MERCED IRRIGATION DISTRICT
WATER & POWER

November 9, 2017

VIA EMAIL To Bay-Delta@waterboards.ca.gov

Jeanine Townsend,
Clerk to the Board
STATE WATER RESOURCES CONTROL BOARD
1001 I Street, 24th Floor
Sacramento, CA
95814-0100

Re: Phase II Bay-Delta Plan Input: Response of Merced Irrigation District to Questions Regarding Bay-Delta Plan Amendment and SED

Dear Ms. Townsend:

The Merced Irrigation District (MeID) provides the following response and comments to the questions distributed by the State Water Resources Control Board (State Water Board) on October 4, 2017 with regard to the State Water Board's September 15, 2016 Draft Revised Substitute Environmental Document (SED) in support of potential changes to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (WQP or Project).

In addition to these responses, MeID refers to and incorporates herein by reference, as appropriate, its March 17, 2017 comments on the SED. MeID also provides these responses without waiving or modifying any statements or information in its prior comments on the SED, and without conceding or admitting the truth or validity of any of the questions from the State Water Board, or the facts and contentions set forth in the questions.

The original questions from the State Water Board are restated in bold, below, and are followed by MeID's response to each question.

1. What specific provisions should be included in the program of implementation to ensure the expeditious implementation of the inflow and cold water habitat objectives?

a. How long should the State Water Board allow for voluntary tributary or regional plans to be developed and implemented to meet the inflow and cold water habitat objectives and what are the minimum provisions those plans should include to be acceptable?

b. What measures should the State Water Board take to implement the inflow and cold water habitat objectives if satisfactory voluntary tributary or regional plans are not developed?

The State Water Board must comply with all legal requirements for a WQP prior to implementing the Project. The "expeditious implementation" of the Project, including any "voluntary tributary or regional plans," should not avoid or bypass necessary requirements for the adoption and implementation of a WQP. MeID does not believe it is appropriate for the State Water Board to propose or ask for suggestions for any "measures" to implement the Project other than compliance with the requirements of California law.

The Project necessarily involves and requires significant changes and modifications to water rights held by MeID and other entities with water rights in the tributaries to the San Joaquin River (SJR). The Project, and in particular the flow objectives, would require a determination, adjudication and modification of the rights of MeID and a number of other parties and entities.

The State Water Board must commence water right hearings prior to or in connection with the implementation of the Project, including any "voluntary tributary or regional plans," In particular, to adopt and implement the Project, the State Water Board would have to first notice and conduct proceedings to modify and change MeID's permitted and licensed rights, and to approve the transfer of water away from MeID. Among other things, the State Water Board must consider the "no injury rule" found in Water Code Sections 1707 and 1736.

A "water quality control plan consists of a designation or establishment of the waters within a specified area of all of the following: (1) Beneficial uses to be protected; (2) Water quality objectives; [and] (3) A program of implementation needed for achieving water quality objectives. (Water Code, § 13050(j).) Water quality objectives "means the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area." (Water Code, § 13050(h).)

Water quality objectives are not self-effectuating; instead, the State Water Board must act separately to implement the actions delineated in the program of implementation. The program of implementation that must be included in every WQP must "include, but not be limited to: (a) A description of the nature of actions which are necessary to achieve the objectives, including recommendations for appropriate action by any entity, public or private. (b) A time schedule for the actions to be taken. (c) A description of surveillance to be undertaken to determine compliance with objectives." (Water Code, § 13242.)

The State Water Board is empowered to undertake both regulatory and adjudicatory functions in allocating water rights and protecting water quality. (Water Code, § 174.) The development of a WQP is a regulatory function, in which the State Water Board acts in a legislative capacity. (*United States v. State Water Resources Control Board* (1986) 182 Cal.App.3d 82, 112, (hereinafter *Racanelli*).) In contrast, in undertaking to allocate water rights, the State Water Board performs an adjudicatory function. (*Id.*, at 113; *State Water Resources Control Board Cases* (2006) 136 Cal.App.4th 674, 697, 720-21.) The State Water Board's amendment of water rights is an adjudicatory function. (*Temescal Water Co. v. Dept. of Public Works* (1995) 44 Cal.2d 90, 100-06.) To the extent implementation of WQPs calls for allocation of water rights, such an allocation is an adjudicatory function. (*Id.*)

The State Water Board is also prohibited from performing adjudicatory functions during the quasi-legislative objective process. The third district appellate court made this prohibition clear when it struck down the State Water Board's 1978 Bay-Delta WQP in *Racanelli*. The *Racanelli* court held the objectives adopted by the State Water Board for an earlier version of the WQP violated the mandate that the State Water Board keep its legislative and adjudicative duties distinct and separate. (*Racanelli*, at 115.) The State Water Board is once again, through the Project, proposing to perform adjudicatory actions under the guise of a legislative process, in violation of *Racanelli*.

The State Water Board does not have unfettered authority to impose a WQP. In its water quality role of setting the level of water quality protection, the State Water Board is required to protect "beneficial uses." The State Water Board is obligated to adopt a WQP consistent with the overall statewide interest in water quality (§ 13240) which will ensure "the reasonable protection of beneficial uses" (§ 13241). Its legislated mission is to protect the "quality of all the waters of the state . . . for use and enjoyment by the people of the state." (§ 13000; *Racanelli*, at 116.)

When establishing water quality plans, the State Water Board is required to consider: (1) past, present, and probable future beneficial uses of water; (2) environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto; (3) water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area; (4) economic considerations; (5) the need for developing housing within the region; and (6) the need to develop and use recycled water. (Water Code, § 13241; *City of Arcadia v. State Water Resources Control Bd.* (2010) 191 Cal.App.4th 156, 176-177.)

MeID maintains that the State Water Board lacks authority and jurisdiction to adopt and implement the Project in its current form, and as defined by the State Water Board. The Project and the SED do not satisfy the requirements for a valid WQP. Specifically, the State Water Board did not weigh and balance beneficial uses in connection with the Project, and the SED, pursuant to Water Code Section 13241. The SED does not provide evidence of any meaningful or actual consideration of the demands of other water users on the Merced River, or other tributaries to the SJR. There is no indication that the State Water Board considered factors and values related to MeID's diversion and use of water, including the beneficial uses made, by MeID, economic and social considerations associated with MeID's diversion and use of water, or any of the other factors listed in Water Code Section 13241.

The State Water Board has not taken necessary steps or followed required procedures to modify or alter MeID's water rights.[1] The State Water Board cannot alter MeID's water rights without the due process protections required by law. (Govt. Code, § 11425.10.) "Procedural due process requires that wherever vested property rights are involved there be due notice to the parties concerned, a right for such parties to appear and answer, and an adjudicative hearing on the facts, either before the administrative agency or a reviewing court." (California Jurisprudence 3rd, § 634, citing *Dare v. Board of Medical Examiners* (1943) 21 Cal.2d 790, also citing *Robinson v. Board of Retirement* (1956) 140 Cal.App.2d 115.)

[1] MeID also maintains that the State Water Board does not and would not have substantive authority to modify, alter and amend MeID's Water Rights, even as part of a properly noticed water rights hearing, in connection with the Project and the SED, and the State Water Board would additionally violate, and improperly adjust, modify, and disregard established water right priorities, including MeID's senior Water Right priorities if it attempted to implement the Project in its present form. (See SED comments, pp.19 to 54.)

The State Water Board must still comply with all CEQA requirements, including all of the requirements for a complete, accurate and proper EIR, prior to implementation of the Project, including by revising and correcting the SED to address all of the points and issues raised by MeID in its comments to the SED, at pages 95 through 132, and by meeting all of the obligations for public involvement and input into the environmental review process. (*Environmental Protection Information Center. v. Johnson* (1985) 170 Cal.App.3d 604, 620.)

The State Water Board's apparent plan to implement the Project, or portions of the Project, through the" Section 401" process for MeID's Merced River Hydroelectric Project Federal Energy Regulatory Commission Project No. 2179) relicensing is not reasonable, practical or authorized by law. In particular, utilization of the relicensing Section 401 process to implement the State Water Board's broad, far reaching and multifaceted water quality project would far exceed the limited authority granted to the State Water Board to issue a Section 401 Water Quality Certificate (WQC). The ongoing, long-term vague and uncertain components and features of the Project also cannot practically or reasonably conform to the Section 401 WQC process.

MeID believes the State Water Board should encourage and support adaptive, flexible and creative voluntary plans to satisfy the goals of the WQP. The State Water Board should not require certain features or components in every plan, but should approve and adopt different and varied plans for different and varied stream systems and to ensure protection of different existing rights and beneficial uses.

A "voluntary plan" should only be implemented after the proponent of the plan, and the State Water Board, comply with all applicable requirements for the plan, including compliance with CEQA, and the National Environmental Policy Act (NEPA), if applicable. Other issues, including the duration and scope of any such plan, and the process for implementation, would have to be negotiated and agreed upon by all interested and affected parties.

A voluntary plan should also not be implemented until any and all other voluntary plans or agreements have been approved and accepted by the State Water Board, and have complied with all applicable requirements for the implementation of such plans. At the very least, if a voluntary plan is approved and implemented prior to approval of a complete, proper and valid WQP, or in advance of an overall, global settlement, the plan should be subject to modification and adaptation to fit into and be consistent with the final WQP or overall settlement. Any voluntary plan should also allow for termination or modification in the event the State Water Board does not adopt or agree on a valid proper plan or WQP for the entire region, or as necessary to protect established water rights and beneficial uses.

2. How should the State Water Board ensure that water released to meet objectives is protected through the system and not rediverted for other purposes?

This question identifies a significant problem and concern with the WQP, and the SED. The question highlights the need for the State Water Board to consider voluntary agreements and alternate arrangements for meeting the goals of the WQP, such as MeID's proposed "SAFE Plan" (Salmon, Agriculture, Flows, and Environment Plan), which do not focus on or exclusively require "releases" of water, or the rigid and extreme curtailment of diversions, to meet the goals of the WQP.

The State Water Board should also not implement the Project, or alternate voluntary agreements, until it has imposed sufficient limitations on all diverters on a stream system or river, after undertaking any and all required water rights hearings, and related proceedings.

The State Water Board should also allow for flexibility and future modification or adjustment of the WQP so that certain water right holders, such as MeID, are not unfairly and unreasonably prejudiced by the WQP and the actions of other water users following implementation of the WQP.

MeID's diversions from the Merced River, for example, are located approximately four miles downstream of McSwain Dam and upstream of the majority of other diversions along the Merced River. As the reservoir operator and due to the location of MeID's Main Canal and Northside Canal, there is the potential for MeID to incur the largest water supply impact from the WQP compared to other diverters on the Merced River. This is because MeID will likely be held accountable to ensure that the flow below its points of diversion is sufficient to meet new minimum flow requirements, not only below its diversions, but past all other diverters on the Merced River.

The State Water Board needs to ensure that reservoir operators do not bear the entire responsibility of achieving the flow requirements. This may be done through confirmation of statement holders' claims and proper curtailment of junior diversions.

The State Water Board also needs to implement the water right priority system to make sure junior water right holders are not diverting from the Merced River unless MeID is able to divert its full demand under its appropriative water rights.

Furthermore, the State Water Board should verify that all users claiming riparian and pre-1914 water rights have a valid claim, and those diverting under a riparian claim are applying the water only to riparian lands. In 2015, the State Water Board initiated this process by issuing an Informational Order (Order WR 2015-0002-DWR) requesting information supporting Statement holders' claims of riparian and/or pre-1914 water rights. This Informational Order was issued to obtain information regarding only four Statements of the 67 consumptive use Statements on file with the State Water Board for diversions from the Merced River. Three of these Statement holders, including MeID, responded to the State Water Board's Informational Order and provided documentation. Based on information obtained through the Informational Order and other water rights information, the State Water Board compiled multiple databases to analyze water availability during 2015.

In addition to the minimum flow requirement at Stevinson in the SED, the SED states that the Project would have a base flow of 1,000 cfs in the San Joaquin River at Vernalis from February through June. The SED states that if 40 percent of the unimpaired flow (UIF) from the Merced, Tuolumne, and Stanislaus rivers does not result in 1,000 cfs at Vernalis, then the Merced River would be required to contribute 24 percent of any additional flow needed to maintain this minimum base flow. In the event of this occurrence, the State Water Board must also properly curtail diverters junior to MeID's Pre-1914 water right on the SJR between the confluence with the Merced River and Vernalis. The data and information presented above for the Merced River should be extended for the lower SJR (LSJR) to Vernalis. This will ensure that MeID is not required to bypass additional flows that are diverted downstream by a junior user.

Additionally, the concept that the Merced River should contribute 24 percent of any additional flow needed is not in accordance with water right priorities. In the event that additional flow is needed at Vernalis, the source of the additional flow should be determined in accordance with the water right priority system for all water rights upstream of Vernalis, including those on the SJR upstream of the confluence with the Merced River

The Project will, therefore, unreasonably and negatively impact MeID's ability to divert water from the Merced River under its Pre-1914 water rights. MeID questions the State Water Board's authority to implement a project which will essentially curtail MeID's Pre-1914 water right diversions during non-emergency conditions. This analysis further emphasizes the need for the State Water Board to effectively enforce the water right priority system and ensure that the flows required to meet the proposed LSJR flow objectives are not diverted for other purposes, which would result in further adverse impacts to MeID.

Adoption and implementation of the Project would additionally violate, and improperly adjust, modify, and disregard established water right priorities. In particular, the Project would violate historical priorities based and established on the timing of appropriations and issuance of permits, as well as state priorities and policies based on the use of water. The Project would specifically violate the rule of priority by restricting and limiting MeID's senior water rights, without placing corresponding or similar restrictions on more junior water rights.

3. What improvements should be made to measure compliance with the existing Delta outflow objectives (that are intended to be retained), and with the proposed new inflow-based Delta outflow objectives?

Compliance with any WQP should be measured by looking at broad, long term, factors and results. Compliance should not be based on or measured solely by narrow, arbitrary, rigid, or data driven requirements, such as rigid flow or temperature requirements, or based entirely on speculative, perceived changes in environmental conditions.

Compliance also should also be considered broadly, based on a wide range of goals and interests, including protection of existing rights and other beneficial uses. Compliance should be measured and determined comprehensively, based on impacts on a number of factors, including agriculture, local water quality conditions, and the environment.

MeID's alternate SAFE Plan, for example, would measure compliance, and satisfaction of WQP goals, based on:

- Increased flows of water in the Merced River, increased over current obligations, but based on sound science and coupled with eco-system improvements and predation management, and appropriate flow releases would be made at times proven to benefit migratory salmon.

- Restoration of designated areas of riparian and salmon-spawning and rearing habitat along the Merced River.

- Increased Salmon Hatchery production, based on the modernization and expansion of the existing Merced River Salmon Hatchery to increase production and survival.

- Implementation of a comprehensive Salmonid Predator Management Plan, which includes manually removing bass from the river, and filling in bass spawning and rearing areas, many of which occur in isolated, off-channel ponds.

In contrast, the SED does not provide or reference enough evidence to support the contention that a focus on increased flows will alleviate the problems discussed in the SED, or that it will help satisfy the stated goals of the Project. (See SED, p. ES-9.) There is insufficient evidence that the required flows will mimic or relate to "natural flows." There is also no evidence that February and June flows will protect fish. The flow objectives are not reasonably tailored to different conditions, features, hydrology and topography of specific rivers and streams. The "one size fits all approach" for flows is not proper or justified.

The SED also does not sufficiently quantify the claimed benefits of the Project. In particular, the SED does not clearly or consistently quantify or explain specific benefits to fish populations in the affected rivers. At the State Water Board's initial November 29, 2016 hearing on the SED, in fact, representatives of several environmental groups agreed that the SED does not evidence or demonstrate any tangible benefit to native fish population as a result of the increased flows called for in the SED.

The burden and responsibility for compliance should also not fall too heavily or inequitably on a single water right holder, or holders, or a smaller group or class of entities and water users. Instead, any measurement or consideration of compliance with the WQP should take into account the need to avoid or minimize adverse impacts on MeID, and other water right holders on the tributaries to the SJR.

The SED does not demonstrate or even claim that the actions of MeID have negatively impacted water quality in the Delta, or within the Merced River. There is no evidence of any connection between the actions of MeID, the remedies sought to be imposed on MeID, and the alleged environmental "crisis" identified in the SED.

The State Water Board accordingly has not made a sufficient showing or justification for the relief and remedies sought against MeID through the Project and SED. Absent any finding of a violation of any law or regulation on the part of MeID, and absent any evidence of causation, there is absolutely no justification for the extreme and unreasonable remedies and relief the State Water Board seeks to impose on MeID and other diverters.

The SED further does not establish or even indicate that the remedies and limitations imposed on MeID will actually alleviate the claimed water quality "crisis." The SED does not demonstrate that the flow objectives in the Project, as discussed in the SED, will have a positive impact on water quality in the Bay-Delta. There is no evidence that the arbitrary "range" of flows for the Merced River will actually improve water quality in the Merced River or the Bay-Delta, or help the environment, or that it will minimize impacts or protect other uses of water. Absent such evidence, the State Water Board cannot determine compliance, and cannot impose the remedies and limitations within the Project on MeID.

It will also be difficult to measure and determine compliance, based on the vague, uncertain objectives for the Project, and the lack of sufficient explanation and details in the SED. The environmental analysis in an EIR is required to contain: (1) an identification of the reasonably foreseeable methods of compliance with the project; (2) an analysis of any reasonably foreseeable significant adverse impacts associated with those methods of compliance; (3) an

analysis of reasonably foreseeable alternative methods of compliance that would have less significant adverse environmental impacts; and (4) an analysis of reasonably foreseeable mitigation measures that would minimize any unavoidable significant adverse environmental impacts of the reasonably foreseeable methods of compliance. (23 Cal. Code Regs. § 3777(b)(4).) The SED violates 23 Cal. Code Regs. Section 3777, as it does not specifically identify or disclose the primary proposed method of compliance with the Project. The SED fails to identify or consider other reasonably foreseeable methods of compliance. Instead of identifying a primary method of compliance, the SED presents a confusing, inconsistent and unclear description of the Project itself, and the procedure and process for compliance with the Project.

The "narrative element" of the Project objectives, for example, is vague and uncertain, and MeID and other impacted entities cannot determine with any certainty how to comply with that objective, or how that objective will be implemented. The "unimpaired flow range element" of the objective is also uncertain, as the State Water Board has proposed that flows should be "30 to 50 percent of unimpaired flow," which provides no certainty as to how entities will actually have to comply with the Project requirements. (SED, p. ES-11.) The SED also indicates that the "STM Working Group" will have authority to adjust the flows in the impacted rivers "to any value between 30 percent and 50 percent, inclusive," which creates even further uncertainty over the method of implementation and compliance with the Project. (SED, Appendix K, p. 30.)

The SED further states: "The unimpaired flow requirement is also not intended to remain at one fixed percent, but rather to be adaptively implemented within a range of unimpaired flow in response to changing information and changing conditions." (SED, p. ES-16.) This proposal for "adaptive management" violates the requirements of CEQA by failing to provide clear direction or guidance on compliance.

It is not clear how parties can comply with the "non-flow actions" described in the SED. (ES-19.) The SED does not identify such non-flow actions with any specificity, nor does the SED provide any indication as to how entities might comply with those requirements, or what impacts would arise from such actions. In particular, the indication that the Project may be implemented through "voluntary agreements" creates considerable uncertainty with regard to the method of compliance for the Project.

By developing numeric objectives that can only be achieved through the imposition of restrictions on a select group of water users, the State Water Board has unlawfully "ignore[d] other actions which could be taken to achieve Delta water quality, such as remedial actions to curtail excess diversions . . . by other water users" and/or flow contributions from other water users within the system. (*Racanelli*, at 120.) The necessary "global perspective" which considers all available water resources is severely lacking here. (*Racanelli*, at 119.) The beneficial uses to be served must drive the objectives (Water Code, § 13241), not the ability of the State Water Board to obtain/regulate water right holders. (*Racanelli*, at 120.) "As the objectives do not consider "[w]ater quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area," the State Water Board's proposed amendments to the water quality control plan are in violation of Water Code, Section 13241(c).

The State Water Board should therefore substantially revise the SED to comply with CEQA and other applicable legal requirements, as described in MeID's comments on the SED and in response to Question No. 1, above, so that the parties can properly determine how to comply with the WQP.

4. Understanding that the proposed outflow objective is derived from the inflow objective but will require some accounting methodology to accommodate Valley floor and Delta accretions and depletions and floodplain inundation, how should implementation and compliance with the new inflow and inflow-based Delta outflow objectives be coordinated?

The State Water Board should substantially revise the SED to comply with CEQA and other applicable legal requirements, as described in MeID's comments to the SED, and in MeID's response to Question Nos. 1 and 3, above, before it attempts to implement the Project, measure compliance with the Project, or "coordinate" any aspect of the Project, including "new inflow and inflow based Delta outflow objectives."

Any attempt to implement the Project, to determine compliance with the Project, or to coordinate the objectives of the Project, at this time, without a proper, valid SED and without the State Water Board having complied with the requirements for the adoption and implementation of a WQP, would be improper and in violation of numerous legal requirements and policies.

The WQP should not be implemented, imposed, or coordinated on a piecemeal basis, but only after the State Water Board has complied with all applicable legal requirements, including holding water rights hearings, and by complying with CEQA and other environmental review requirements. The State Water Board also has an obligation to adopt a valid WQP that complies with all legal requirements, and which is properly coordinated internally, as well as in connection with other uses, rights and demands.

In its present form, as described in the SED, the Project is not internally consistent or properly coordinated. For example, by only requiring the maintenance of UIF below the rim dams on each of the three eastside tributaries, and by only requiring contributions from the three eastside tributaries to meet the Vernalis Flow Objective, the State Water Board's proposed objectives are designed in such a way that they can only be enforced against water users who divert from the Stanislaus, Tuolumne and Merced rivers, upstream of the compliance points on each of those rivers. The major water users on those rivers include MeID, as well as South San Joaquin River Irrigation District (SSJID), Oakdale Irrigation District (OID), Turlock Irrigation District (TID), and the City and County of San Francisco. (SED, 2-7, 2-18.) All of the water users upstream of the confluence of the Merced River with the SJR are notably exempt from this regulation, as are the water users on the westside of the SJR, and the water users on the Calaveras, Mokelumne and Consumnes rivers (see SED, Figure ES-1 [showing the Calaveras, Mokelumne and Consumnes Rivers in the San Joaquin River Basin]). By exempting these water users and the resources available to them in the current analyses, the State Water Board has improperly ignored numerous and significant water resources that should have been included in developing the objectives designed to protect "the natural production of viable native SJR watershed fish populations migrating through the Delta." (SED, Appendix K, p. 18.)

The State Water Board has also ignored the water users on the LSJR that are downstream of the compliance points on each of the three eastside tributaries. The State Water Board has ignored contributions from the tributaries downstream of Vernalis, including the Calaveras, Mokelumne and Consumnes rivers. Similarly, the Project Area includes the Southern Delta, and rightfully so, because the SJR enters and supplies water to the Southern Delta. The WQP only addresses salinity impacts to lands in the South Delta. There is no requirement that South Delta water users

contribute to the flow objectives by curtailing diversions, or taking any other action, in order to achieve the objectives for fish and wildlife beneficial uses, despite the fact that the WQP explicitly states that "the objectives are intended to protect Migratory Lower San Joaquin River fish in a larger area, including the Delta." (SED, Appendix K, p. 28.)

The SED additionally does not indicate whether and to what extent riparian water right holders, and municipal water users and right holders, will be impacted by the Project. It does appear that riparian and municipal water users will not have contributed water to the Project, which further highlights the selective, unreasonable, unfair and illegal nature of the Project.

The Project, and the SED, do not coordinate, consider or take into account that factors besides flow, such as predation, are the primary controlling environmental conditions with regards to the survival of fish and wildlife beneficial uses on the Tuolumne, Merced, and Stanislaus rivers (e.g., TID and MID 201310). Adding more flow to these rivers will not adequately reduce the impacts of predation on fish and wildlife, and in fact, on the Merced River there is substantial scientific evidence that indicates adding substantially more water to the river will achieve the exact opposite result, improve conditions for predatory fish, and reduce salmon survival. These studies have been provided to the State Water Board previously. Further, the local environmental conditions do not reflect that fish and wildlife mortality is caused by dewatering, lack of velocity, lack of water quantity, impaired water quality, or other flow related conditions.

5. What approach should the State Water Board use to transition from the current Delta outflow objective in Table 4 of the 2006 Bay-Delta Plan to a new inflow-based Delta outflow objective to ensure that Delta outflows are not reduced while the tributary inflow requirements are being implemented?

The State Water Board should substantially revise the SED to comply with CEQA and other applicable legal requirements, as described in MeID's comments to the SED and in response to Question Nos. 1 through 4, above, prior to any attempt to implement the Project.

MeID further points out that the State Water Board has exceeded its jurisdiction, and violated the Porter Cologne Act, by attempting to regulate waters outside of the geographical boundaries of the Bay-Delta Plan for the benefit of fish and wildlife resources, also outside of the geographical boundaries of the Bay-Delta Plan.

The SED expressly states: "This Water Quality Control Plan covers the Bay-Delta Estuary and tributary watersheds (Bay-Delta Plan or Plan)." (SED, Appendix K, p. 1, emphasis added.) The SED describes the "plan area" as the Stanislaus River watershed from New Melones Reservoir to the confluence of the SJR, the Tuolumne River watershed from New Don Pedro Reservoir to the confluence of the SJR, and the Merced River watershed from the Lake McClure to the confluence of the SJR, as well as the mainstem of the SJR between its confluence with the Merced River downstream to Vernalis. (SED, 1-2.)

The Bay-Delta Plan regulates the waters within the San Francisco Bay and the Bay-Delta Estuary. (1978 Bay-Delta Plan, at I-3 [stating the purpose of the plan is to "protect beneficial uses of Delta water supplies."]; 2006 Bay-Delta Plan, at 1.) This includes the waters of the San Francisco Bay, the San Pablo Bay, the Suisun Bay, the water bodies of the interior Delta, the Sacramento River from the Delta up to the confluence of the American River, and the Lower San Joaquin River from the Delta up to Vernalis. (2006 Bay-Delta Plan, Figure 1.)

The Legislature has not expanded or altered the "legal boundaries of the Delta" since the issuance of the *Racanelli* decision. The State Water Board does not have authority to expand the boundaries on its own, without new legislation. The State Water Board does not otherwise have authority to expand the Bay-Delta Plan beyond the legal boundaries of the Delta, nor does the State Water Board refer or cite to any authority which allows it to expand the reach of the Bay-Delta Plan, or the Project, beyond the boundaries of the Delta. The Legislature in particular has not expanded the boundaries of the Delta to include the "tributary watersheds" of the Delta.

The State Water Board therefore does not have authority or jurisdiction to implement the Project, or to regulate water quality through the Bay-Delta Plan, within the Merced River, outside the boundaries of the Delta.

The Merced River instead is within the Sacramento and San Joaquin River Basins, and any regulation of water quality within the Merced River would require an amendment to the Water Quality Control Plan for the Sacramento and San Joaquin River Basins. The State Water Board would also have to conduct appropriate environmental review of the amendment to that Water Quality Control Plan.

6. How should the State Water Board account for flows provided for floodplain inundation to benefit native species?

At the outset, MeID points out that the SED proposes higher flows of water to improve water quality in the Bay-Delta region, not in the Merced River. It is therefore not clear if this question addresses floodplain inundation only in the Bay-Delta to benefit native species. It is also not clear how the State Water Board will account for flows provided in floodplain inundation within the Bay-Delta, as the SED fails to provide information regarding flood plain inundation within the Bay Delta.

Floodplain, depending on the definition of floodplain, inundation may be beneficial for juvenile salmonid growth and survival depending on a number of conditions (e.g., timing, duration, condition of the floodplain inundated, water temperature and proximal predator habitat) that are very location-specific However, the State Water Board fails to disclose that the physical condition of most of the Merced River's floodplain would not provide these benefits. Merced River floodplains are generally structurally unsuitable in the upper reaches of the river due to dredger tailings and mining pits, and in the lower river due to agricultural production adjacent to both sides of the river.

The SED, moreover, fails to demonstrate that floodplain inundation, as contemplated by the Project, would actually further or promote the goals of the Project, or would provide substantial or measureable benefits to water quality, or native fish populations, in the SJR or the SJR tributaries, including in the Merced River.

Although the State Water Board claims substantial benefits to juvenile salmonids associated with an increase in floodplain inundation in the Merced River, when accounting for local biologic and ecologic conditions in the Merced River and fall-run Chinook salmon (*Oncorhynchus tshawytscha*) life history, there is substantial uncertainty in whether there would be any biological benefits associated with the increased floodplain inundation under the State Water Board's alternatives.

Although restoration activities have recently been conducted and are ongoing in the upper reach of the Merced River, including floodplain habitat rehabilitation, the State Water Board fails to specifically account for or differentiate between the restored floodplain habitat, which is a very small portion of the lower Merced River, and the remainder of the floodplain of the Merced River. Because the State Water Board does not differentiate between the inundation of restored and non-restored floodplain, the biological benefits of the floodplain inundation reported by the State Water Board are highly uncertain. As described in more detail in Section 6.2.1.4.3 in MeID's comments to the SED, the physical condition of Merced River's floodplains is generally unsuitable for juvenile salmonids. In addition, the restored floodplain areas were designed to function under the existing flow regime. The State Water Board also fails to evaluate potential negative impacts of the alternatives on the restored areas of the Merced River.

In addition to poor physical floodplain habitat on the Merced River, the floodplains of the Merced River would be expected to have elevated water temperatures compared to the Merced River. Specifically, because of the predominance of dredger tailings and the lack of riparian vegetation, the shallow inundated floodplains would absorb more solar radiation and increase in temperature more quickly than the Merced River. As stated by CDFG (2010, p. 719), "...water temperatures within the floodplain tend to be more variable and more responsive to ambient temperatures than in the river channel because they are typically shallower and have slower velocities." Elevated water temperatures may reduce growth of juvenile salmonids in the absence of sufficient food availability on the floodplain, particularly in consideration of the poor quality of the floodplain habitat in the Merced River.

Although the State Water Board fails to evaluate the potential for stranding and isolation of juveniles on the Merced River's floodplain, visual examination of the floodplains of the Merced River (see Figure 6.2-1, above) indicates that the upper reaches of the river are surrounded by dredger tailings and mining pits, which would likely result in stranding or isolation of juveniles that entered the floodplains under increased flows. Moyle et al. (2007, as cited in CDFG 2010) suggest that successful native fish utilize and leave floodplains before the river disconnects from the floodplain. Chinook salmon have been reported to show reduced incidence of stranding compared to non-native fish species in the Consumnes River (Moyle et al. 2007, as cited in CDFG 2010), however, stranding of native fish that has been reported on the Consumnes River floodplains was concentrated in unnatural features, such as ponds built for waterfowl (California Bay-Delta Authority 2003).20 Similarly, by the time the Merced River floodplain would start to disconnect from the Merced River, mining pits would have already been hydraulically disconnected from the floodplain, which would result in the isolation (and likely eventual mortality) of juvenile salmonids.

Extended inundation of the Merced River floodplains for a longer duration may provide for additional suitable habitat for non-native predators of juvenile salmonids such as striped bass and black basses, particularly when water temperatures are relatively warm during April and May. For example, largemouth bass (*Micropterus salmoides*) and smallmouth bass (*Micropterus dolomieu*) have been found to be primary predators of juvenile Chinook salmon in the lower Tuolumne River (TID and MID 199221). Largemouth bass also have been found to be keystone predators of native fish species in the Bay-Delta, particularly during spring months (Nobriga and Feyrer 200722). The State Water Board (2010, p. 6223) indicated that floodplain inundation during the late spring may allow for non-native fish access to floodplains. Despite the increase in floodplain inundation under the State Water Board's alternatives in the Merced River during April and May, the State Water Board does not address impacts of non-native fish species on

juvenile salmonids on the floodplains. In addition, relatively low water depths (e.g., less than 30 cm) on a floodplain may increase the susceptibility of juvenile salmon to predation by avian predators (CDFG 2010).

In addition to not addressing floodplain habitat quality, the State Water Board does not disclose the spatial distribution of floodplain inundation under its alternatives in the Merced River. With the exception of a few small areas in the upper reach of the Merced River where restoration has occurred, promoting inundation of lands outside of the main channel of the Merced River is not expected to improve overall survival of juvenile salmonids emigrating from the Merced River to the Bay-Delta. Nonetheless, the State Water Board could not have conducted a sufficient evaluation of effects of floodplain inundation in the Merced River on juvenile salmonids without addressing the spatial distribution of flooded areas.

Overall, the increase in floodplain inundation under the State Water Board's alternatives in the Merced River is not expected to increase overall survival of juvenile salmonids emigrating to the Delta, in consideration of: (1) the poor physical quality and lack of food production potential of the Merced River floodplains; (2) elevated water temperatures on the floodplain; (3) potential for stranding and isolation of juveniles on the floodplains; (4) potential predation of juveniles on the floodplains; (5) unknown spatial distribution of floodplain inundation; and (6) the timing of the floodplain inundation on the Merced River.

In addition, although not reported by the State Water Board in the discussion on page 7-100 of the SED, Table 7-15b indicates that floodplain inundation area in the Tuolumne River decreases by an average of 54 acres during February. The change in frequency of inundation events during February is not known because it is not reported in Table 7-15b and is not disclosed in the discussion on page 7-100. Nonetheless, fry and juvenile rearing habitat is substantially reduced during February, March, April and May, and floodplain inundation appears to be substantially reduced during February and March. The State Water Board appears to conclude that because floodplain inundation events increase substantially in frequency during April and May, conditions would be more suitable overall for fry and juveniles. However, no analysis is presented on why increases in floodplain inundation during April and May, in combination with reductions in floodplain inundation during February and March, and substantial reductions in fry and juvenile rearing WUA during February, March, April and May, would result in improved conditions for fry and juveniles in the Tuolumne River. In addition, as previously commented on, the percentage change in floodplain inundation events is only meaningful with the appropriate context (i.e., the absolute number of floodplain inundation events under each scenario), which is not reported by the State Water Board.

Similar comments as described above for the Tuolumne River provided by Merced ID also apply to the Merced River. For example, the State Water Board fails to analyze how increases in floodplain inundation frequency during April and May result in overall improvements to fry and juveniles, in consideration of substantial reductions in average juvenile rearing WUA during April and May, and a substantial reduction in average floodplain inundation area during February (Table 7-15c) (the change in inundation frequency during February is unknown because it is not reported by the State Water Board).

As discussed in Section 6.2.1.4.8 of MeID's comments to the SED, the SED's alternatives increase Merced River floodplain inundation primarily during April and May. This indicates that the SED's alternatives are attempting to promote juvenile fall-run Chinook salmon to stay in the Merced River during April and May associated with "floodplain" inundation flows. However,

this is expected to reduce survival rates of juvenile outmigrants due to a delayed emigration to lower Merced River, the San Joaquin River and Bay-Delta, when water temperatures are becoming unsuitable for juvenile salmonids. This is supported by a study in the lower American River, which found that increased floodplain inundation in the lower American River likely increased juvenile retention in the river (Sellheim et al. 201546). The State Water Board's analysis shows that water temperatures become increasingly less suitable (according to the State Water Board's 7DADM criteria) during April and May in the Merced River. In fact, modeled average 7DADM water temperatures under the UIF alternatives still do not meet the USEPA 7DADM water temperature guideline for smoltification in the SJR at Vernalis during April, May or June (page 7-125), potentially minimizing any potential water temperature benefits in the tributaries.

7. How should the State Water Board structure adaptive management for the new objectives?

MeID generally supports adaptive management methods, projects and goals to ensure compliance with the requirements for a valid and proper WQP, as described in its responses to Question Nos. 1 and 3, above.

The State Water Board, however, has not provided sufficient information in the SED regarding appropriate or proper adaptive management methods that could be utilized to accomplish the goals of the Project. The State Water Board additionally has not sufficiently identified the environmental impacts associated with such adaptive management programs and methods.

Although the SED describes several adaptive management methods that may be implemented as part of the Project, the conditions and triggers for implementing each method are not defined. These adaptive management methods include: (1) increasing or decreasing the percent of unimpaired flow; (2) varying the minimum flow rate from a 7-day average of the UIF within the February through June period; (3) shifting of a portion of the February through June UIF volume outside of the February through June period; and (4) modifying the minimum flow at Vernalis within the range of 800 to 1,200 cfs. It also appears that the Project will set minimum pool levels in certain affected reservoirs, but that is not clear from the SED.

Since it is unclear if, or when, these adaptive management methods may be implemented, MeID does not assume the methods are part of the Project. However, MeID provided comments on several of the adaptive management methods described in the SED in its comments to the SED. MeID also raised a number of concerns with some of the adaptive management methods described and proposed in the SED.

For example, adaptive adjustments 2 and 3 both have the potential to improperly infringe upon MeID's existing water rights due to the implicit requirement for MeID to utilize its water rights to store water specifically for fish and wildlife beneficial uses. Both of these adaptive adjustments envision an operation that may require MeID to collect water to storage in Lake McClure, presumably under MeID's existing water rights, specifically for the purpose of subsequently releasing the water downstream for fish and wildlife beneficial uses. This required operation is problematic for multiple reasons.

First, MeID's water right licenses for diversion to storage in Lake McClure do not include fish and wildlife protection as a beneficial use, nor do the licenses include the Merced River or Bay-

Delta as places of use. It would require a change to MeID's water rights to allow for the storage of water specifically for this purpose, and likely require a change to add the Merced River and Bay-Delta as places of use to help protect bypassed and released water from diversion by other water users.

Second, the State Water Board lacks authority to require this change, as it goes beyond the scope of terms and conditions typically included in water right permits and licenses. MeID's existing water right licenses contain bypass or release requirements to maintain minimum flows in the Merced River at Shaffer Bridge. These minimum flow requirements are typically less than inflow to Lake McClure and are, therefore, a requirement to bypass - and not divert the natural flow. Occasionally the existing minimum flow requirements can exceed inflow. During these limited periods in the past, MeID has released and abandoned previously stored water to augment the bypassed natural flow and maintain the existing minimum flow requirements.

Adaptive adjustments described in the SED go well beyond these limited periods and relatively small volumes of water. A requirement to shift as much as 25 percent of the February through June flow requirement can require storing in excess of 100,000 ac-ft specifically for fish and wildlife beneficial uses (Figure 4.1-3), based on a 40 percent of UIF requirement. Additionally, while analysis by State Water Board staff only included flow shifts in wet and above normal year types, the requirement to shift flows could occur every year based on the decision of the Stanislaus, Tuolumne, and Merced (STM) Working Group and the State Water Board's Executive Director. (SED Appendix K, page 30.)

Third, it is unclear from the description of the alternatives in the SED how this portion of the February through June UIF would interact with MeID's flood control obligations. There are multiple potential issues with water stored as part of an adaptive adjustment and flood control operations at New Exchequer Dam. The SED does not provide an adequate description of how the State Water Board intends to implement adaptive adjustments to allow MeID to understand the scope of the potential impacts. Implementation of the adaptive adjustments should be clearly described in the SED in order to allow a more full analysis of the effects of the adjustments. Two specific items that require additional definition are: 1) when it is possible to store water as part of the adaptive adjustment, and 2) when does any water stored as part of the adaptive adjustment spill?

MeID encourages the State Water Board to propose and consider additional, proper, useful and practical adaptive management methods in a revised SED which complies with CEQA and all other applicable legal requirements. MeID also encourages the State Water Board to be open to accepting adaptive management methods and options proposed by current water users and right holders, such as MeID, as either an alternative to the Project, or as a means and method of complying with the WQP. MeID's SAFE Plan, for example, provides a comprehensive alternative method of compliance aimed directly at supporting salmon, agriculture, local water quality and the environment.

8. How should the State Water Board ensure that non-flow measures included in voluntary tributary or regional plans are implemented in a timely and effective manner?

If a "voluntary plan" which includes non-flow measures is developed and agreed upon by the State Water Board, the plan could be implemented as soon as the proponent of the plan, and the

State Water Board, comply with all applicable requirements for the plan, including compliance with CEQA and NEPA, if applicable. (See MeID's response to Question 1, above.)

Non-flow measures in any voluntary tributary or regional plan should be designed for a specific flow regime in a river or stream system, and should also remain flexible to accommodate changes in flows following implementation of the entire Bay-Delta WQP, or as a result of other changes in flow conditions. Parties should be able to adjust and modify non-flow measures to avoid adverse impacts and to ensure that such measures will continue to be effective in the future, while still protecting beneficial uses and established water rights.

Other issues, including the timing and process for implementation of the plan, and criteria for determining the effectiveness of the plan, would have to be negotiated and agreed upon by all interested and affected parties. Implementation of voluntary plans, and the process for determining the effectiveness of voluntary plans, will also likely vary for each voluntary plan agreed to by the State Water Board, based on the details and requirements for each plan, and based on differences on physical, practical, geographic and legal differences within varying stream systems and watersheds.

If a voluntary plan is approved and implemented prior to approval of a complete, proper and valid WQP, or in advance of an overall, global settlement, the plan should be subject to modification and adaptation to fit into and be consistent with a final WQP or overall settlement. Any voluntary plan should also allow for termination or modification in the event the State Water Board does not adopt or agree on a valid, proper plan or WQP for the entire region, or as necessary to protect established water rights and beneficial uses.

Finally to ensure that voluntary agreements which include non-flow measures are proposed, adopted and implemented in a timely and effective manner, the State Water Board should give local water right holders and diverters sufficient time to develop voluntary agreements, with non-flow measures, instead of attempting to quickly adopt and implement the Project without complying with all legal requirements. The State Water Board should give allow local water right holders and diverters, with the most knowledge and experience with local water conditions, the flexibility and incentive to develop and implement voluntary agreements, with non-flow measures, which will best satisfy and support the objectives of the Project, while reducing adverse impacts on local communities and other beneficial uses.

As previously noted, MeID's SAFE Plan for the Merced River is an example of the multi-benefit, and localized, plan which the State Water Board should approve and adopt, as an alternative to the Project.

9. What specific drought measures should be included in the Bay-Delta Plan?

Any WQP, or voluntary agreement, should allow for flexibility, adaptation and relief in the event of severe or significant drought conditions, including multiple dry years, in order to protect all beneficial uses of water and local water supplies.

The WQP should include objective measures for modification or suspension of various features and requirements of the plan as a result of drought conditions, such as suspending or reducing releases of water for water quality purposes, and allowing diversion and storage of water supplies which would otherwise remain in a river channel for water quality purposes.

The State Water Board should provide for flexibility and modification of the WQP based on drought conditions, and to account for new regulations and emergency proclamations and measures intended to address future drought conditions. Some entities may suffer more severe negative impacts, for example, as a result of emergency drought regulations and restrictions, when combined with the impacts of the WQP. The WQP should therefore allow for varying modifications and adjustments based on different drought impacts in different watersheds and stream systems, and by different parties, following implementation of the WQP.

Because drought measures and plans vary for water right holders and beneficial users of water, based on differences in water supplies, demands, and other localized conditions and factors, the WQP should also more generally allow for short term suspension or modification of WQP requirements or obligations based on local needs and response to drought conditions.

Most water districts and municipal water purveyors, including MeID, have adopted drought management plans. The Plan, and any obligations or limitations imposed on an entity through the plan should be temporarily modified or suspended pursuant to a drought management plan if the activates a drought management plan or otherwise imposes drought related measures pursuant to a drought management plan.

MeID further points out that the SED is deficient, and not in compliance with CEQA, because it does not analyze Project impacts during dry years or drought conditions. The State Water Board's use of averages to determine Project impacts does not comply with CEQA because the SED does not review the varying Project impacts based on variable water year conditions. (*San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645.) CEQA regulations also prohibits reliance on averages where more specific data is available. (23 Cal. Code Regs., § 3777(c).)

MeID does appreciate the State Water Board asking for input, through these questions, regarding drought measures that should be included in the WQP, but MeID reminds the State Water Board that it must still review the impacts of such measures, and dry and drought impacts in general, in a revised SED before it adopts and implements the Plan.

10. What should be the threshold for triggering drought measures?

The threshold for triggering drought or dry year measures should not be strict or rigid, but should be flexible and variable, based on differing water supplies, geographic location, demands and limitations or regulatory requirements.

Some areas of the region may be more severely impacted than other regions. Impacts from a drought or dry year conditions will also vary based on differing water supplies, demands, and regulatory requirements. Entities with greater stored or reserved water supplies may not, for example, need as much relief from the requirements of the Project as entities that rely more on direct surface water diversions.

To ensure sufficient protection of existing water rights and demands during drought or dry year conditions, entities subject to regulation or otherwise impacted by the Project should have the right to suspend or limit their compliance with the Project, or other aspects of the Project, based on drought or dry year conditions. At the very least, the State Water Board should be required to

give substantial weight to a request from a regulated or impacted entity or water right holder to suspend or modify the requirements of the WQP, based on drought or dry year conditions.

11. How could the State Water Board incentivize creative voluntary drought measures?

See response to Question Nos. 9 and 10, above.

As indicated above, entities adversely impacted by the Project as a result of drought or dry year conditions should have the right to suspend or modify the Project, or their obligations under the Project, to avoid unreasonable and increased impacts from the Project.

In addition, or in the alternative, the State Water Board should allow entities impacted by drought or dry year conditions sufficient time, support, resources and opportunity to propose and implement alternate methods of compliance with the WQP, or equivalent water quality protections. The State Water Board should encourage and accept flexible, realistic, practical, manageable, and efficient voluntary drought measures, in order to ensure protection of existing rights and beneficial uses, as well as the water quality protections implemented through the Project, during drought or dry year conditions.

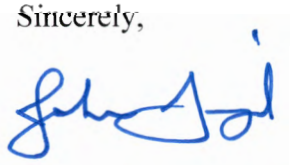
In general, the State Water Board should continue to encourage and incentivize water conservation, storage and banking, and conjunctive use and management of water supplies.

Conclusion

We thank you for the opportunity to provide further comments on the Project and the SED, and to provide further facts and information to the State the State Water Board.

For further reference to MeID's rights and interests, and position with regard to the Project and SED, please refer to MeID's March 17, 2017 comments to the SED. If you have any other questions regarding these comments, or MeID's previous comments, please contact me.

Sincerely,



John Sweigard, General Manager
Merced Irrigation District