Nevada Irrigation District

Water for Life

January 19, 2024

State Water Resources Control Board
Division of Water Rights
Attn: Bay-Delta & Hearings Branch
P.O. Box 100
Sacramento, CA 95812-2000
SacDeltaComments@waterboards.ca.gov

Re: CEQA Comment Letter – Sacramento/Delta Draft Staff Report
Nevada Irrigation District's Comments on Proposed Plan Amendments (55% Unimpaired Flow *with* Climate Change Hydrology)

Dear Chair Esquivel and Board Members:

The proposed plan amendments (55% unimpaired flow (UIF) within a 45%-65% adaptive range) to the Bay-Delta Water Quality Control Plan would cause significant and irreversible impacts to Nevada Irrigation District (NID), its watersheds, communities, family farms, recreational facilities, and local terrestrial and aquatic resources. An unimpaired flow standard is simply unworkable at NID.

NID urges the State Water Resources Control Board to accept and incorporate into its analysis NID's proposed Healthy Rivers and Landscapes Agreement. A summary of NID's proposal is transmitted under separate cover.

The purpose of this letter is to summarize the devastating effects of the proposed 55% UIF standard on NID.

I. *Background on NID*

NID was formed in 1921 and includes a service area boundary of more than 287,000 acres in Nevada, Placer and Yuba Counties. Its boundaries span from the High Sierra in the Sierra Nevada Mountain Range, down to the Sacramento Valley foothills in Lincoln and from the Middle Yuba River in the North to near Folsom Reservoir in the South. (See NID Map, attached as Exhibit. A.) Given its location in the headwater region, NID relies extensively on snowpack for its operations. In an average year NID counts on over 120,000-acre feet of spring and early summer runoff from snowpack. This snowpack will diminish and become less reliable annually with the effects of climate change. Given the reality that NID is in the epicenter of

climate change, NID has actively been planning and undertaking actions to mitigate the effects of climate change for over a decade.

NID provides drinking water to 19,800 connections (over 56,000 people) and, by contract, provides water to Nevada City, Grass Valley, and small portion of the City of Lincoln for use within their respective municipal treated water service areas. NID owns and operates six water treatment facilities to provide safe, affordable, and reliable drinking water. Average annual treated water deliveries are 9,091 acre-feet.

Additionally, NID operates a network of more than 475 miles of canals and 411 miles of pipelines to transport water to its diverse agricultural customer base. These distribution facilities provide irrigation water to around 5,200 customers and support a multi-million dollar agricultural industry in Nevada, Placer and Yuba Counties. Agricultural crops served by NID water include irrigated pasture, vineyards, orchards, other crops, and family gardens. In total, NID provides irrigation water to approximately 33,122 acres and delivers an average of 120,000 acre feet per year.

NID is a leader among Northern California water agencies in the production of clean, renewable hydroelectric energy. Revenues from hydroelectricity are very important to the funding of maintenance and operation of NID's diverse and sprawling water distribution system and in keeping NID's water rates affordable. NID's seven power plants provide enough energy to supply the equivalent of more than 60,000 homes. On average, NID generates 293.9 gigawatt hours of energy per year.

NID provides outstanding outdoor recreational opportunities at NID reservoirs and facilities in the Sierra Nevada, including mid-elevation recreation at Rollins Reservoir, Scotts Flat Reservoir, Combie Reservoir and high-elevation Upper Division Reservoirs such as Jackson Meadows Reservoir and Faucherie Lake. NID owns and operates twelve separate recreation sites located throughout its service and watershed area. Popular outdoor recreational activities supported by NID include camping, fishing, swimming, sunning, boating, waterskiing, sailing, hiking, gardening, and kayaking. In total, NID's recreational facilities serve approximately 300,000 visitors per year.

Many of NID's facilities and water rights originate in the early years of California's statehood and were assumed or acquired by NID upon formation in 1921. A number of NID's water rights and facilities have been in continuous use for over 150 years. NID holds and maintains some of the most senior water rights in California. Its water rights are senior to downstream water right holders and rim dam operators, including Yuba County Water Agency

(operating New Bullards Bar Reservoir), South Sutter Water District (operating Camp Far West Reservoir), and the United States Bureau of Reclamation (operating Folsom Reservoir).

NID relies exclusively on the capture of surface water to sustain its drinking water, irrigation water, hydropower and recreation enterprises. Given its headwater location, there are no alternative water supplies available to NID. NID overlies fractured rock aquifers and, consequently, does not have access to alternative groundwater supplies. NID's vast and complex water storage and distribution system was designed and constructed with the reality that there are no reliable alternative supplies, except capture and storage of surface water. NID imports water from the Middle Yuba and South Yuba (and tributaries) systems for non-consumptive and consumptive uses in Nevada, Yuba and Placer Counties. NID constructed a dispersed, but interconnected, system of nine storage facilities to convey water, generate power and serve its customers in lower elevations. Given there are no alternative water supplies, carryover storage is an extremely important tool for NID to use as a hedge against succeeding dry year(s).

The UIF approach upends NID's carefully designed and operated system causing devastating impacts to all NID's enterprises and consequently its customers.

II. *NID's Efforts to Address the Impacts of Climate Change*

Regarding climate change, the Draft Staff Report (DSR) states "There is great uncertainty of how global change may affect the local climate in the study area. Changes in sea level, wind, temperature, and precipitation may have large effects on the hydrology and available water supply. SacWAM modeling of climate change is not included at this time because of the uncertainty and lack of detailed climate change information required to produce inputs to the model." (DSR, p. 6-8.) The lack of climate change hydrology incorporated into the proposed UIF scheme is improper for informed decisionmaking and public disclosure as to the actual environmental effects of the proposed plan amendments under CEQA.

An EIR (or in this case the functional equivalent of an EIR) must discuss any inconsistencies between the proposed project and other plans. (14 Cal. Code Regs. § 15125(d).) One such plan is the Delta Plan prepared by the Delta Stewardship Council. The Delta Plan was amended in 2022 to, among other things, incorporate additional research relating to climate change. The amended Delta Plan acknowledges that "Climate change will have major implications for the future of the Delta ecosystem. Climate change is expected to have the following four effects on the Delta ecosystem: increased temperatures, altered precipitation and runoff patterns, increased frequency of extreme weather events, and sea level rise." (Delta Plan,

Amended – June 2022, p. 4-20.) The DSR's failure to incorporate the effects of climate change into its assessment of UIF violates CEQA.

As noted, NID is in the crosshairs of climate change, and is a statewide leader in undertaking planning and actions to address loss of snowpack. Unlike the State Water Board, NID does not have the luxury of simply ignoring climate change and possibly addressing it at a future date.

As one example of NID's proactive efforts, in 2014 NID petitioned for assignment of a state filed water right (Application 5634) for the proposed Centennial Reservoir Project, a new 110,000 acre-foot reservoir that would be located between two existing reservoirs on the Bear River. The application described the project as "an effort to meet anticipated future demand and the effects of climate change". (Application, Attachment No. 1, § 3.) "Predicted changes in climate and future uncertainty in the regulatory requirements demonstrate that NID is more reliant on releases from storage to meet demand and that those releases will occur earlier in the year and more frequently. … Predicted warming temperatures resulting in higher snow levels and reduced snowpack, the result is that there will be less available snowmelt for NID to capture under its existing pre and post 1914 water rights." (*Ibid*.)

NID's application received protests from various parties and the matter was assigned to the SWRCB's AHO office. Environmental review under the California Environmental Quality Act of the proposed Centennial Project and alternatives started. NID also began meeting and conferring with protesting parties to attempt to resolve protests. Several protesting parties requested, and NID agreed, to conduct a significant planning process, including development of a climate change model, to assess the need for the Centennial Reservoir Project, supplemental water supplies in general, and to develop other alternatives, including demand management measures, for additional consideration. This planning process is known as NID's Plan For Water.

Plan For Water is a public collaboration process with a goal to determine the best ways to meet the community's demand for water over the coming decades. Working together as a community, Plan For Water was founded upon six objectives: (i) Assess our water situation together; (ii) Develop a deeper understanding of subsequent impacts to community interests and the community's future; (iii) Provide a forum for community members and stakeholder groups to offer their input; (iv) Focus on overarching policies and not on specific projects; (v) Understand what is really important to the community and why; and (vi) Create a 50-year plan using the best information available at this time.

The process included a review of NID's available water supply and the long-term impacts on varying water demands coupled with the latest forecast of climate change hydrology. After 24 months of regular meetings and development of supporting technical data and analyses, Plan For Water is nearing completion and will show how future water supply and demand scenarios may be integrated into NID's water management practices.

The State Water Board's AHO proceeding on NID's petition for assignment of the state-filed water right is currently pending, awaiting completion of NID's Plan For Water process and environmental review under CEQA. That environmental review will assess a proposed project and a reasonable range of alternatives to address NID's water supply deficits due to climate change.

III. *Plan For Water Stakeholders Jointly Development a Water Supply Model to Forecast Impacts of Climate Change on NID and Inform Development of Responsive Actions*

Plan For Water used a sophisticated water supply modeling process that included: development of projected hydrology (using historical hydrology and Global Climate Models), watershed runoff modelling (using the Hydrologic Modeling System (HEC-HMS)), demand projections (using the Integrated Water Flow Model Demand Calculator), and finally reservoir operation modelling (using Hec-ResSim). The development of watershed-based hydrology relied on historical hydrology data paired with projected hydrology using Global Climate Models (GCMs) to assess climate change impacts within NID's service territory and watersheds. GCMs are three-dimensional mathematical representations of the major world-wide climate components such as the atmosphere, land surface, ocean, and sea ice. GCMs simulate how these components interact, resulting in scientifically based projections of how these climate interactions may happen.

Three GCMs were selected that best represent the California climate and that could be downscaled to NID's service territory. The three GCMs selected also reflect a range of possible hydrologic scenarios (wet climate, medium climate, and dry climate). Three demand scenarios were also selected, reflecting a high increase in demand, a reduction in demand and a baseline demand. From the range of climate change and demand scenarios, three combinations of scenarios were identified to develop inputs necessary to run the reservoir operations model (Hec-ResSim). Two of the selected scenarios represent hydrological and demand bookends: the low bookend (dryer hydrology, high demands) and the high bookend (wet hydrology, low demand). The third scenario represents a median condition (a middle-of-the-road hydrologic climate with baseline demand). The reservoir operations models allows NID to project future water supply

needs. To ensure the accuracy of the modelling effort NID, technical consultants, local experts, and interested members of the public tested model sensitivity and groundtruthed its validity for purposes of projecting future hydrological conditions.

NID's mountainous upper watershed acts as a natural reservoir, releasing historically 120,000 acre feet of snowmelt runoff during the spring and summer months. Climate change impacts will result in less snowpack and faster melting of the snowpack. The NID system was not designed to flexibly adapt to the reality and impacts of climate change, including the loss of a significant amount of snowpack.

A large portion of the NID watershed is above the 5,000-foot elevation where snow falls during winter storms. This area is and will continue to be impacted by higher winter and spring temperatures. The combination of reduced snowpack and prolonged dry periods exacerbates future water scarcity issues.

More information about Plan For Water, including development of NID's Water Supply Model can be found on NID's Plan for Water webpage.

IV. *The NID Water Supply Water Model Demonstrates Devastating Impacts to all NID public services and Enterprises.*

Attached as Exhibit B is the Technical Memorandum prepared by NID's expert consultants summarizing key effects of the proposed 55% UIF standard using NID's Water Supply Model with three variations of climate change hydrology: "Dry", "Median" and "Wet". The analysis included in the Technical Memorandum only utilized a baseline demand scenario. Each future climate scenario demonstrates catastrophic impacts to NID compared to existing conditions and operations. The UIF standard is simply unworkable at NID.

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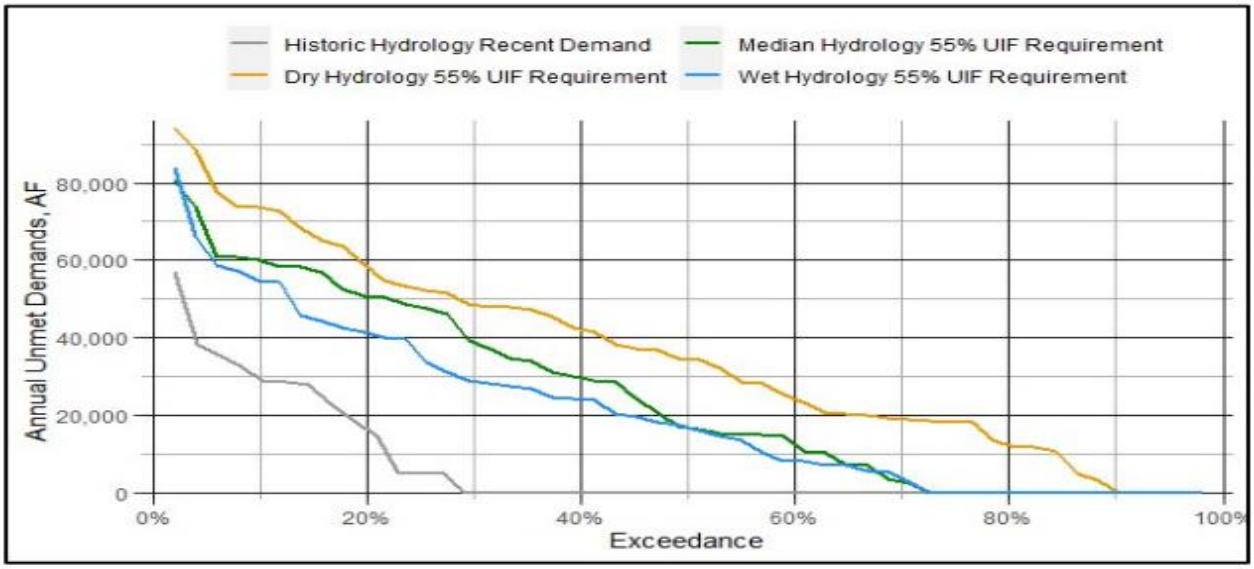
A. Impacts to Water Supply – Single Year

Imposition of the UIF standard causes unmanageable water supply impacts to NID. Figure 10 in the Technical Memo depicts NID's annual unmet consumptive demands:

Figure 10 - Annual Unmet Consumptive Demands Exceedance



In over 70% of years under the 55% UIF scenario, NID must manage a water supply deficit. 50% of the time that water supply deficit is approximately 18TAF to 37TAF. 20% of the time, NID will have to address and mitigate a 40TAF to nearly 60TAF supply deficit.

B. Water Supply Impacts to Scotts Flat Reservoir – the Primary Water Source for Nevada County

These water supply impacts become even more significant when evaluated by impacted facility. For example, NID's Scott's Flat Reservoir is highly reliant on imported water supplies given its small watershed. However, Scotts Flat is essential to NID operations insofar as it supplies the water for Nevada County and is the primary source of drinking water supply for NID customers.

Scotts Flat Reservoir was designed to store imported water from the Yuba River system. The UIF approach, however, constrains these longstanding interbasin water deliveries by forcing water to be kept in its native system. The DSR states that "The largest changes to interbasin

diversions and associated reservoir reoperation, occur in the Yuba and Bear Rivers[]" and that "Twelve of the 43 upper watershed reservoirs have potential to see large changes in operation under each of the modeling scenarios, particularly facilities that include interbasin diversions that move water from one watershed to another." (DSR, pp. 6-30, 6-47.) This is true of Scotts Flat Reservoir; however, the SacWAM model incorrectly states that Scotts Flat Reservoir would have *no change* in average annual elevation because of any of the UIF flow scenarios. (See, e.g., Table A1-145 at p. A1-217; Table A1-309 at p. A1-312.)

No change in Scotts Flat Reservoir elevation appears to be an error in the SacWAM modeling that hardwires Scotts Flat (and Combie Reservoir) to always be at the average monthly historical average with no deviation from average under the UIF scheme. (See, e.g., "Sacramento Water Allocation Model, Model Version 2023.06.12 Documentation, September 2023" [hereinafter "SacWAM Documentation"], Table 6-5 and §6.1.2.3.) This model rule is inconsistent with the UIF project description in the DSR, including the following:

> Both the narrative and numeric portions of the inflow objective are proposed to apply throughout the watershed, including on upstream tributaries, on all the Sacramento/Delta tributaries that support of contribute to the protection of anadromous fish species (Figure 1-1a). Under the proposed program of implementation, all water users on these tributaries, except those with a *de minimis* effect on flows (e.g, 10AF/yr or less), would have responsibility for contributing to the achievement of the objective.

(DSR, p. 5-17.) All of NID's facilities, including Scotts Flat Reservoir and Combie Reservoir, are within the Delta watershed, as depicted in DSR Figure 1-1a. Consequently, contrary to the SacWAM modeling rule, Scotts Flat and Combie Reservoirs "would have responsibility for contributing to the achievement of the objective." (*Ibid.*)

This uncertainty between the SacWAM model depiction of the proposed plan amendments and the DSR narrative violates CEQA. A "finite project description is indispensable to an informative, legally adequate EIR." (*County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 192.) Moreover, an accurate and stable project description is necessary so that the lead agency and public have enough information to "ascertain the project's environmentally significant effects, assess ways of mitigating them, and consider project alternatives." (*Sierra Club v. City of Orange* (2008) 163 Cal.App.4th 523, 533.)

The State Water Board's DSR analysis of NID's reservoirs violates CEQA. The DSR does not, in detail, describe the proposed change in operations for NID's facilities. This is most

acutely seen with the DSR's analysis of impacts at Scotts Flat Reservoir, where Tables A1-309 through A1-312 depict essentially no change at Scotts Flat Reservoir with the various UIF alternatives:

Table A1-309. Distribution of Baseline September Carryover Storage (TAF) and Absolute Difference by Scenario for Scotts Flat Reservoir

	Baseline	35	45	55	65	75
0%	31	0	0	0	0	0
10%	31	0	0	0	0	0
25%	31	0	0	0	0	0
50%	31	0	0	0	0	0
75%	31	0	0	0	0	0
90%	31	0	0	0	0	0
100%	39	0	0	0	-2	-2
Mean	31	0	0	0	0	0

Table A1-310. Distribution of Baseline September Storage Elevation (TAF) and Absolute Difference by Scenario for Scotts Flat Reservoir

	Baseline	35	45	55	65	75
0%	3047	0	0	0	0	0
10%	3047	0	0	0	0	0
25%	3047	0	0	0	0	0
50%	3047	0	0	0	0	0
75%	3047	0	0	0	0	0
90%	3047	0	0	0	0	0
100%	3060	0	0	0	-3	-3
Mean	3048	0	0	0	0	0

Table A1-311. Distribution of Baseline April Carryover Storage (TAF) and Absolute Difference by Scenario for Scotts Flat Reservoir

	Baseline	35	45	55	65	75
0%	47	0	0	0	-1	-4
10%	47	0	0	0	0	0
25%	49	0	0	0	0	0
50%	49	0	0	0	0	0
75%	49	0	0	0	0	0
90%	49	0	0	0	0	0
100%	49	0	0	0	0	0
Mean	48	0	0	0	0	0

Table A1-312. Distribution of Baseline April Storage Elevation (TAF) and Absolute Difference by Scenario for Scotts Flat Reservoir

	Baseline	35	45	55	65	75
0%	3072	0	0	0	-2	-7
10%	3073	0	0	0	0	-1
25%	3075	0	0	0	0	0
50%	3075	0	0	0	0	0
75%	3075	0	0	0	0	0
90%	3075	0	0	0	0	0
100%	3075	0	0	0	0	0
Mean	3075	0	0	0	0	0

This fails to accurately describe the changes to NID's facilities, including Scotts Flat Reservoir, with the particularity and detail required by CEQA. On one hand, the DSR states that interbasin transfers will impact reservoir operations, including that the "largest changes to interbasin diversions and associated reservoir operation, occur in the upper Yuba and Bear Rivers". (DSR, p. 6-30.) On the other hand, once facility highly reliant on interbasin transfers from the Yuba system – Scotts Flat Reservoir – depicts no change as a result from the UIF regime whatsoever.

In *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931 the CEQA lead agency, like the State Water Board here, attempted to claim that there would be no

change in reservoir operations and referenced "A hydrologist's report [that] listed the water levels of the three impacted lakes at the end of each month over a period of many years." (*Id.* at p. 952.) The court found the environmental analysis inadequate because it lacked an "operational analysis", noting that:

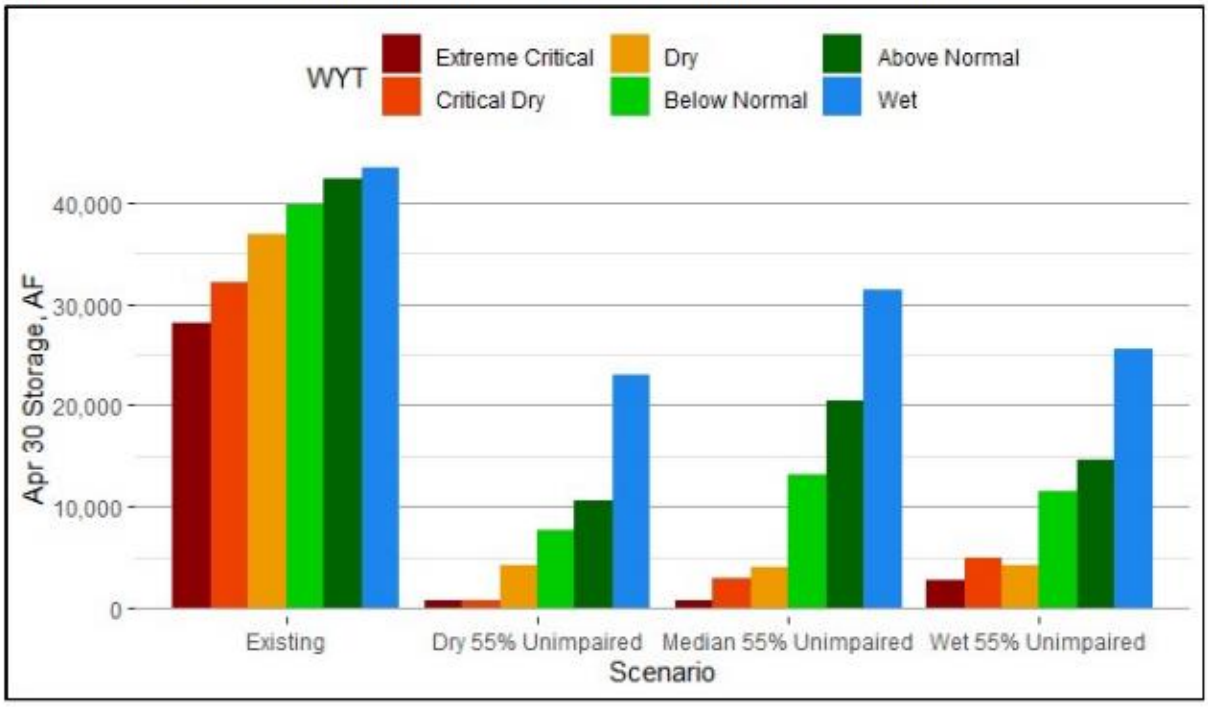
> The month-end water level is only one element of the operation. Just as important to fisheries, river habitat and recreational uses is how those lake levels were determined. When were releases made and at what rate? What were the factors that determined when releases would be made? Are those factors equally applicable for purposes of power generation and inelastic consumptive use? The month-end lake level could be achieved by constant releases over a period of time or, theoretically, through one rapid and enormous release that adversely affects fisheries and habitats. Reliance on lake levels alone is insufficient to describe the current release program or to assess the impacts of the proposed project.

(*Id.* at pp. 954-955.)

The DSR's description of the project as to NID's facilities contains even less detail than the description the court in *County of Amador* found insufficient. Is the UIF regime imposed consistent with the water right priority system, or not? Is UIF imposed on all NID facilities and points of diversion, or not? Is Scotts Flatt Reservoir and Combie Reservoir subject to the UIF standard, or not? What are the environmental and economic effects of the exact project that is proposed by the State Water Board? How would that project be implemented to answer the questions posed by the court in *County of Amador*?

Given uncertainties in the project description, NID modeled the UIF requirement consistent with the language of the DSR, including that "default" implementation would be imposed on all tributaries and all water rights in the Delta watershed. (DSR, p. 5-17.) If the proposed plan amendments are implemented in this manner, the UIF approach would have catastrophic impacts to NID, particularly to Scotts Flat Reservoir. Figure 17 of the Technical Memorandum depicts end-of-April storage at Scotts Flat Reservoir under existing conditions and with a 55% UIF climate change scenario:

Figure 17 - Scotts Flat Reservoir April 30 Storage, Averaged by Water Year Type



April 30 is utilized to show typical reservoir highpoint as the season transitions into the high-water use summer months. Under the proposed plan amendments, Scotts Flatt Reservoir is at deadpool in many of the drier year types. ***This means there is effectively no water supply for Nevada County before the high-demand Summer and Fall water seasons***.

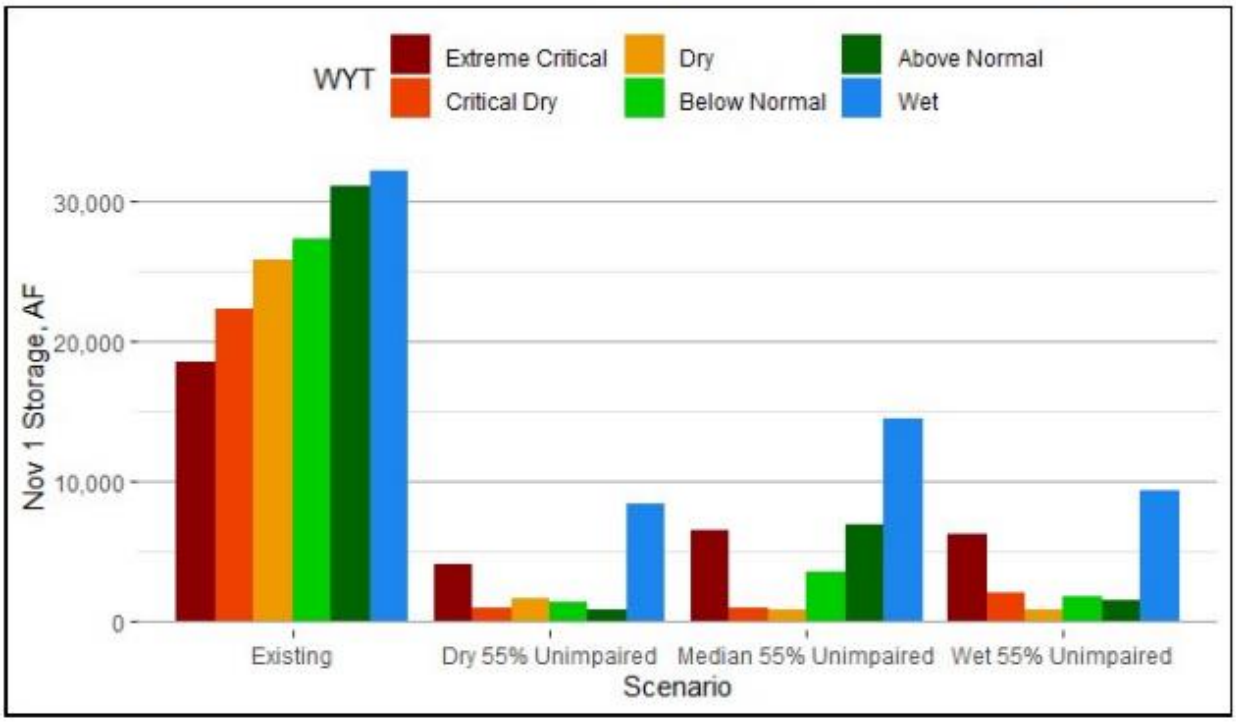
Even in above normal and below normal year types, there are huge water supply impacts of 20 TAF to 30 TAF per year. The DSR contains no analysis of these catastrophic impacts to NID or the cascade of other impacts, including to other biological resources, recreation, aesthetics, increased risk of wildfire, and negative economic impacts to the regional economy. It is difficult to imagine how NID would manage such a devastating water supply impact to Nevada County. A supply reduction of this magnitude would result in the severe rationing of water supply throughout NID's service area. Human health and safety would take priority, thereby leaving NID's extensive irrigation system with little to no supply and dry irrigation canals. The loss of irrigation is not only catastrophic to the community from an agriculture and fire suppression perspective, but would have a detrimental effect to the environment with small

streams and tributaries suffering from the lack of tailwater from NID's canals. These environmental impacts are neither disclosed nor analyzed in the DSR.

Given NID's headwater location and lack of alternative water supplies, carryover storage is a vitally important tool to prepare and manage for the potential that the following year is the start of a drought. NID typically targets a minimum carryover storage of 78,000 acre feet. Under the proposed plan amendments, NID in most years would be unable to maintain that level of minimum carryover storage. (See Technical Memorandum, Figures 12, 14, 16, 18 and 20.) This creates greater risk to NID when future dry and critical years occur.

As an example, Figure 18 of the Technical Memorandum depicts November 1 Scotts Flat Reservoir storage, averaged by water year type under existing and 55% UIF scenarios:

Figure 18 - Scotts Flat Reservoir November 1 Storage, Averaged by Water Year Type



Having carryover storage at Scotts Flat Reservoir less than 5,000 acre feet in all year types except wet is not a realistic operational regime for NID. Under a 55% UIF standard, NID would have to reduce demands to ensure greater carryover storage at Scotts Flat and other NID

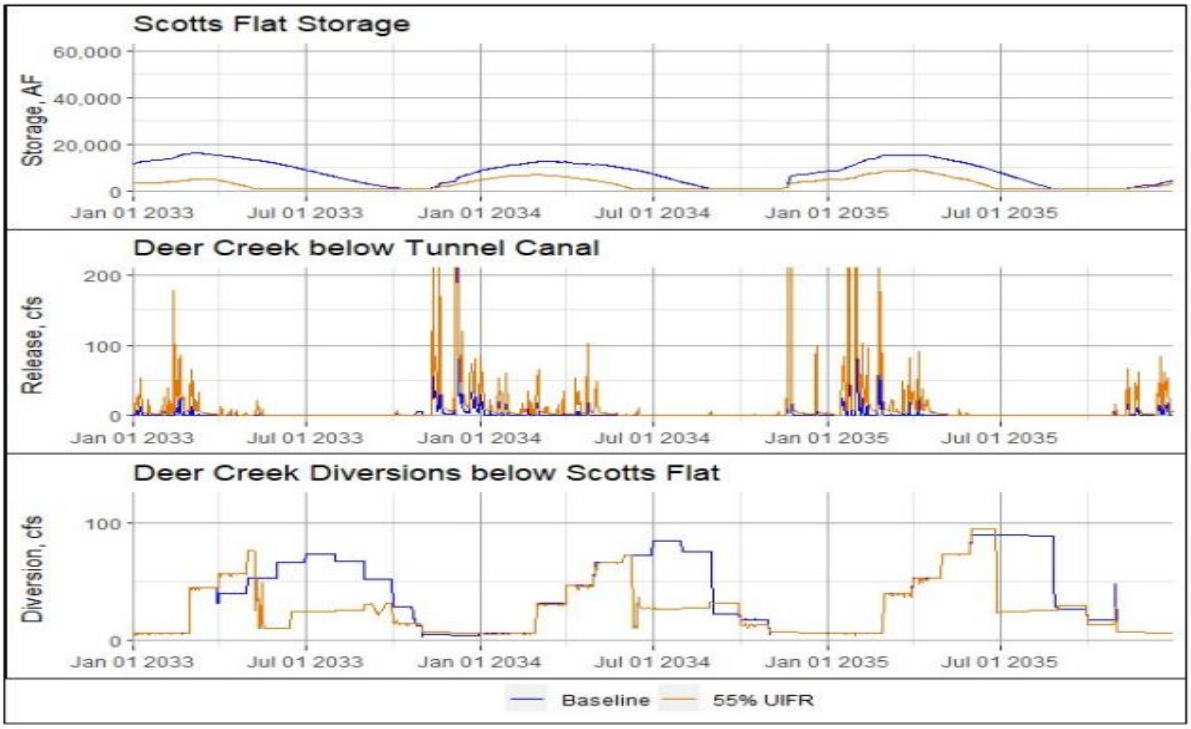
storage facilities. These other actions would exacerbate other impact areas, such as hydroelectric generation, regional economic impacts, terrestrial species, and fallowing of agricultural land.

C. Impacts to Water Supply – Multiyear Drought

Multiyear droughts have occurred historically in California and will happen again. The DSR notes that "climate change is already bringing … longer and more severe droughts that present challenges for water supplies" and includes two "modular drought alternatives" regarding curtailments and water conservation. (DSR, pp. 5-68, 7.24-46.) However, the DSR does not sufficiently analyze the impacts of multiyear droughts or assess how climate change will exacerbate already challenging drought conditions.

NID's Technical Memorandum does assess storage conditions under historical hydrology and climate change hydrology with the proposed plan amendments. The results demonstrate, again, significant and unmanageable impacts to NID. For example, Scotts Flat Reservoir using median climate change hydrology in a multiyear drought is as follows:

Figure 33 - Scotts Flat Reservoir Operations, Median Climate 2038-2040



In a multiyear drought scenario, Scotts Flat Reservoir is effectively at deadpool during spring and summer months for the entire three-year drought. Additionally, storage levels cannot recover under the UIF requirement. Even at highpoint, Scotts Flat Reservoir storage levels are effectively unusable at less than 5 TAF. Water delivery below this elevation will compromise water quality in the canals and streams below the reservoir due to the mobilization of sedimentation that has built up behind the dam. Additionally, hydroelectric power becomes infeasible due to the loss of head pressure and flow to spin the turbine.

D. Mitigation Measures to Address Water Supply Impacts are Infeasible

CEQA requires that the DSR propose and describe feasible mitigation measures to minimize or avoid the project's significant environmental effects. (Pub. Res. Code §§ 21002.1(a), 21100(b)(3), 21080.5(d)(2)(A); *Napa Citizens for Honest Gov't v. Napa County Bd. of Supervisors* (2001) 91 Cal.App.4th 342, 365.) CEQA defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors." (CEQA Guidelines § 15364.) There must be evidence in the record that the mitigation measure would be effective. (*League to Save Lake Tahoe Mtn. Area Preservation Found. v. County of Placer* (2022) 75 Cal.App.5th 63, 121 [no evidence that mitigation measures requiring compliance with unformulated target would work.].)

The DSR relies extensively on a mitigation measure that encourages water users to "diversify water portfolios" as a mechanism to mitigate the water supply impacts of UIF:

> **Diversify Water Portfolios:** Water users can and should diversify water supply portfolios to the extent possible, in an environmentally responsible manner and in accordance with the law. This includes sustainable conjunctive use of groundwater and surface water, water recycling, water conservation and efficiency upgrades, and water transfers.

(See, e.g., DSR, p. 7.4-97.) This same language is used throughout the DSR as a supposedly effective and feasible mitigation measure. (DSR pp. 7.4-97 [Mitigation Measure MM-AG-a,e]; 7.6.1-89 [MM-TER-a]; 7.6.2-106 [MM-AQUA-a,d], 7-8.41 [MM-EN-a-e]; 7.12.1-118 [MM-SW-a,f]; 7.12.2-67 [MM-GW-b] and 7.20-50 [MM-UT-d].) In NID's case, however, this mitigation measure is not feasible.

As noted, NID overlies fractured rock aquifers and does not have access to groundwater. The DSR notes that "Groundwater is not extensively utilized in these areas [meaning NID] because of the presence of fractured rock aquifer system." (DSR p. 7.4-52.) Thus, conjunctive use of groundwater and surface water is not possible in NID's case.

As noted, NID is in the headwater region of the Sierra Nevada Mountain range. Unlike much of the Bay-Delta watershed, there is no upstream party from which NID could purchase transfer supplies from to mitigate impacts from significant supply reductions. Pacific Gas & Electric Company maintains facilities (its Upper-Drum-Spaulding Hydroelectric Project, FERC Project No. 2310) that are intermingled with NID's system and NID under a "coordinated operations agreement" with PG&E can purchase supplies from PG&E under certain circumstances. However, under an UIF scenario, those purchases from PG&E would either be significantly constrained and potentially not available to NID. At best, those purchases as well as similar PG&E water purchases by Placer County Water Agency would be significantly reduced. At worst, acquisition of water from PG&E would not be available at all given the confluence of a variety of factors, including PG&E's own water supply deficit from UIF. It is improper and entirely speculative for the DSR to assume NID can acquire transfer supplies.

NID currently maximizes wastewater recycling for irrigation water supplies. While NID has no authority or control over wastewater management (such services fall under the jurisdiction of the City of Grass Valley, Nevada City, and Placer County) NID does capture wastewater discharges and recycle the flows into its irrigation canals. These flows are already accounted for in NID's overall water portfolio, and included in NID Water Supply Model. It is unreasonable and without substantial evidence for the DSR to assume that NID can further "diversify" its water portfolio when it already maximizes its use of recycled water.

NID operates a successful water conservation campaign that has resulted in continued reduction in water use over the last 15 years. NIDs overall treated water demand has reduced by 25% yet our customer base has increased by 2%. Additionally, NID complies with the state's water audit and water loss regulations and continues to educate and encourage conservation. Even with successful conservation efforts, and a continuing commitment to conservation measures, the sheer magnitude of the water supply deficits caused by UIF cannot be overcome by conservation, and certainly not in an economically feasible manner. The DSR does not analyze whether it is feasible for NID to conserve sufficient supply to overcome the impacts of UIF.

E. Impacts to NID's Hydropower Generation

The DSR fails to accurately characterize impacts to NID's generation due to the significant reduction in imports to the Bear River from NID's Bowman-Spaulding Conduit. NID's Technical Memorandum summarizes the generation impacts associated with the proposed plan amendments:

Scenario	Annual NID Generation GWhs	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Existing Conditions	293.9	21.1	24.9	32.2	28.6	43.6	31.0	32.7	29.6	14.5	11.1	9.7	15.0
PFW Scenario 4-55%	149.7	14.9	7.1	6.5	5.2	17.7	9.4	24.3	23.6	10.2	7.0	8.5	15.4
PFW Scenario 5-55%	184.5	18.6	10.4	8.3	6.0	26.1	13.6	27.1	26.3	11.8	6.4	9.7	20.2
PFW Scenario 6-55%	188.6	20.8	13.1	9.9	6.6	24.0	13.3	28.5	26.7	11.7	7.0	9.6	17.3

Today, NID's seven power plants provide enough energy to supply the equivalent of more than 60,000 homes. The proposed plan amendments, as reflected in the Table above, would result in a decrease of between about 36% and 50% of NID's annual hydroelectric energy production from its Yuba-Bear Project, or a reduction in power supply to roughly 21,600 to 30,000 homes. The DSR notes Chicago Park, Dutch Flat 1 and 2, and Rollins Powerhouses "have reduced hydropower generation caused by a reduction in interbasin diversions to the Bear River", but fails to provide detailed analysis as to the local and systemwide impacts of this reduced generation. (DSR, p. A5-29.)

The DSR's statement about reduction in interbasin diversions conforms with previous modeling of UIF scenarios in the FERC relicensing context that showed generation loses would be greatest at the NID's Chicago Park and Dutch Flat 2 powerhouses, which currently provide frequency and voltage ancillary services to help stabilize the California electric grid and support the addition of solar and wind energy sources into the market. With UIF, Dutch Flat 2 Powerhouse is offline during critical spring and summer months during most WY types and would not be able to continue to provide frequency and voltage support. A detailed assessment of the impact of the loss of these resources to the grid is beyond the scope of the model developed to quantify, however, an outline of the ancillary benefits is provided below.

Generation from NID benefits the existing high voltage electric system in numerous ways, and the absence of this generation would degrade overall system reliability and local regional reliability, specifically. The broader benefit to the system is the presence of inertia provided by the rotating generators at Chicago Park and Dutch Flat 2 powerhouses to the rest of the grid. The rotating machines establish a baseline frequency signal to which all inverter-based renewable generators (e.g., solar photovoltaic) can set their inverters. In addition, the inertia of the above generators is what keeps the system stable after a system disturbance. Losing the frequency signal provided by the above generators and the inertia would do harm to both frequency regulation and system stability.

Project generators also provide benefits to the grid immediately around the 115 kV points-of interconnection to NID's generation. The 115 kV circuit to which NID interconnects is a lengthy circuit which extends from south central Nevada County to west of Sacramento. The rating of the circuit ranges from 63 mega-volt amperes (MVA) to 119 MVA, depending on presumed weather conditions and as-built details. This lengthy 115 kV line experiences high voltage drops and requires the voltage support provided by NID's generation. The overall 115 kV circuit, which is the singular link through the Sierra Nevada, is weakened without the above generators to provide local voltage support, inertia for system stability, and a baseline indication of system frequency. Importantly, this lost generation and lost ancillary benefits would be from a carbon-free source of electricity when both the President of the United States and the Governor of California have mandated the expansion of generation from such carbon free sources to advance their aggressive policies regarding reducing greenhouse gas emissions by 2030. The DSR does not analyze the impacts of loss or diminishment of NID's powerhouses on the grid and this Plan's inconsistency with state and federal mandates.

Under the existing NID/PG&E power purchase contract, any revenue impacts associated with the reduction in energy production resulting from the imposition of the UIF as compared to baseline would be the subject of negotiations between PG&E and NID. However, for the purposes of a coarse estimate the reductions shown above in Table 8 would be expected cause a revenue loss of 36-49% or $8,000,000 to $12,000,000 annually. Currently, power revenue subsidizes NID's water rates. Without the power revenue subsidy, NID's rates would significantly increase, affecting the regional economy and affordability of water. The DSR does not analyze the cascading economic impacts of NID's loss of power revenue.

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F. Impacts to Recreation

The impacts to NID's Recreational Campgrounds and Facilities would be substantial. NID would see a loss in revenue from a lack of camping, boating and fishing. Lakefront campsites would not be "lakefront". Given that UIF lowers the water level of NID's reservoirs where its recreation facilities are located, boat launches, mooring and boat slips would be affected. Lower lake levels would cause safety hazards for boaters with more debris and hazards in the lake.

G. Economic Impacts

In 2016, the State Water Board adopted a Human Right to Water Resolution making the Human Right to Water (HR2W), as defined in Assembly Bill 685, a primary consideration and priority across all programs of the State Water Board and the nine Regional Water Quality Control Boards. The DSR does not accurately identify economic impacts associated with UIFs and will result in a higher affordability burden for all water systems and especially NID's. UIF reduces the available water supply which will result in significantly reduced revenue derived from hydropower sales. The loss of hydro revenue is then compounded with a decreased amount of water supply to sell to current NID customers. Together, these compounding factors will result in significant increases in water rates for NID customers.

Based on the anticipated reduction in annual hydropower generation identified in Section E due to UIF, NID will annually generate up to 144.2 less GWhs compared to today. This reduction in annual hydropower revenue would result in a reduction of $8 to $12 million annually in hydropower revenue that is used to offset water rates, and complete watershed improvement projects.

Water rates will be further increased by UIF due to anticipated unmet demands which will result in less water supply available to be sold. The reduction in revenue associated with reduced raw water sales is estimated to generate $1.5 M less revenue per year during an average year and the reduction in treated water revenue is estimated to be approximately $4 M per year. The total reduction in revenue that would result from UIF would is estimated to raise NID customer rates between $520 to $700 per year. This increase in water rates would be on top of increases associated with other regulatory costs, capital costs and general inflation. Water would no longer be affordable for the communities served by NID.

Indirect economic impacts will also occur because of UIF that are not defined in the DSR. In a multi-year drought scenario, it is likely that many of NID's reservoirs will be drawn to deadpool which will cease irrigation water deliveries to many areas within NID, reduce or

eliminate recreation opportunity, and cause revenue impacts much greater than those noted above (which were calculated based on average annual increases in unmet demands). These impacts will adversely affect property values, revenue generated from agricultural activities, and the local economies.

H. Enhanced Risk of Wildfire

NID's service area is extremely prone to wildfires. Over 75% of NID's service area is in the State's "Very High" fire hazard severity zone, which is the state's highest risk designation. The DSR observes anticipated "primary effects of climate change" including "[i]ncreased frequency and severity of wildfire events." (DSR, p. 7.10-3.)

> Changes in hydrology may result in changes to reservoir operations such that water levels are lower during the fire season (roughly summer through early fall). However, it is unlikely that lower water levels would prevent access to water for such use, thus impeding fire suppression and exposing people or structures to increased risk of loss, injury, or death from wildland fire.

(DSR, p. 7.11-11.)

This DSR statement is not accurate in NID's case. As noted above, Scotts Flat Reservoir is at deadpool in numerous single dry year and multiyear drought scenarios with the proposed plan amendments. Those drier year types enhance risk of wildfire due to drier fuel loads and coincide with the same year types where Scotts Flat is at deadpool. As previously stated, Scott's Flat is the main source of water supply for the Nevada County communities within NIDs Service area including the Cities of Grass Valley, Nevada City, and Smartsville as well as the large unincorporated areas of development. The reservoir is key to supplying NIDs irrigation canals that supply Nevada and Yuba Counties water for fire prevention and suppression. Scotts Flat Reservoir is the primary source of water supplied to the CAL FIRE Air Attack Base at the Nevada County Airport. It is used as a water source to suppress wildfire.

Moreover, the community of Cascade Shores is located on the southerly side of Scotts Flat Lake. Scotts Flat would be utilized in fire suppression efforts in the event of a wildfire affecting Cascade Shores. The DSR should analyze the impacts of the lack of such water for future firefighting efforts under an UIF regime.

Irrigated pasture and other farmland are important fire avoidance and suppression tools. NID water irrigates over 33,000 acres including pastures, orchards, nurseries, vineyards, gardens,

and parks and golf courses. These irrigated areas throughout NID have multiple benefits in terms of diminishing already high wildfire risk. First, irrigated acreages have lesser fuel loads compared to non-irrigated acres. Second, irrigated lands help to prevent the ignition of dangerous wildfires due to the reality that crops are wetter fuel. Third, in the event of wildfire, irrigated lands act as green firebreaks to help contain and assist in fire suppression.

The proposed plan amendments, particularly in Nevada County, would result in the conversion of huge swaths of currently irrigated acreage to dry land. This would enhance wildfire risk and the difficulty of suppression. The DSR does not analyze this reality whatsoever.

I. Impacts to Fish & Wildlife

The DSR acknowledges, generally, that changes in reservoir water levels can result in a host of terrestrial and aquatic resource impacts. For example, the DSR states that "The largest changes in reservoir water levels are expected in the upper watershed reservoirs that are associated with interbasin diversions…." (DSR, p. 7.6.1-59.) The DSR notes impacts to bald eagles, American white pelican, western pond turtle, amphibian species (e.g., foothill yellow-legged frog). (*Id.*, pp. 7.6.1-59 to 7.6.1-61.) Impacts to bald eagle and pelican are considered less than significant, however, because "water elevations generally would be expected to be similar to baseline conditions during fall and winter." (*Id.*, p. 7.6-1-60.) However, in NID's case, as demonstrated in the Technical Memorandum, NID's reservoir levels in the fall and winter, particularly in drought sequences, do not recover to baseline conditions.

Moreover impacts to amphibians like foothill yellow-legged frog (FYLF) are supposedly mitigated to less than significant levels by implementation of mitigation measure Impact TER-b,c, which relies on water portfolio "diversification" that is infeasible in NID's case given NID cannot implement groundwater storage and recovery, undertake water transfers, or engage in further water recycling. (DSR, pp. 7.6.1-81 to 7.6.1-83.) Consequently, significant adverse impacts to FYLF would occur in the Middle Yuba River, primarily due to colder and spikey flows in spring and warmer water temperatures in the summer and fall. The DSR does not correctly capture this impact, or property mitigate its significance.

Regarding impacts to aquatic species, the DSR acknowledges that "some upper watershed reservoirs might experience substantial effects, especially those involved with interbasin diversions and those that need to release additional water to meet inflow requirements for the rim reservoirs downstream…". (DSR, p. 7.6.2-55.) Moreover, the DSR acknowledges "Changes in flow and reservoir storage under the proposed Plan amendments could affect

temperatures and the availability of cold water." (*Id.*, p. 7.6.2-56.) However, the DSR does not properly analyze these impacts. Rather it states the following:

> For upper watershed reservoirs, specific cold water storage assumptions were not included in the modeling because there is not enough available information, and the focus of the analysis is on the anadromous reaches of the tributaries with the cold water habitat. As described in Chapter 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*, cold water habitat measures could be required for these upper watershed reaches if water temperature concerns exist or become problematic as a result of implementation of the proposed Plan amendments.

(*Id.*, p. 7.6.2-57.) This is improper under CEQA. The State Water Board is obligated to assess the whole of the action and the likely environmental effects of the proposed plan amendments. On one hand, the DSR acknowledges temperature impacts associated with both lower reservoir storage and future effects of climate change. Yet, on the other hand, the DSR defers describing and assessing that impact to a future date. CEQA requires that such impacts be assessed now, at time of circulation of the DSR, which is the functional equivalent to a draft environmental impact report under CEQA. The proposed UIF standard would result in significant adverse impacts on rainbow trout in the Middle Yuba River and South Yuba River primarily due to higher than optimum and very spikey flows in spring and warmer water temperatures in the summer and fall.

Moreover, NID notes that if the State Water Board attempted to address temperature impacts in the same manner as done with other facilities (imposition of a carryover storage/buffer storage requirement) that such action would exacerbate already critical water supply impacts at NID. The whole of the action, including this possibility, must be analyzed to inform both the State Water Board and the interested public. (See, e.g., Pub. Res. Code § 21005.).

J. Impacts to Agriculture in NID's Service Area

The DSR correctly observes that changes in supply because of UIF will result in reduced crop acreages and fallowing:

> Reduced flows in some streams in the upper watersheds that are interconnected by interbasin diversions could occur in the Upper Yuba and Bear Rivers. Crops grown in these areas include alfalfa and pasture, vine crops, rice and deciduous orchards (NID 2016). Groundwater is not extensively utilized in these areas

> because of the presence of a fractured rock aquifer system. *Changes in supply could result in reductions in crop acreage and increased fallowing*.

(DSR, p. 7.4-52, emphasis added.) However, the DSR claims that "Implementation of Mitigation Measures MM-AG-a,e: 1 through 6 will avoid or reduce the amount of agricultural conversion as a result of the proposed Plan amendments." (*Id.*, p. 7.4-54.) Mitigation Measure MM-AG-a,e is not feasible in NID's case. As noted, NID cannot simply "diversify" its water portfolio given its unique circumstances (discussed *supra*). The other aspects of Mitigation Measure MM-AG-a,e are either not applicable to NID, infeasible, or deferred to a yet-to-be released program of implementation. CEQA requires a specific analysis of the impacts to NID's agriculture and feasibility (or not) of mitigation measures.

V. *The Proposed Plan Amendments Are Not Implemented in Order of Water Right Priority, as Claimed in the DSR and As Required by Law*

Concerning implementation of the proposed plan amendments (55% UIF), the DSR states:

> Subject to possible modifications for drought, public health and safety, public trust obligations for wildlife refuges, or alternative arrangement in a voluntary implementation plan, implementation of the flow objective would be required to be met in order of water right priority. In some year types when water may not be available for all users, shortages would be borne in order of priority, starting with the most junior water rights.

(DSR, p. 5-17.) However, SacWAM does not model implementation of the proposed plan amendments consistent with the priority system. This conclusion is reached based on the model output and the SacWAM Documentation that fails to account for implementation by water right priority. (See, e.g., SacWAM Documentation, Table 7-62, pp. 7-74 to 7-75.)

Moreover, the law requires that "Every effort…must be made to respect and enforce the rule of priority." (*El Dorado Irr. Dist. v. State Water Resources Control Bd.*, (2006) 142 Cal.App.4th 937, 966.) The preservation of the priority system is the "first concern" of the State Water Board in the exercise of its power. (*Id.* at p. 961, quoting *Meridian Ltd v. San Francisco* (1939) 13 Cal.2d 424, 450.)

The DSR fails as an informative document under CEQA by failing to model and disclose the impacts of the proposed plan amendments consistent with the priority system. Moreover, the

same deficiency violates the law because the State Water Board must make "every effort" to exercise its powers consistent with the priority system. These omissions are particularly significant to NID given, generally, its senior water right status vis-à-vis downstream parties. For example, NID and Yuba County Water Agency entered into a November 13, 1961 stipulation that allowed for the eventual construction of Yuba's water storage and related facilities and issuance of associated water rights. A copy of the stipulation is attached as Exhibit C. Generally, it acknowledges NID's water rights "shall be considered prior in time and right to the rights" sought and thereafter acquired by Yuba and that NID's diversions from the Middle Fork, South Fork, and tributaries would continue in operation and priority compared to Yuba's rights.

The DSR should be recirculated with the proposed plan amendments implemented in reverse order of water right priority where junior water right holders, including Yuba Water Agency, are curtailed prior to NID.

VI. *Modular Alternative 6a is Infeasible and Inconsistent with NID's Pending Application for Assignment of State Filed Application 5634*

As noted above, an essential component of NID's comprehensive efforts to address climate change is its pending application for assignment of state-filed application 5634 and the accompanying water-right application 5634X01. The DSR correctly observes that these state-filed water rights are "To provide for growth and development in the areas that were not yet built out in the Bay-Delta watershed…." (DSR, p. 2-122.) In NID's case, assignment of this water right was incorporated into its Plan For Water process, including addressing impacts of climate change, and the development of alternatives for review under CEQA.

Modular Alternative 6a would "protect the base upon which the VA flows are intended to be added from new or expanded water diversions. Specifically, any new point of diversion of water or expanded point of diversion of water would not be authorized to divert water during the January through June time period unless Delta outflows were at levels determined in the State Water Board's 2017 Scientific Basis Report, or future equivalent analyses, to provide conditions expected to result in the recovery of a wide array of native fish and wildlife species." (DSR, p. 7.2-16.)

As an initial note, a detailed description of this alternative and an analysis of its impacts, including modeling the alternative under SacWAM, is not included in the DSR or supporting documentation. This alone violates CEQA. In addition, Modular Alternative 6a is not feasible because it does not conform to Water Code section 10500 et seq. "Feasible" under CEQA means

"capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors." (CEQA Guidelines § 15364.) The State Water Board with Modular Alternative 6a is attempting to effectively supersede and revoke the Legislature's enactment of Water Code section 10500 et seq., and more specifically terminate NID's pending application *sua sponte*. This exceeds the State Water Board's legal authority and, consequently, Modular Alternative 6a is not feasible.

VII. *The DSR is Uncertain and Lacks a Stable Project Description Concerning Whether the Cold Water Habitat Objective is Proposed to be Implemented at NID*

The cumulative impact of the UIF requirement and the potential for a cold water habitat objective (effectively a carryover storage obligation) should be analyzed specific to NID. The DSR implies that NID, as a reservoir operator in upstream tributaries, would be subject to the objective:

> The narrative cold water habitat objective is proposed to apply throughout the watershed, including upstream tributaries and distributaries, on all the Sacramento/Delta tributaries that support or contribute to the protection of native cold water fish species. Under the proposed program of implementation, all water users on these tributaries, except those with *di minimis* effect on temperature management, would bear responsibility for contributing to the achievement of the objective.

(DSR, p. 5-23.) However, neither the DSR nor the SacWAM modeling analyzes the effects of this requirement on NID. This is significant because the cold water narrative can exacerbate water supply impacts, which in NID's case are already catastrophic *without* a cold water narrative obligation expressly required or analyzed.

The SacWAM documentation includes a "buffer pool" requirement for Bowman, Jackson and Rollins Reservoirs, but the buffer pool is set to the average monthly historical storage for those facilities, meaning that the SacWAM model operates between the monthly storage and full pool and will only draw down below average monthly storage to meet 55% UIF. (SacWAM Documentation, Table 6-5.) This is not consistent with how buffer pools or the cold water objective is implemented on other tributaries. (See, e.g., DSR, pp. A1-14 [Table A1-5. Shasta Buffer Pool for Each Scenario (TAF)]; A1-15 [Table A1-8. Oroville Reservoir Buffer Pool for Each Scenario (TAF)].) This lack of analysis and uncertainty violates CEQA.

The DSR observes that UIF impacts reservoir storage and the "balance between meeting current and future demands for water supply and retaining cold water pool in the reservoir." (DSR, p. 6-48.) However, the DSR defers analysis of this balance entirely for NID facilities, instead suggesting that the "balance" will be analyzed in the future: "This balance could be further refined in the future as a result of further analysis." (*Ibid.*) Deferring analysis of such an important subject, particularly given NID's reservoirs are already significantly impacted by the imposition of the UIF standard, is improper and violates CEQA.

VIII. *The DSR Contains No Analysis of the Facility Upgrades Necessary to Implement a UIF Standard*

To meet an increased percent of UIF requirement, it would be necessary for NID to increase the low-level outlet release capacities at Jackson Meadows Dam and Rollins Dam. It is estimated that Jackson Meadow's low-level outlet would need to be increased from its current 760 cfs capacity to approximately 1,125 cfs. Rollins Dam would need to be increased from its current 2,850 cfs to approximately 4,860 cfs.

At Jackson Meadows Dam, the existing low-level outlet would need to have at minimum two 42-inch pipes; achieved by replacing the existing second smaller 24-inch pipe with a new 42-inch-diameter pipe and operating both combined to release a flow of 1,125 cfs at full pool. At Rollins Dam, the existing low-level outlet would need to be increased in size from 72 inches in diameter to at least 84 inches in diameter to release a flow of 4,860 cfs at full pool. Additionally, tunnel concrete work, a steel liner and other upgrades would be required at the downstream portion of the Rollins Dam tunnel to protect the concrete surfaces from scour potential resulting from the higher velocity releases. In addition, all new automated valves would be required at both sites. NID has grave concerns that these increases might compromise dam safety and is unsure whether FERC and the California Division of Dam Safety would allow this work. However, assuming they would, NID estimates the cost (in 2021 dollars) to enlarge the existing low-level outlets and replace the existing valves at Jackson Meadows Dam and Rollins Dam is $20,000,000.

The DSR observes that "The State Water Board would need to develop provisions for ensuring that water right holders are bypassing water and other actions to meet the proposed plan amendments, including monitoring, reporting, accounting, and other provisions. (DSR, p. 5-57.) The DSR, however, does not specifically identify how this would be accomplished, or the environmental effects and economic cost of such measures. NID believes that to operate and demonstrate compliance with a UIF objective, nine new or modified gages would be required at the following locations: (i) Middle Yuba River upstream of Jackson Meadows Reservoir; (ii)

Canyon Creek upstream of French Lake Dam; (iii) Canyon Creek upstream of Faucherie Lake Dam; (iv) Canyon Creek upstream of Sawmill Lake Dam; (v) Canyon Creek upstream of Bowman Lake; (vi) Jackson Creek upstream of Jackson Lake; (vii) Jackson Creek upstream of Bowman Lake; (viii) Bear River upstream of Rollins Reservoir; and (ix) Greenhorn Creek upstream of Rollins Reservoir. Each gage would be telemetered and connected in real-time to NID's SCADA system so that NID could back-calculate UIF each day, and subsequently calculate the previous seven-day average. Given the magnitude of inflows (e.g., some would range from a low of tens of cfs to over 6,000 cfs), the gages would need to be very substantial. Each would require power to measure inflow reliably and accurately. Given their likely size, permits would be needed. Taken together, NID estimates (in 2021 dollars) the cost for gaging alone is roughly $12,000,000.

Under a UIF regime, NID literally will not know what the flow requirement is for the day until midnight of the previous day when it calculates the average flows for the previous seven days. Therefore, valves will need to be adjusted as soon as that calculation is completed. This will require automating all release valves. As part of the overall low-level outlet increased flow capacity project, all new valves are required and power would be required at each valve. NID estimates the added cost (in 2021 dollars) to automate all new release valves is $7,000,000. Modifications are required to pass stream diversions along NID's Bowman-Spaulding Canal, along with gaging of these locations with power, telemetry, and connection real-time to NID's SCADA system so NID can back-calculate its UIF obligation. The best estimate of this cost (again in 2021 dollars) is $2,000,000.

Finally, NID would incur additional periodic costs, including enhanced maintenance and repair of all this new infrastructure. NID's best estimate (in 2021 dollars) is $400,000 annually, or $12,000,000 over the 30-year estimated lifespan of these facilities.

Taken together, NID estimates in 2021 dollars that the capital cost of UIF is $41,000,000 and the incremental annual/periodic cost over a 30-year period is $12,000,000, for a total cost over 30 years of $53,000,000. NID emphasizes that these are rough costs at this time and could be considerably higher. The DSR does not describe the CEQA impacts associated with these facility modifications, nor does the DSR economic analysis consider this added cost.

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IX. *Conclusion*

The State Water Board's proposed plan amendments involving UIF are simply unworkable at NID. To the extent the State Water Board wishes to continue its consideration of UIF alternatives (as opposed to the VA alternative), the DSR must be modified to address the issues raised in this comment letter and the DSR must be recirculated.

Very truly yours,

Nevada Irrigation District

By: _____
Jennifer Hanson, General Manager