage prepaid at San Francisco, California.

I also served the California Supreme Court with an electronic copy of the following document:

### **APPELLANTS' OPENING BRIEF**

by personal delivery.

Executed on **March 27, 2013**, at San Francisco, California.



**Tiffany Poovaiah**

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<p>Hon. Samuel T. McAdam, Dept. 14  Yolo County Court Clerk, Room 103  Superior Court of the State of California,  County of Yolo  725 Court St., Room 103  Woodland, CA 95695</p>	<p>Hon. Daniel P. Maguire, Dept. 15  Yolo County Court Clerk, Room 103  Superior Court of the State of California,  County of Yolo  725 Court St., Room 103  Woodland, CA 95695</p>