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**Comments on the September 2020 Draft Initial Study/Negative Declaration for Westlands Water District Warren Act Contract for Groundwater Pump-Ins and Conveyance in the San Luis Canal**

Dear Mr. Vang:

Thank you for the opportunity to comment. We have reviewed the Draft Initial Study and Negative Declaration (IS/ND) and find that it is incomplete with regard to assessment of environmental impacts and is lacking sufficient data to determine compliance with the provisions of State of California water quality laws under Porter Cologne and the federal Clean Water Act (CWA), the California Endangered Species Act (CESA), the Central Valley Project Improvement Act (CVPIA) and the California Environmental Policy Act (CEQA). The groundwater pump-in project (“Project” or “Pump-In Project”) is a substantial and complex project that clearly requires a comprehensive Environmental Impact Report (EIR) to properly address potential impacts and alternatives to the proposed project. CEQA was enacted to require public agencies and decision-makers to document and consider the environmental implications of their actions before formal decisions are made (Public Resources Code §21002), and to “[e]nsure that the long-term protection of the environment ... shall be the guiding criterion in public decisions” (Public Resources Code § 21001(d)). CEQA compels an informed process.

*It is a meticulous process designed to ensure that the environment is protected.*<sup>1</sup> An informed decision document under CEQA should include all relevant data and supporting information, including past monitoring data along with analysis of that data, and associated contracts and Agreements with State and Federal agencies to help inform the public and decision makers as to impacts and guide future implementation of the project. There are significant data gaps in the IS/ND that hinder the public and decision makers' from making an informed decision regarding the potential environmental consequences of allowing these discharges of contaminated groundwater into the San Luis Canal/California Aqueduct (SLC/Aqueduct). Also completely neglected are the impacts from discharging this contaminated water and substituting or exchanging it with water exported from the Delta Estuary or other exchanges that have the potential to impact the American River, Yuba River, Sacramento River and Shasta dam operations.

Westlands Water District (Westlands), an agency of the state with a singular focus of providing irrigation water, is not the appropriate lead agency for such a complex project impacting a broad geographical area. The inadequate IS and ND are the latest examples of the failure of Westlands to provide sufficient information to the public and impacted downstream beneficial water users. As stated in previous comments, the Department of Water Resources should be the lead agency for such a geographically complex project that impacts multiple counties and jurisdictions.

There is substantial evidence that previous Westlands groundwater pump-in projects have caused and if permitted again, will continue to cause, water pollution, land subsidence, increased water supply costs to others, and damage to the California Aqueduct, which serves millions of people. The IS/ND fails to provide a complete assessment of the impacts of this project, fails to include effects of these prior pump-ins on subsidence damages to the San Luis Canal (the federal/state portion of the California Aqueduct, SLC), and completely neglects to include any information and analysis of prior water quality data, quantity of groundwater pumped, percent of aqueduct flow comprised of Westlands' groundwater pump-ins, or contaminant mass balance in the SLC from previous groundwater pump-ins associated with this project. Further, the project as described in the IS/ND would violate terms under Article 16(b)(2) of Westlands WIIN Act repayment contracts which we discuss further in our comments below. The IS/ND, as presented, does not support a "fair argument" that this project does not have significant environmental impacts. The project as proposed does not support a "fair argument" that this project does not have significant environmental impacts. A full Environmental Impact Report (EIR) is required so that the environmental impacts, as well as costs and damage to downstream beneficial uses, can be adequately analyzed and described to the public and decision makers.

Further, the CEQA process must be completed before an agency makes a final decision on a proposed action. We note that the IS/ND in the Project Description on page 9 states the conveyance period for 2020 would be between August 1 and December 31. The conveyance period for this project in 2020 should commence when the CEQA and the associated NEPA documentation for this project have been finalized, not before it. Allowing discharge of this contaminated groundwater prior to completion of the CEQA and NEPA analyses precludes public input and analysis. It predetermines the action, contrary to CEQA and NEPA requirements to carefully weigh and consider public input.

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<sup>1</sup> [Planning and Conservation League v. Department of Water Resources \(2000\) 83 Cal.App.4th 892, 911.](#)

In April 2020, Westlands prepared and published a Draft IS/ND for the Project (State Clearinghouse #2020050434). This previous Draft IS/ND was circulated for public review on April 5, 2020 for a period of 30 days. The Draft IS/ND was not adopted and has since been rescinded by Westlands. This new Draft IS/ND prepared by the Westlands incorporates new information and minor revisions to the text of the previous Draft IS/ND and was republished to align with timing of publication of the United States Bureau of Reclamation's (Reclamation) Draft Environmental Assessment (DEA) for the Westlands Water District Groundwater Warren Act Contract (published July 22, 2020). In accordance with the CEQA, Westlands, made this draft IS/ND available for a 30-day public comment period closing on October 1, 2020, State Clearinghouse Number 2020090040.<sup>2</sup> This new Draft IS/ND replaces the prior Draft IS/ND that was published in April 2020 and initiates a new public comment period on the adequacy of this new IS/ND. As noted on page 3 of the revised IS/ND, "...comment letters received on the previous Draft IS/ND will not be responded to unless resubmitted as formal comments on this new IS/ND."

Our organizations provide these comments on the Westlands Groundwater Pumping and Conveyance Project (Pump-in Project). We previously submitted comments on the April 2020 draft IS/ND for the Pump-in Project and we incorporate those comments by reference.<sup>3</sup> In addition, several of the undersigned organizations have previously submitted comments on this project including: 1) Comments on the Draft Environmental Assessment (DEA) for Groundwater Pump-ins Enabled by the U.S. Bureau of Reclamation (Reclamation) Warren Act Contract for Westlands Water District (EA-20-008, CGB-EA-2020- 032)<sup>4</sup> dated August 20, 2020,<sup>5</sup> 2) Comments on Reclamation's DEA on the Westlands Water District Groundwater Warren Act Contract EA-15-001 & FONSI-15-001, dated March 26, 2015,<sup>6</sup> and 3) Scoping Comments for Westlands Water District Proposed "Conveyance of Nonproject Groundwater from the Canal side project using the California Aqueduct" dated March 2, 2010.<sup>7</sup> Our previous comments are incorporated here by reference.

The following evaluation and comments supplement our previous comments with more detail on key issues. Comments are organized in two parts: (1) a summary of the project as described in the IS/ND as

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<sup>2</sup> See: <https://ceqanet.opr.ca.gov/2020090040/2>

<sup>3</sup> [https://calsport.org/news/wp-content/uploads/Env-Advocate-Cmts-WWD-SLC-Pump-in-2020-IS\\_ND\\_6-10-2020-Cal-Aqueduct.pdf](https://calsport.org/news/wp-content/uploads/Env-Advocate-Cmts-WWD-SLC-Pump-in-2020-IS_ND_6-10-2020-Cal-Aqueduct.pdf)

<sup>4</sup> The DEA is available here: [https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc\\_ID=46185](https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=46185)

<sup>5</sup> [https://calsport.org/news/wp-content/uploads/Env-Advocate-8\\_20\\_-2020-Cmts-Re-DEA-for-WWD-Pump-in-SLC\\_Cal-Aqueduct-EA-....pdf](https://calsport.org/news/wp-content/uploads/Env-Advocate-8_20_-2020-Cmts-Re-DEA-for-WWD-Pump-in-SLC_Cal-Aqueduct-EA-....pdf) & [https://calsport.org/news/wp-content/uploads/Env-Advocate-Cmts-WWD-SLC-Pump-in-2020-IS\\_ND\\_6-10-2020-Cal-Aqueduct.pdf](https://calsport.org/news/wp-content/uploads/Env-Advocate-Cmts-WWD-SLC-Pump-in-2020-IS_ND_6-10-2020-Cal-Aqueduct.pdf)

<sup>6</sup> <http://calsport.org/news/wp-content/uploads/Conservation-Gr-Cmt-Ltr-3-26-15-WWD-30-K-GroundwaterDischarge-Warren-Act-Contract-EA-15-001-CMTS-Dra....pdf>

<sup>7</sup> <http://calsport.org/news/wp-content/uploads/Conservation-Gr-FinalScopingCmts-03-02-2010-100K-Pump-in-CalAqueduct.pdf>

background for our critique, and (2) a critique of the project, monitoring plans, and environmental impact analysis.

### **PROJECT SUMMARY**

Under the Pump-in Project, Reclamation would enter into a five-year Warren Act Contract<sup>8</sup> (for the years 2020-2025) to allow Westlands to pump in up to 30,000 acre-feet per year (AF/y) (and up to 150,000 AF over the five-year life of the project) of potentially highly contaminated non-Central Valley Project (CVP) groundwater into the California Aqueduct-San Luis Canal (SLC). Such pump-ins would occur in years in which Westland's CVP allocation is 20% or less. The period of introduction would be between April 1 and August 31 of a given year. However, as it is not possible to begin conveyance by April 1, 2020, the conveyance period for 2020 would be shifted by four months, to between August 1 and December 31. All subsequent years would use the April 1 to August 31 window. According to the IS/ND on page 9, the proposed Pump-in Project would involve four main components: groundwater pumping, water conveyance, ground subsidence monitoring, and water quality monitoring.

Non-CVP water introduced into the SLC would either be directly delivered to agricultural users or wildlife refuges located downstream of the points of introduction or operationally exchanged with Reclamation for a like amount, less conveyance losses, of Westlands' available water supplies in San Luis Reservoir. The delivery of non-CVP water to wildlife refuges is a critical aspect of the Pump-in Project to evaluate because of the sensitivity of the refuges to contamination (discussed in detail below). Exchanged water would either be delivered to agricultural users located upstream of the points of introduction in Westlands or could be exchanged for water stored in San Luis Reservoir as non-CVP water for later delivery to Westlands via the San Luis Canal. The impacts of these exchanges, the quantities, timing, and location from where the water is taken, like the Delta Estuary for example, are not disclosed or defined.

As noted on page 10 of the IS/ND the existing discharge facilities into the SLC have expired licenses and are expected to renew this year. Reclamation proposes to issue a combined 25-year license authorization for all discharge points involved in the proposed Project (identified in Table 1 of the IS/ND, on pages 11-13).

### **Proposed Design Constraints and Operating Criteria.**

The Westlands Pump-in Project is supposed to be subject to water quality monitoring, groundwater monitoring, and reporting requirements as described in Reclamation's current San Luis Canal NonProject Water Pump-in Program 2020 Water Quality Monitoring Plan dated May 2020 (WQMP) and provided in Appendix A of Reclamation's DEA for this project. We note that the WQMP is part of a draft EA that has not yet been finalized by Reclamation.

Further, on page 53 of the IS/ND the following is states, "*USBR, in coordination with DWR and the State Water Contractors, may allow minor exceedances of certain Secondary Title 22 constituents if all*

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<sup>8</sup> The Warren Act (Act of February 21, 1911; Chapter 141, 36 Stat. 925) authorizes Reclamation to enter into contracts to impound, store, or convey non-CVP water in federal facilities, when excess capacity is available. Warren Act Contracts are issued by Reclamation to allow movement of non-federal water through federal facilities.

*primary standards are met due to the less adverse risks to human health presented by those constituents at the secondary maximum contaminant levels.”* There is no definition a minor exceedance is in the IS/ND nor the DEA.

There are numerous inconsistencies, as discussed in our detailed comments below. Further enforcement actions are absent and instead are left to vague assurances between Westlands and Reclamation. These vague assurances do not mitigate impacts nor is it clear how they will be enforced.

### **Water Quality Monitoring Requirements.**

#### Baseline sampling and routine sampling of individual wells

The WQMP requires that all participating wells must have baseline sampling each year before pumping into the San Luis Canal begins for those constituents of concern used for screening-out non-compliant wells. Further, the WQMP requires that for all constituents in the Table 5 short list (except as specified in the footnotes), monitoring will continue to occur weekly for four consecutive weeks, and then monthly for the duration of pumping into the SLC.

In addition, each well is also required to be tested every three years for the full array of Title 22 constituents of concern. On page 7 of the IS/ND it states that, *“Reclamation will allow the introduction of water from two or more wells through one discharge point if the blended water meets the Title 22 standards. Special monitoring may be required for these situations.”* As we discuss in detail below, the Title 22 Drinking Water standard for selenium is not protective of fish and wildlife resources that use water from the aqueduct and this is inconsistent with the short list of water quality standards for selenium set forth in Table 5 in the WQMP. This inconsistency needs to be corrected. Further, the impacts of any such inconsistency, including the failure to monitor and enforce protective fish and wildlife water quality standards for selenium, have not been disclosed.

New in the SLC WQMP’s monitoring short list is 1,2,3-Trichloropropane (TCP). In 2017 the State Water Resources Control Board (SWRCB) added an MCL of 5 parts per trillion (ng/L) of TCP (the equivalent of five grains of sand in an Olympic-sized swimming pool) to the Title 22 list for primary drinking water chemicals.<sup>9</sup> This chemical was included in a nematode fumigant made by Shell Oil and Dow Chemical companies and applied liberally to the Central Valley’s vast farmland from the 1950s through the 1980s. Water quality data reports from prior Westlands groundwater pump-ins into the SLC did not report TCP, so the concentrations of TCP of these proposed groundwater inputs is unknown. TCP contamination in groundwater has impacted groundwater pump-ins involving other districts in the Central Valley.<sup>10</sup>

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<sup>9</sup> See: [https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/SBDDW-17-001\\_123TCP\\_MCL.html](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/SBDDW-17-001_123TCP_MCL.html)

<sup>10</sup> See: [https://www.bakersfield.com/columnists/lois-henry-tainted-valley-groundwater-could-stymie-banking-deals/article\\_a7b50638-ee48-11ea-87be-535a106d4220.html](https://www.bakersfield.com/columnists/lois-henry-tainted-valley-groundwater-could-stymie-banking-deals/article_a7b50638-ee48-11ea-87be-535a106d4220.html)

Table 5 from 2020 SLC WQMP

San Luis Canal  
 Non-Project Water Pump-in Program  
 Water Quality Monitoring Plan

Table 5. Water Quality Standards, Short List

Constituent	Units	Maximum Contaminant Level	Detection Limit for Reporting	CAS Registry Number	Recommended Analytical Method
Arsenic	mg/L	0.01 (1)	0.002 (2)	7440-38-2	EPA 200.8
Boron	mg/L	2.0 (13)		7440-42-8	EPA 200.7
Bromide	mg/L	(14)			
Chloride	mg/L	250 (7)		16887-00-6	EPA 300.1
Chromium, total	mg/L	0.05 (1)	0.01 (2)	7440-47-3	EPA 200.7
Hexavalent chromium	mg/L	0.010 (1)	0.001 (2)	18540-29-9	EPA 200.8
Manganese	mg/L	0.05 (7)		7439-96-5	EPA 200.7
Nitrate (as nitrogen)	mg/L	10 (1)	0.4 (2)	7727-37-9	EPA 300.1
Selenium	mg/L	0.002 (10)	0.001	7782-49-2	EPA 200.8
Sodium	mg/L	69 (12)		7440-23-5	EPA 200.7
Specific Conductance	µS/cm	1,600 (7)			SM 2510B
Sulfate	mg/L	500 (7)		14808-79-8	EPA 300.1
Total Dissolved Solids	mg/L	1,000 (7)			SM 2540C
Total Organic Carbon	mg/L	(14)			EPA 415.3
Gross alpha <sup>4</sup>	pCi/L	15 (3)	3 (3)		SM 7110C
1,2,3-Trichloropropane	mg/L	0.000005 (4)	0.000005 (5)	96-18-4	SRL 524M
One-Time Screening					
Perfluorooctanoic acid (PFOA) <sup>5</sup>	ng/L	N/A		0.82 (15)	EPA 537.1
Perfluorooctanesulfonic acid (PFOS) <sup>5</sup>	ng/L	N/A		2.7 (15)	EPA 537.1

Short list to be measured before pumping occurs, then weekly for four consecutive weeks, and monthly for the duration of pumping into the San Luis Canal.  
 (4) Monthly testing only  
 (5) One-time screening conducted prior to pumping individual wells and from Lateral 7 at the Adams Avenue pump station. Although there are no MCLs developed yet, there are notification levels and response levels. The notification levels are 5.1 PPT (PFOA) and 6.5 PPT (PFOS). The response levels are 10 PPT (PFOA) and 40 PPT (PFOS) based on a running four quarter average. The lowest concentration minimum reporting levels (LCMRL) are 0.82 ng/L (PFOA) and 2.7 ng/L (PFOS).

Also included with the sampling of individual wells is one-time screening for the presence of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) and, if detected, Reclamation and the California Department of Water Resources (DWR) will work with Westlands on conducting additional sampling.

Lateral 7 water quality monitoring

Under the proposed and as yet not adopted water quality monitoring program, non-project water is only allowed to enter Lateral 7 when water is being pumped into the SLC, not when flow is entering the Mendota Pool. Westlands is required to take weekly field measures for conductivity and turbidity at locations near Lateral 7 during these periods.

In addition to non-project well sampling, Westlands must collect samples from Lateral 7 at the Adams Avenue pump station. Lateral 7 water must be tested for the full suite of Title 22 (Table 6) every year. Table 5 constituents will be sampled weekly for the first four weeks, then monthly for the duration of pumping. There will be a one-time screening for the presence of Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS) from Lateral 7 at Adams Avenue pump station and if detected, Reclamation and DWR will work with Westlands on conducting additional sampling.

## Water Quality Monitoring of the Aqueduct

Mean daily salinity and turbidity will be measured with the DWR sensors that report real-time data to the California Data Exchange Center (CDEC). Westlands is required to download daily average data for SLC Checks 13 and 21 to measure changes in the canal between these checks that may be attributable to the addition of the non-project water.

The WQMP includes maximum allowable changes in the SLC caused by the addition of Westlands' groundwater pump-ins. These commitments are summarized in Table 4 on page 12 of the WQMP and are included below. If the addition of the non-project water is increasing the salinity (measured as electrical conductivity, or EC) of water in the SLC by more than 100  $\mu\text{S}/\text{cm}$  between Check 13 and Check 21, *Reclamation will work with Westlands and the well operators to turn off high salinity wells.* (Emphasis added) These are vague directives that lack enforcement. Without an absolute requirement that these high salinity wells are turned off, the impacts of such delay or failure to act are not disclosed nor considered.

The addition of non-project water must not raise the salinity in the SLC at Check 21 above 700  $\mu\text{S}/\text{cm}$ , equivalent to 450 mg/L Total Dissolved Solids. If the salinity of water passing Check 13 is greater than 700  $\mu\text{S}/\text{cm}$ , *Reclamation and Westlands will coordinate with DWR to modify or restrict non-project pumping.* Once again, these are vague directives that lack enforcement. Without an absolute requirement that these high salinity wells are turned off, such action cannot be ensured, but the potential impacts of such delay or failure to act are not disclosed.

Also, at Check 21 are requirements for TDS (NTE 450 mg/L) and selenium (NTE 2  $\mu\text{g}/\text{L}$ ).

**Table 4. Maximum allowable changes in the San Luis Canal caused by the addition of non-project groundwater**

Constituent	Monitoring Location	Maximum concentration in the San Luis Canal
Electrical conductivity	Between San Luis Canal Checks 13 and 21	Less than 100 $\mu\text{S}/\text{cm}$ increase between the checks
Turbidity	Between the Lateral 7 upstream site and downstream site	Less than 10 NTU
Electrical conductivity	In the San Luis Canal at Check 21	Not to exceed 700 $\mu\text{S}/\text{cm}$
Total dissolved solids		Not to exceed 450 mg/L
Concentration of selenium		Not to exceed 2 $\mu\text{g}/\text{L}$
Concentration of any Title 22 constituent		Less than half of a Title 22 MCL

### **Depth to Groundwater Commitments.**

The WQMP also includes requirements to measure groundwater levels and a shutoff trigger to reduce subsidence impacts. The shutoff trigger included in the WQMP requires pumping to stop at 25% above the maximum drawdown experienced by any of the wells participating in the Program, i.e., 75% Max

depth to groundwater (DTGW). The intent is to prevent further lowering of water levels beyond what has historically occurred in a given well, as illustrated in Figure 4 of the DEA and copied below.

Well owners are required to measure the initial depth to groundwater in each well before pumping into the SLC, and monthly from April through August and every other month outside of that range while the 2020 Pump-in Program is in effect. An individual well will be shutoff when its Depth to Groundwater reaches 75% of the difference between the Fall/Winter Median Groundwater Level and the Max DTGW using the following equation:

$$\text{Shutoff Trigger} = 0.75 * (\text{Max DTGW} - \text{Fall/Winter Median}) + \text{Fall/Winter Median}$$

If an individual well is shutoff due to groundwater levels reaching the shutoff trigger, it will not be allowed to resume pumping until it reaches 70% of the difference between the Fall/Winter Median

Groundwater Level and the Max DTGW using the following equation:

$$\text{Well Resumption} = 0.70 * (\text{Max DTGW} - \text{Fall/Winter Median}) + \text{Fall/Winter Median}$$

Groundwater level measurements are supposed to follow a strict schedule. If a well is shutoff it will not be measured again until the next scheduled measurement date. The participants must notify Reclamation in writing when a well is shutoff or resuming.

**Figure 4 from 2020 DEA for this Project**

As shown in Figure 4, Max DTGW (also referred to as Critical Head) is the greatest amount of drawdown (lowest depth to water) that has occurred within a particular well.

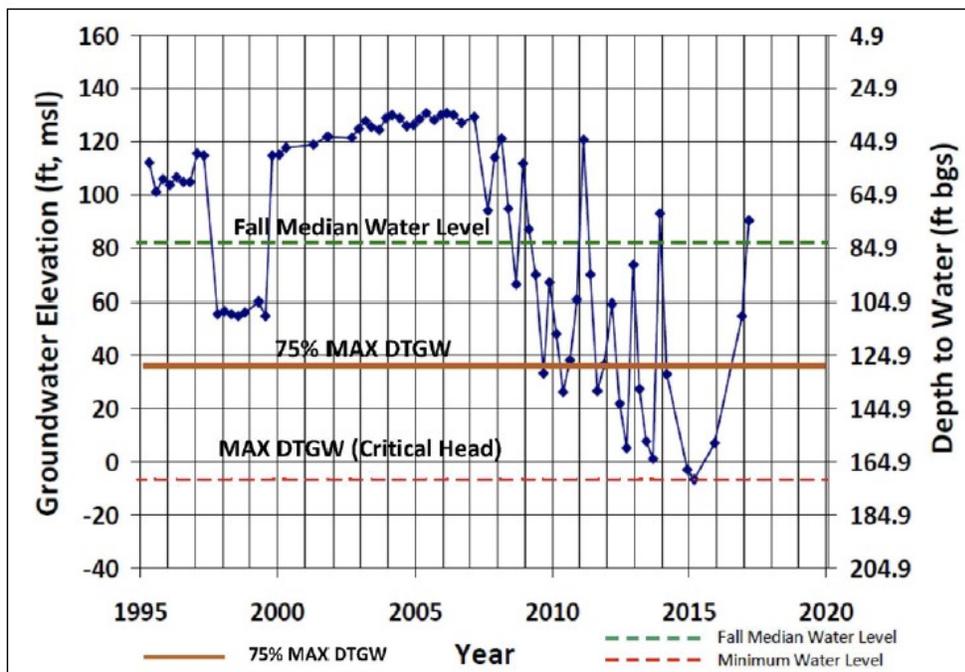


Figure 4. Example of Operation of the Shutoff Trigger

## **SPECIFIC COMMENTS AND RECOMMENDATIONS**

### **Authorization of Discharge Points into the SLC should be for no more than 5 Years.**

Reclamation proposes to issue a combined 25-year authorization for 88 discharge points (identified in Table 1 of the IS/ND, pages 11-13) involved in the Pump-in Project. The environmental impact of authorizing these discharges for 25 years has not been evaluated or disclosed. Further, sanctioning this groundwater discharge for a 25-year period for all discharge points in a document that covers only a 5-year Warren Act Contract for those discharges further fails to disclose the environmental impacts and fails to adopt mitigation measures. As we will discuss below, 35 of the 88 discharge points identified in Table 1 of the IS/ND under Westlands' previous pump-in projects had at least one well that exceeded maximum contaminant levels (MCLs) identified for the constituents Arsenic (As), Selenium (Se) or Total Dissolved Solids (TDS). This information is summarized in Appendix A to our comments. We note here that the use of the MCL terminology to the water quality standards applicable to this project leads to confusion because MCLs generally refer to federal drinking water standards, which these are not. Nevertheless, in our comments we will use Reclamation's definitions as defined in the, as yet, not finalized federal DEA and WQMP. This nomenclature is likely arbitrary and is used to promote confusion and obfuscation of impact and contamination.

Inclusion of these discharge points for 25-years is arbitrary and capricious and not supported by any water quality data from previous groundwater pump-ins or long-term analysis of potential future impacts. Moreover, it is a violation of Article 14(f) of the current Warren Act Contract between Reclamation and Westlands that states, "*At all times during the term of this Contract, the Contractor shall be in compliance with the requirements of the then-current Quality Assurance Project Plan (Plan) prepared by the Contracting Officer to monitor Non-Project Water introduced into and conveyed through the Project Facilities.*"<sup>11</sup> We therefore recommend that only those discharge points that do not exceed MCLs for constituents identified in Table 4 of the WQMP be authorized for 5 years, and that NO discharge points be authorized for a longer period. The public is left in the dark regarding the "*then-current Quality Assurance Project Plan.*" No such plan has been adopted under the proposed federal DEA for this project, nor is any such plan referenced in the IS/ND.

### **Changes in SLC water quality requirements in the 2020 WQMP must be Addressed and Environmental Impacts Analyzed and Disclosed.**

We note that the 2015 WQMP<sup>12</sup> for discharges into the SLC restricted salt contamination between Checks 13 and 21 compared with the 2020 WQMP as follows:

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<sup>11</sup> See: <https://www.usbr.gov/mp/warren-act/docs/contract-westlands-multiyear-convey-nonproject-water.pdf>

<sup>12</sup> See Appendix C, starting at pdf pg 4:  
[https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc\\_ID=21986](https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=21986)

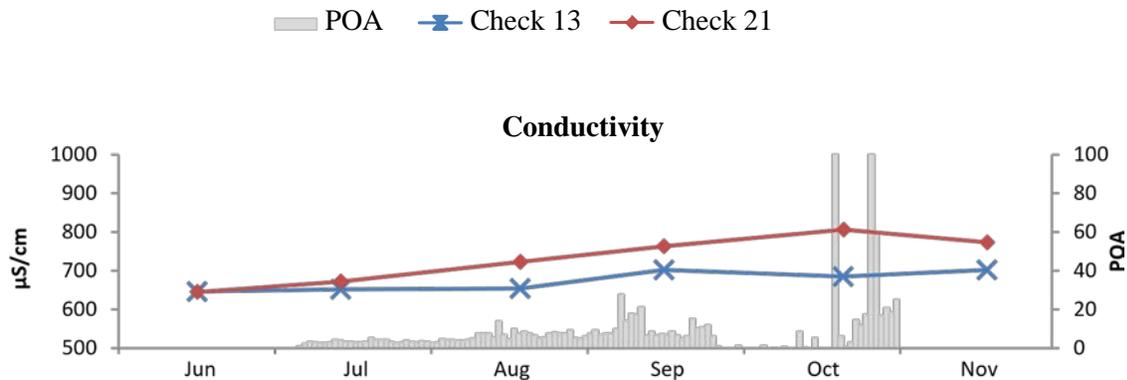
- A maximum allowable change caused by pumped GW at Check 21 (Kettleman) of not to exceed 600  $\mu\text{S}/\text{cm}$  EC (the 2020 WQMP allows 700  $\mu\text{S}/\text{cm}$ );
- Less than 50  $\mu\text{S}/\text{cm}$  EC change between Check 13 and Check 21 (the 2020 WQMP allows no more than 100  $\mu\text{S}/\text{cm}$  EC change);

There is no mention of these changes in EC requirements in the SLC in the IS/ND, DEA or the 2020 WQMP, nor is there any analysis of the effects of this allowable EC increase or explanation as to why these EC control requirements have been weakened. We further note that compliance with the 2015 EC requirements in the SLC were exceeded routinely in 2015 as documented in DWR’s report on non-project water pump-ins for 2015<sup>13</sup>, as depicted in Figure 3-5 from that report:

**CDEC continuous EC Data Checks 13 and 21 in 2015 From (DWR 2016)**

Water Quality Assessment of Non-Project Turn-ins to the California Aqueduct, 2015

Figure 3-5 Water Quality Constituents-of-Concern at Check 13 and Check 21 and Westlands Water District Percentage-of-Aqueduct Values



Note that Article 14(f) of the current Warren Act Contract between Reclamation and Westlands states, “At all times during the term of this Contract, the Contractor shall be in compliance with the requirements of the then-current Quality Assurance Project Plan (Plan) prepared by the Contracting Officer to monitor Non-Project Water introduced into and conveyed through the Project Facilities.”<sup>14</sup> We see clear evidence from DWR reports of prior Westlands groundwater pump-ins that water quality requirements have been routinely exceeded both at the wellhead and at Check 21 in the SLC. This record of noncompliance calls for greater enforcement of water quality standards, not less. And further, the impact from these past discharges needs to be disclosed, alternatives considered along with mitigation measures adopted to prevent impacts to downstream beneficial water uses.

<sup>13</sup> See: <https://calsport.org/news/wp-content/uploads/Water-Quality-Assessment-of-Non-Project-Turn-ins-to-the-California-Aqueduct-2015.pdf>

<sup>14</sup> See: <https://www.usbr.gov/mp/warren-act/docs/contract-westlands-multiyear-convey-nonproject-water.pdf>

**Pump-In Project Likely to Harm State Fish and Wildlife Designated Beneficial Uses Associated with the California Aqueduct.**

The groundwater contributions from the Pump-in Project are conveyed south through the California Aqueduct and stored in four reservoirs (Pyramid Lake, Castiac Lake, Silverwood Lake, and Lake Perris). The aqueduct and these four reservoirs are regulated under four Regional Water Boards jurisdictions. Designated fish and wildlife beneficial uses of the Aqueduct and downstream reservoirs are listed in Table 1.

The Central Valley Regional Water Quality Control Board (CV Regional Board) does not include fish (WARM) as a beneficial use for the aqueduct. Yet, the Department of Water Resources promotes fishing along the aqueduct and identifies five locations within or near Westlands (Fairfax, Three Rocks, Huron, Avenal Cutoff, and Kettleman City sites).<sup>15</sup> Further, the CV Regional Board includes WARM beneficial use designation for the Delta Mendota Canal,<sup>16</sup> so we can only surmise that the omission of a WARM beneficial use designation for the California Aqueduct is an oversight. Nonetheless, the Pump-in Project should be protective of downstream beneficial uses of the water in the California aqueduct and these impacts need to be addressed in the a full EIR that would replace this deficient IS/ND. Existing data simply does not support the adoption of a negative declaration for the environmental impacts from this project. Due to the high percentage of discharge volumes represented by the Westlands' pump-ins during certain time periods, especially drought conditions, humans who fish the California Aqueduct are likely to be periodically exposed to much higher contaminants than the long-term average. In addition, there will be higher contaminant levels in fish than monitored in canal water due to accumulation in fish tissue. This exposure, warnings, and monitoring are not disclosed, especially to low income communities in the surrounding areas, and there is no mention of fish tissue monitoring. Monitoring requirements in the WQMP do not include biological monitoring so that these impacts can be identified and assessed.

**Table 1. Fish and Wildlife Beneficial Uses Associated with CA Aqueduct south of Pump-in Project**

Waterbody Name	WARM	COLD	SPWN	WILD	RARE
California Aqueduct <sup>17</sup>				E	
Castiac Lake <sup>18</sup>	E	I	E	E	E
Pyramid Lake <sup>18</sup>	E	E		E	E
Silverwood Lake <sup>19</sup>	E		E	E	

<sup>15</sup> See: [https://calsport.org/news/wp-content/uploads/DWR\\_Fishing-Along-the-SWP.pdf](https://calsport.org/news/wp-content/uploads/DWR_Fishing-Along-the-SWP.pdf)

<sup>16</sup> See: [https://www.waterboards.ca.gov/centralvalley/water\\_issues/basin\\_plans/sacsjr\\_201805.pdf](https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf)

<sup>17</sup> Ibid.

<sup>18</sup> See Beneficial Use Designations of Inland Surface Waters, Los Angeles Regional Water Board: [https://www.waterboards.ca.gov/losangeles/water\\_issues/programs/basin\\_plan/2020/Chapter\\_2/Chapter\\_2\\_Table\\_2\\_1/Chapter\\_2\\_-\\_Table\\_2-1.pdf](https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/2020/Chapter_2/Chapter_2_Table_2_1/Chapter_2_-_Table_2-1.pdf)

<sup>19</sup> See: [https://www.waterboards.ca.gov/lahontan/water\\_issues/programs/basin\\_plan/docs/ch2\\_bu.pdf](https://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/docs/ch2_bu.pdf)

Lake Perris <sup>20</sup>	E	E		E	E
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**E:** Existing beneficial use.

**I:** Intermittent beneficial use.

**WARM: Warm Freshwater Habitat** - Uses of water that support warm water ecosystems including but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

**COLD: Cold Freshwater Habitat** - Uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

**SPWN: Spawning, Reproduction, and/or Early Development** - Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.

**WILD: Wildlife Habitat** - Uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

**RARE: Endangered Species** - Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.

**Effects on Refuge Water Supplies – Percent of Aqueduct of Westlands' Pump-ins.**

On page 34 under "item d" the IS/ND concludes that the proposed project would have less than significant impact on biological resources, but acknowledges that groundwater from the Pump-in Project will comingle with refuge water supplies: *“The Kern National Wildlife Refuge water supplies may mix with groundwater introduced as a result of the proposed Project, and this would occur partly during times of the year when these refuges would receive water supplies. However, the selenium levels are expected to remain well below the threshold for an adverse effect on wildlife, which is 2 parts per billion (0.002 mg/L) as measured in the water column (USBR and San Luis & Delta-Mendota Water Authority 2009 and references therein). Water introduced under the Project would be monitored and managed to ensure the quality of water does not exceed the requirements of the Water Quality Monitoring Plan, which establishes limits on the quality of water for selenium to 2 micrograms per liter...”* The IS/ND assumes the wellhead MCL of 2 µg/L selenium established in the 2020 WQMP will be adhered to, without providing any data on the water quality performance of prior Westlands pump-ins. We note that almost 40% of the discharge points identified in Table 1 of the IS/ND had at least one well sample that exceeded MCLs identified in the DEA for the constituents As, Se or TDS. This information is summarized in Appendix A to our comments. Information on volumes from each well, and which wells were shut down during prior groundwater pump-ins was not provided in the IS/ND nor the DWR reports of water quality assessments of non-project turn-ins to the California Aqueduct. Westlands also did not

<sup>20</sup> See:

[https://www.waterboards.ca.gov/santaana/water\\_issues/programs/basin\\_plan/docs/2019/New/Chapter\\_3\\_June\\_2019.pdf](https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/docs/2019/New/Chapter_3_June_2019.pdf)

provide this information, as was requested under the California Public Records Act.<sup>21</sup> These elevated selenium concentrations at the wellheads occurred even though the 2015 WQMP<sup>22</sup> for this project listed an MCL for selenium of 2 µg/L, shown in Table 4 below. A lack of surveillance and enforcement has been a critical flaw of previous pump-in projects. The environmental impacts from this failure needs to be disclosed and analyzed.

**San Luis Canal Non-Project Ground Water Pump-in Program 2015 Water Quality Monitoring Plan**

**Table 4. Water Quality Standards, Initial Test**

Constituent	Maximum Contaminant Detection Limit for Analytical			Recommended CAS Registry	
	Units	Level	Reporting	Number	Method

**Field Measurements**

The IS/ND also fails to disclose any data on the percent of flow in the Aqueduct (POA) comprised of Westlands groundwater pump-ins. In 2014 and early 2015 there were days within the fall and winter months when the Dos Amigos Pumping Plant ceased pumping, resulting in Westlands pump-ins contributing 100% of the flow in the aqueduct on those days as depicted in the Figures 3-1 and 3-2 from DWR 2015<sup>23</sup> and Figure 3-1 from DWR 2016<sup>24</sup> reports and copied below. Some of these time periods overlap with refuge water deliveries to Kern NWR. The impacts from deliveries of degraded water to the refuge needs to be monitored and disclosed. The past performance of Westlands groundwater pump-ins into the SLC clearly does not support a less than significant impact on biological resources and warrants a full EIR analysis.

<sup>21</sup> <https://calsport.org/news/wp-content/uploads/Canal-Integration-Program-Third-Response-Schifferle-071720.pdf>

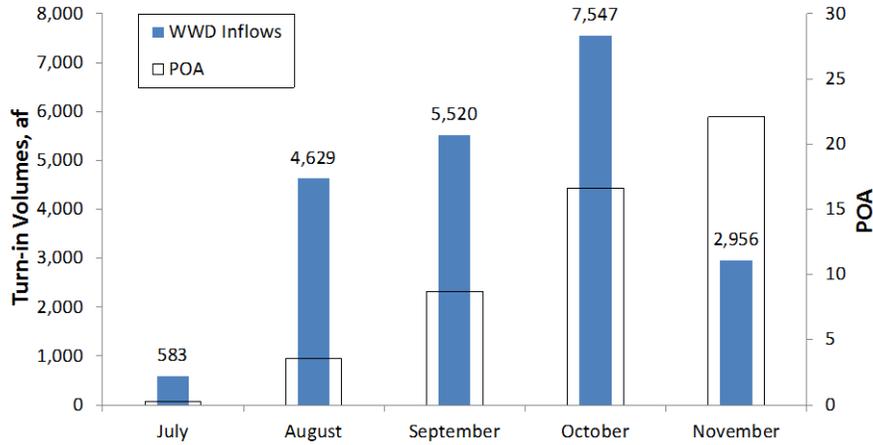
<sup>22</sup> See Appendix C, pdf pg 4: [https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc\\_ID=21986](https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=21986)

<sup>23</sup> See: <https://calsport.org/news/wp-content/uploads/Water-Quality-Assessment-of-Non-Project-Turn-ins-to-the-California-Aqueduct-2014.pdf>

<sup>24</sup> See: <https://calsport.org/news/wp-content/uploads/Water-Quality-Assessment-of-Non-Project-Turn-ins-to-the-California-Aqueduct-2015.pdf>

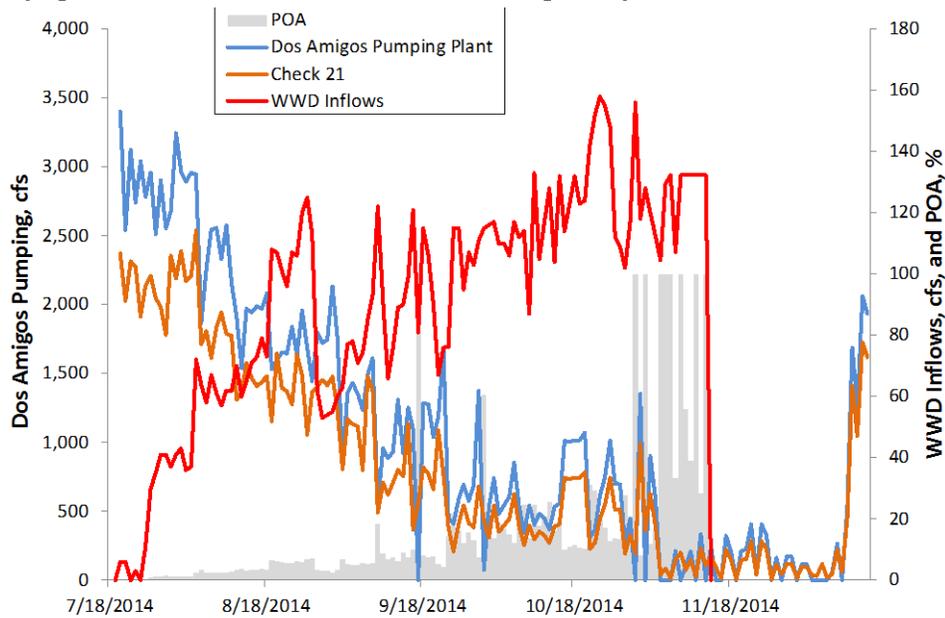
*Water Quality Assessment of Non-Project Turn-ins to the California Aqueduct, 2014*

**Figure 3-1. Monthly Inflows to the Aqueduct from Westlands Water District and Calculated Percentage-of-Aqueduct Values**



Notes: af = acre-feet, POA = percentage-of-Aqueduct, WWD = Westlands Water District

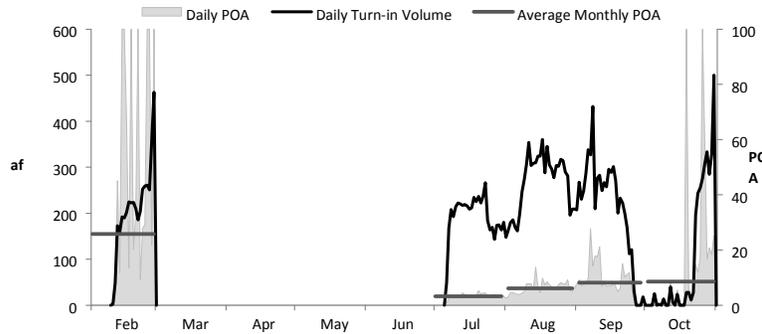
**Figure 3-2. Daily Inflows to the Aqueduct from Westlands Water District, Pumping at Dos Amigos Pumping Plant, Check 21 Flows, and Calculated Percentage-of-Aqueduct Values**



Notes: cfs = cubic feet per second, POA = percentage-of-Aqueduct, WWD = Westlands Water District

Water Quality Assessment of Non-Project Turn-ins to the California Aqueduct, 2015

Figure 3-1 Daily Inflows to the Aqueduct from Westlands Water District and Calculated Percentage-of-Aqueduct Values



DAPP Pumping	18,297	66,621	10,738	150,896	70,871	131,353		
Total Turn-in Volume			175,307	190,325	1			
Average Monthly POA	26 <sup>a</sup>	-	-	-	-	3.3 <sup>a</sup>	8.2	8.6

Notes:

af = acre-feet, DAPP = Dos Amigos Pumping Plant,  
POA = percentage-of-Aqueduct

POAs of 100 percent during February and October represent days when Dos Amigos PP was inactive.

<sup>a</sup>Calculations for monthly POAs begins on the first day of turn-in operations.

The California Department of Fish and Wildlife (CDFW) submitted comments on the previous IS/ND for the Pump-in Project dated June 22, 2020.<sup>25</sup> We adopt these comments by reference. CDFW wrote that, “Mendota Wildlife Area (MWA) is located directly adjacent to Westlands, and several groundwater wells are located either directly adjacent to the MWA or in the nearby vicinity. Some of these wells pump groundwater into the Inlet Canal, which runs along the southern boundary of the MWA and connects to the WWD via Lateral Canals 6 and 7. Although not identified as a subsidence prone area in the ND, MWA has been significantly affected by groundwater overdrafting and subsidence.” The Project’s potentially significant direct and cumulative contributions to land subsidence in the vicinity of Mendota WA requires a full EIR.

<sup>25</sup> See: <https://ceqanet.opr.ca.gov/2020050434/2/Attachment/5CSO8N>

The IS/ND states on page 33 under item “d” that “*Groundwater pumped from wells within the vicinity of the MWA under the Project would be conveyed directly to Lateral 7 and conveyed away from the MWA towards the SLC. Groundwater supplies conveyed through Lateral 7 would not mix with water supplies in the MWA to avoid introduction of any potential constituents of concern with regard to wildlife (e.g., selenium, TDS) into the MWA.*” Yet page 12 of Reclamation’s DEA for this project contradicts the IS/ND with respect to groundwater commingling with Mendota WA water supplies: “*Both Mendota Wildlife Area and Kern National Wildlife Refuge water supplies may mix with groundwater introduced as a result of the Proposed Action, and this would occur partly during times of the year when these refuges would receive water supplies.*” Further, on page 32 of the IS/ND it states, “*There are instances where the MWA receives non-Project water from Lateral 7; however, water introduced to Lateral 7 would not be conveyed to the MWA.*” It is unclear how MWA would not be affected by Project pump-ins into Lateral 7 if they can receive water from Lateral 7. These inconsistencies need to be addressed and corrected.

With respect to water quality requirements of pumped groundwater and associated refuge water quality impacts CDFW noted for Mendota Pool, “*The primary disqualifying factor would be high salinity levels, where any well with TDS exceeding 1,000 mg/L would be disqualified. This upper limit is 20% higher than the daily mean TDS water quality objective for the MWA of 800 mg/L or less (Reclamation Water Contract Number 14-OC-200 for Refuge Water Supplies to MWA). The addition of water with TDS higher than 800 mg/L would increase the salinity of the receiving waters in the MWA.*”

CDFW recommended “*...that an analysis with thresholds of significance for aquatic species be included in the IS/ND with measures proposed to reduce any potentially significant impacts.*” Again, the effects to Mendota WA do not a negative declaration of environmental impacts. Significant environmental impacts have been identified and thus, a full EIR analysis is required to adequately inform the public, downstream beneficial uses and other water contracts of the potential to degrade the waters of the state and nation from these discharges.

### **Water quality standards for Selenium in IS/ND are not Protective of Fish and Wildlife Beneficial Uses.**

On page 32 under "item f" the IS/ND concludes that “*Because discharged water under the Project would be subject to rigorous monitoring and testing to meet Title 22 water quality standards and the requirements of the 2020 Water Quality Monitoring Plan, salinity levels of the Kern National Wildlife Refuge water supplies would also be protected. The proposed Project would not convey flows to the MWA. There are instances where the MWA receives non-Project water from Lateral 7; however, water introduced to Lateral 7 would not be conveyed to the MWA. Therefore, no impacts would occur.*” No data is provided to support this conclusion. In fact previous monitoring reports dispute such a blanket claim. Also, as previously noted, the IS/ND assumes the wellhead MCL of 2 µg/L selenium established in the 2020 WQMP will be adhered to with only vague enforcement assurances. Past data on the water quality performance of prior Westlands pump-ins draws this assumption into question. Biological data is absent. Furthermore, the monitoring provided in the IS/ND does not support such a conclusion.

Moreover, on page 7 of the IS/ND, it is stated that “*Reclamation will allow the introduction of water from two or more wells through one discharge point if the blended water meets the Title 22 standards.*” The Title 22 selenium objective of 50 µg /L and the 20 µg /L EPA drinking-water MCL for selenium, are

not protective of fish and wildlife resources that use water from the Aqueduct, which require levels less than 2 µg /L, specifically 1.5 µg /L. The blending of water from two or more wells to meet “Title 22 water quality standards” clearly is not protective of endangered species, migratory birds using the Pacific Flyway and other fish and wildlife that rely upon waters from the San Luis Canal/California Aqueduct.

On July 13, 2016 the Environmental Protection Agency (EPA) released a Final Updated Clean Water Act (CWA) section 304(a) recommended national chronic aquatic life criterion for the pollutant selenium in fresh water.<sup>26</sup> The final criterion supersedes EPA's 1999 CWA section 304(a) recommended national acute and chronic aquatic life criteria for selenium. The 2016 criterion reflects the latest scientific information, which indicates that selenium toxicity to aquatic life is primarily based on organisms consuming selenium-contaminated food rather than direct exposure to selenium dissolved in water. The federal register notice identified revised chronic selenium criteria in water for lentic waters (e.g., meaning of, relating to, or living in still waters, such as lakes, ponds, or swamps) and lotic waters (e.g., rivers and streams). EPA's revised chronic selenium criterion for lentic waters of 1.5 µg /L on a monthly basis is the criterion that should be applied to water in the aqueduct to protect downstream fish and wildlife beneficial uses.

As described in Reclamation's DEA for this project, both Mendota Wildlife Area and Kern National Wildlife Refuge water supplies may mix with groundwater introduced as a result of the proposed Pump-in Project, as well as, downstream State Water Project reservoirs. Rare species that could be impacted by selenium from Westlands' contaminated groundwater discharges from the Pump-in Project include the federally listed Buena Vista Lake shrew (endangered), federally listed giant garter snake (threatened), and federally protected bald eagle (USFWS 2017).

CDFW comments on the previous IS/ND for the Pump-in Project noted the likelihood for other species to be impacted: “*Special-status species in the Project vicinity include the State and federally threatened giant garter snake, the State threatened and federally endangered San Joaquin kit fox (Vulpes macrotis mutica), the State and federally endangered Tipton kangaroo rat (Dipodomys nitratoides nitratoides), the State and federally endangered and State fully protected blunt-nosed leopard lizard (Gambelia sila), the State threatened Swainson's hawk (Buteo swainsoni), the State threatened Nelson's antelope squirrel (Ammospermophilus nelsoni), the State threatened tricolored blackbird (Agelaius tricolor), the federally endangered and California Rare Plant Rank (CRPR) 1B.2 San Joaquin woollythreads (Monolopia congdonii), the CRPR 1B.2 Munz's tidy-tips (Layia munzii), the State candidate for listing crotch bumble bee (Bombus crotchii), and the State species of special concern American badger (Taxidea taxus), Tulare grasshopper mouse (Onychomys torridus tularensis), San Joaquin coachwhip (Masticophis flagellum ruddocki), and burrowing owl (Athene cunicularia).*”

These complex issues related to impacts on fish and wildlife beneficial uses require a full analysis of the proposed project and its impacts along with potential alternatives. The level of impact and complexity of

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<sup>26</sup> See: <https://www.federalregister.gov/documents/2016/07/13/2016-16585/recommended-aquatic-life-ambientwater-quality-criterion-for-selenium-in-freshwater>

discharging contaminants that likely remain in the food chain for decades impacting not only threatened and endangered species but the entire Pacific Flyway, requires an EIR. Consultation with the CDFW and the USFWS is essential to ensure that biological resources are protected.

### **Water Quality Data from Previous Pump-ins is not Provided.**

Data on groundwater quality from participating wells is not provided in the IS/ND. The only groundwater data from individual wells for a Westlands previous pump-in that was available on the web was collected by the California Department of Water Resources in 2008.<sup>27</sup> Some of the wells sampled in 2008 are included in Table 1 of the IS/ND for the current project. Further, we received DWR Technical Memoranda Reports on the Non-Project Turn-ins to the California Aqueduct for the years 2014,<sup>28</sup> 2015,<sup>29</sup> and 2016<sup>30</sup> from a Public Records Request to Westlands in July 2020.<sup>31</sup> That data from 2008 and 2014-16 highlights the significant variability of selenium in well water from the Westlands pump-ins and many of the samples reported were well above the MCL for selenium in the 2015 WQMP (2 µg/L).

Reclamation's San Luis Canal Non-Project Water Pump-in Program Water Quality Monitoring Plan from 2015 required that:

*“Westlands will provide the following information to Reclamation prior to pumping groundwater into the canal:*

- the location of each well, pumping rate, and point of discharge into the San Luis Canal (Appendix B);*
- complete water quality analyses (Table 5) and Table 4 for new wells and each new year of pump-ins*
- the depth to groundwater in every well before pumping into the San Luis Canal commences...*

*When the Project is operating, Westlands will provide DWR and Reclamation with periodic (daily and weekly, as necessary) schedules which identify the approved source wells flow rates, locations of pump-in by Aqueduct Mile Post, and deliveries by Reach.*

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<sup>27</sup> Select Project, then WWD 2008 Pump Ins at:  
<https://wdl.water.ca.gov/waterdatalibrary/WaterQualityDataLib.aspx>

<sup>28</sup> See: <https://calsport.org/news/wp-content/uploads/Water-Quality-Assessment-of-Non-Project-Turn-ins-to-the-California-Aqueduct-2014.pdf>

<sup>29</sup> See: <https://calsport.org/news/wp-content/uploads/Water-Quality-Assessment-of-Non-Project-Turn-ins-to-the-California-Aqueduct-2015.pdf>

<sup>30</sup> See: <https://calsport.org/news/wp-content/uploads/Water-Quality-Assessment-of-Non-Project-Turn-ins-to-the-California-Aqueduct-2016.pdf>

<sup>31</sup> <https://calsport.org/news/wp-content/uploads/Canal-Integration-Program-Third-Response-Schifferle-071720.pdf>

*Westlands shall provide weekly updates identifying the current and anticipated water quality changes within the SLC by using the daily model. The goal is to provide Reclamation and the State Water Project Facilitation Group with a day-to-day prediction of downstream water quality using real-time pump-ins, real-time upstream background flows, and current background water quality data.”*

Inexplicably, none of this data from previous pump-ins is presented in the IS/ND. The IS/ND fails to include any prior data from previous Westlands groundwater pump-ins on water quality, quantity of groundwater pumped by each well, depth to groundwater of each well prior to pumping, or contaminant mass balance in the SLC. Data on the previous performance of the Pump-in Project is essential information missing from the IS/ND. It is important to estimate mass balance contaminant loading in the California Aqueduct from these groundwater inputs to ensure that these discharges do not harm downstream beneficial uses and to determine the impacts from continuing the Pump-in Program. These data are also important to inform decision makers and the public with regard to the cumulative impacts of the Pump-in Project. As emphasized for other issues as well, the IS/ND should be withdrawn and replaced with a full EIR analysis that includes all of this and other critical information for public comment review.

### **Monthly Monitoring of Aqueduct Water Quality near Kettleman City is Insufficient to Assess Environmental Impacts of Pump-in Project.**

The California Department of Water Resources (DWR) conducts monthly monitoring of the California Aqueduct and has documented occurrences of elevated levels of concern for selenium at Check 21 near Kettleman City (station number KA017226), especially during times when surface water flows have been restricted in the Aqueduct and groundwater from Westlands is being pumped into the Aqueduct.<sup>32</sup> As denoted in **Figure 1** below, monthly water quality samples at Check 21 have exceeded the US EPA’s July 2016 Final Updated CWA section 304(a) recommended national chronic aquatic life criterion for the pollutant selenium in fresh water 12 times between January 2012 and January 2020. These proposed objectives include a lentic water quality objective of 1.5 µg/L,<sup>33</sup> which would be the applicable selenium objective for Kern National Wildlife Refuge and other wetlands and reservoirs that are fed by water from the California Aqueduct. Further, the once-a-month water quality sampling is insufficient to establish a monthly mean water quality calculation, to capture contaminant spikes that accumulate downstream, or to assess potential bioaccumulation in the food chain. Refuge water delivered to the Kern National Wildlife Refuge is diverted from the California Aqueduct in Kern County near Check 29, downstream of where groundwater from the Pump-in Project is pumped into the Aqueduct. Inexplicably, DWR stopped collecting water quality data from Check 29 after November 2016.<sup>34</sup>

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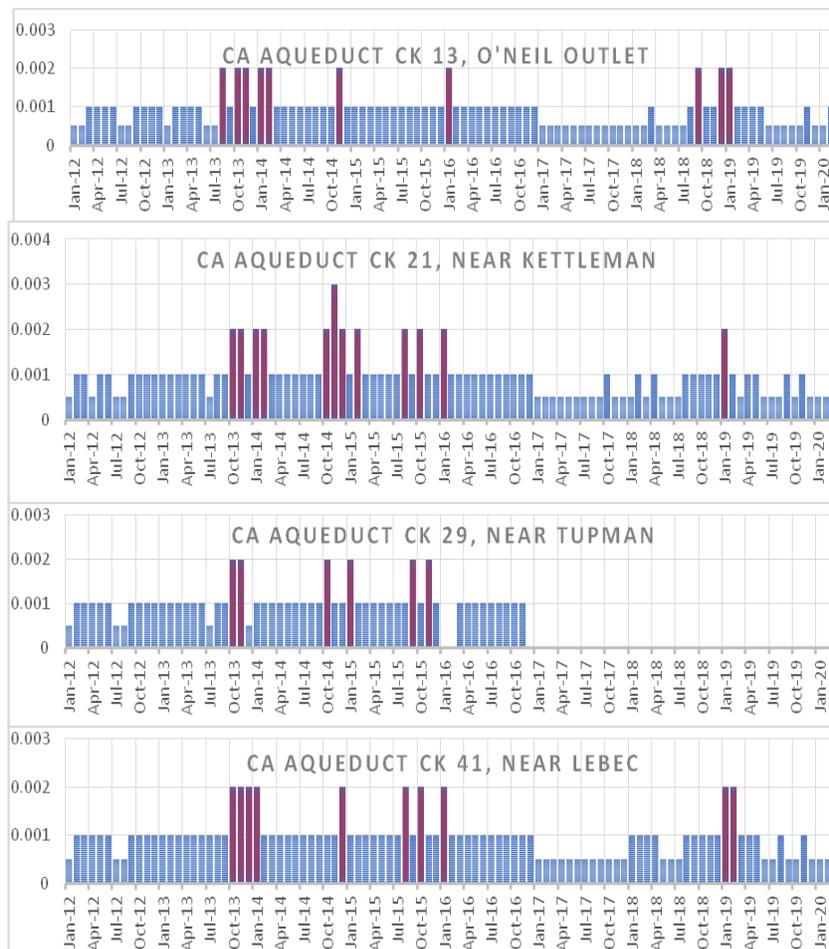
<sup>32</sup> Water quality data for the California Aqueduct near Kettleman City is available here by specifying Station Name Check 21: <https://wdl.water.ca.gov/waterdatalibrary/>

<sup>33</sup> See: <https://www.federalregister.gov/documents/2016/07/13/2016-16585/recommended-aquatic-lifeambient-water-quality-criterion-for-selenium-in-freshwater>

<sup>34</sup> Selenium & Arsenic concentrations in the California Aqueduct at Check 29, downstream of where groundwater has been pumped into the canal increased markedly in 2015 and in the case of Arsenic were approaching the Maximum Contaminant Level for drinking water of 0.010 mg/L. See: [http://www.water.ca.gov/waterdatalibrary/waterquality/station\\_group/index.cfm](http://www.water.ca.gov/waterdatalibrary/waterquality/station_group/index.cfm)

Elevated selenium in the Aqueduct is typically associated with drier water years when a larger proportion of total volume in the Aqueduct is comprised of groundwater inputs. Groundwater inputs entering into the Aqueduct (from various sources including Westlands) were 46 percent of the total volume entering the aqueduct in 2014,<sup>35</sup> 44 percent in 2015,<sup>36</sup> and 8.3 percent in 2016.<sup>37</sup>

**Figure 1. Total selenium concentrations in water samples from the California Aqueduct at Checks 13, 21, 29, and 41. Light-shaded bars at 0.0005 mg/L are non-detections, dark blue bars are detections at 0.001 mg/L, and red bars are samples that equaled or exceeded 0.002 mg/L, and exceeded the lentic water quality objective for selenium of 0.0015 mg/L (1.5 µg/L). The Y axis is total Selenium in mg/L, the X axis is Mo-Yr of Sample Date:**



<sup>35</sup> See page 86 in: <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/State-Water-Project/Management/Bulletin-132/Bulletin-132/Files/Bulletin-132-15-r.pdf>

<sup>36</sup> See page 84 in: <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/State-Water-Project/Management/Bulletin-132/Bulletin-132/Files/Bulletin-132-16-r.pdf>

<sup>37</sup> See page 94 in: <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/State-Water-Project/Management/Bulletin-132/Bulletin-132/Files/Bulletin-132-17-r.pdf>

## **Project as Defined in IS/ND and WQMP Violates Article 16(b)(2) of Westlands WIIN Act Repayment Contracts.**

Reclamation is in the process of completing and executing CVP repayment contracts for Westlands including contract #: 14-06-200-495A, 14-06-200-3365A, 14-06-200-8092, 7-07-20-W0055, 14-06-200-8018, 14-06-200-3365A, and 14-06-200-7823J. All of these contracts include language under Article 16(b) regarding use of Project facilities for conveyance and/or diversion of non-project water owned or acquired by Westlands.<sup>38</sup> Article 16(b)(2) of these contracts defines the following provisions for non-Project water: “*Delivery of such non-Project water in and through Project facilities shall only be allowed to the extent such deliveries do not:*

- (i) interfere with other Project purposes as determined by the Contracting Officer,*
- (ii) reduce the quantity or quality of water available to other Project Contractors;*
- (iii) interfere with the delivery of contractual water entitlements to any other Project Contractors; or*
- (iv) interfere with the physical maintenance of the Project facilities.”*

The IS/ND and WQMP allow degradation of water quality in the Aqueduct between Check 13 and Check 21 (a maximum allowable change in EC of 100  $\mu\text{S}/\text{cm}$ ). This would violate Article 16(b)(2)(ii) of the Westlands contracts. Further, the IS/ND and WQMP allows a selenium concentration of 2  $\mu\text{g}/\text{L}$  in the Aqueduct which exceeds the U.S.EPA’s revised chronic selenium criterion for lentic waters of 1.5  $\mu\text{g}/\text{L}$ . As we have noted previously, EPA’s revised chronic selenium criterion for lentic waters is a monthly mean of 1.5  $\mu\text{g}/\text{L}$  and this is the criterion that should be applied to water in the California Aqueduct to protect fish and wildlife beneficial uses, including refuge water supplies at Kern NWR and Mendota WA. Allowing the degradation of water quality in the Aqueduct would interfere with Project obligations to provide water of suitable quality to refuges identified in CVPIA, a violation of Article 16(b)(2)(i) of the Westlands contracts. Lastly, as discussed below, previous Westland groundwater pump-ins have contributed to subsidence and resulted in significant operational impacts to the Aqueduct including reduced conveyance capacity, increase in power cost, and decrease in available freeboard. These impacts violate Article 16(b)(2)(iv) of the Westlands WIIN Act Repayment Contracts. And further these contracts do not comply with provisions of the CVPIA requiring the restoration and mitigation of fish, wildlife, migratory birds and waterfowl impacts.

### **Warren Act Contract and Agreement Between DWR and Westlands allowing the Pump-in Project are not Included in the in the IS/ND.**

The proposed Westlands 5-year Warren Act Contract (Contract) is not included with the IS/ND and has not been made available for public review, thus an informed decision and analysis is precluded. A copy of the current Contract is available on Reclamation’s website and the term of this contract is through June 30, 2022.<sup>39</sup> Will there be changes to the contract after 2022? Further, Exhibit D to this Contract, which

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<sup>38</sup> See: <https://www.usbr.gov/mp/wiin-act/docs/usbr-westlands-draft-wiin-act-contract-public-comment-period-10-22-19.pdf>

<sup>39</sup> See: <https://www.usbr.gov/mp/warren-act/docs/contract-westlands-multiyear-convey-nonproject-water.pdf>

identifies the minimum water quality standards for monitoring the quality of Non-Project Water introduced by Westlands into the SLC is not included with the Contract. In order to accurately assess the impacts and cumulative impact of this Project, a copy of the Contract and all Exhibits for the time period being considered (2020-2025) should be disclosed and included in the IS/ND for this Project.

Additionally, adding to the incomplete project description and definition of the project, apparently there exists an Agreement between DWR and Westlands for introduction and conveyance of local groundwater in the California Aqueduct, and this Agreement is likewise not provided for public review. We note that a copy of a 2008 Agreement between DWR and Westlands allowing the introduction and conveyance of groundwater into the Aqueduct between June and September 2008 was included in the 2015 Final EA for Westlands groundwater pump-ins (SWPAO #08052).<sup>40</sup>

Without these documents, the public is prevented from seeing key information regarding the contractual requirements of this action. Omitting these key documents keeps the public in the dark regarding the project definition, baseline and potential contractual remedies available to downstream beneficial uses that are harmed by the degradation of water quality in the SLC/California Aqueduct.

### **Subsidence Monitoring Requirements Are Insufficient.**

Land subsidence is a major and growing consequence of groundwater pumping in the project area and threatens the California Aqueduct and other infrastructure. Increases in subsidence, impacts and costs to the California Aqueduct, and long-term cumulative impacts are significant. USGS recently reported, *“Extensive groundwater pumping from San Joaquin Valley aquifers is increasing the rate of land subsidence, or sinking. This large-scale and rapid subsidence has the potential to cause serious damage to the water delivery infrastructure that brings water from the north of the valley to the south where it helps feed thirsty cropland and cities. According to a new report by the U.S. Geological Survey the subsidence is occurring in such a way that there may be significant operational and structural challenges that need to be overcome to ensure reliable water delivery.”*<sup>41</sup>

Further, DWR has been funding and working with NASA’s Jet Propulsion Laboratory (JPL) to monitor subsidence in the San Joaquin Valley since July 2013. It uses interferometric synthetic aperture radar (InSAR) from satellites and aircraft to record the distance between the radar and the ground surface. This work has identified significant areas of subsidence in Westlands as shown in the figure below taken from DWR’s 2017 California Aqueduct Subsidence Study Report.<sup>42</sup>

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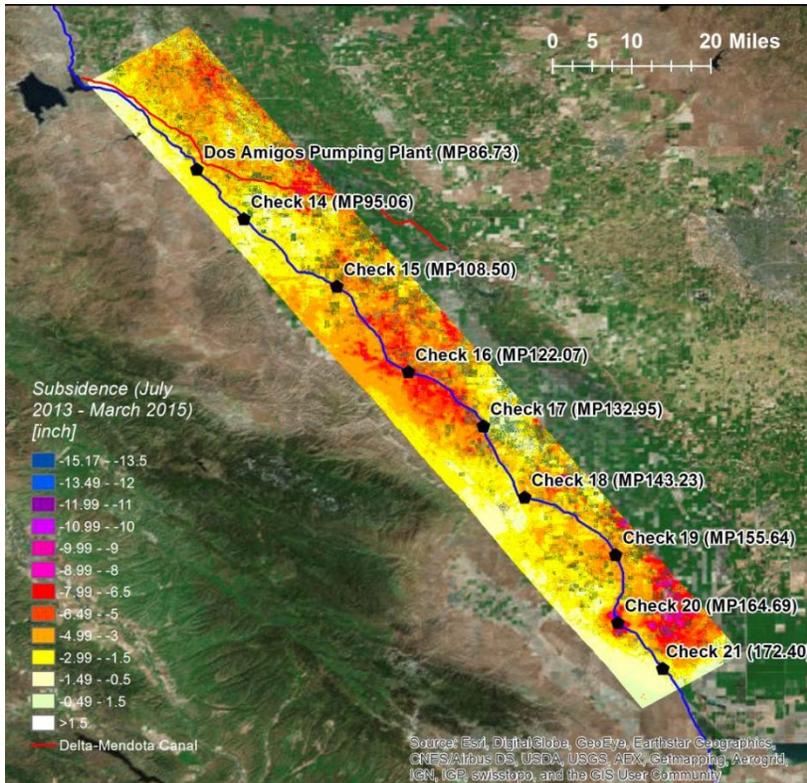
<sup>40</sup> The 2008 Agreement between DWR and Westlands for the introduction and conveyance of groundwater into the Aqueduct was included in Appendix A of the 2015 Final EA for the Pump-in Project. See pdf pg 19: [https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc\\_ID=21984](https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=21984)

<sup>41</sup> See <https://pubs.er.usgs.gov/publication/sir20185144>

<sup>42</sup> See: [https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Engineering-AndConstruction/Files/Subsidence/Aqueduct\\_Subsidence\\_Study-Accessibility\\_Compatibility.pdf](https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Engineering-AndConstruction/Files/Subsidence/Aqueduct_Subsidence_Study-Accessibility_Compatibility.pdf)

The Survey data in the DWR Subsidence Report show this section of the Aqueduct, the SLC (from Los Banos to Kettleman City), has subsided the most over the years.<sup>43</sup> The DWR report identifies a number of significant operational impacts of subsidence to the Aqueduct including: reduction in conveyance capacity, increase in power cost, decrease in available freeboard (the difference in elevation between the crest of the canal and the water level as fixed by design requirements). These effects are significant and costly to repair.

**Figure taken from DWR’s 2017 California Aqueduct Subsidence Study Report**



As denoted on page 16 of the IS/ND, there are “...two subsidence prone areas located within the District along the SLC...These two areas experienced increased rates of subsidence, which may threaten lands and infrastructure within their vicinity, namely the SLC.” The IS/ND proposes within these areas, to subject well pumping to “more restrictive minimum thresholds to protect critical head levels, and extraction from the Lower Aquifer (deep aquifer below the Corcoran Clay layer) would be limited in all years to minimize or avoid subsidence in susceptible lower aquifers.”

CDFW provided comments on the Westlands' previous IS/ND for this project on subsidence effects to MWA, “MWA is located within the Delta-Mendota Subbasin and borders the Westside Subbasin. Both the Westside and Delta-Mendota Subbasins are designated as critically overdrafted by the California Department of Water Resources, and such overdrafting is a serious issue within the Mendota Pool area

<sup>43</sup> [Ibid.](#)

*due to ongoing subsidence. Over the years, the Mendota Dam has experienced subsidence, and the California Department of Water Resources, Division of Safety of Dams has required the water level to be lowered due to the subsequent compromised integrity of the dam. The lowered water level at the dam has resulted in lower water levels to the gravity flow and lift pump inlets at the MWA. The northernmost gravity flow inlet receives no water, causing loss of trees and habitat along the northern edge of the wildlife area. The lift stations no longer pump efficiently because the inlets are not fully covered with water, allowing air to be pulled into the pumps and decreasing water flows. Decreased water flow results in MWA operating its pumps for longer periods, increases the electricity cost and personnel cost to monitor and maintain the pumps, and increases wear and tear on the pumps.*

*Continued subsidence affects the ability of CDFW to operate the MWA according to its management objectives, and other areas where water is no longer delivered by gravity could increasingly lose associated wetland and riparian habitat features. Subsidence is irreversible and damage to surface water conveyance features caused by subsidence can only be mitigated by removal of damaged infrastructure and replacement, or re-engineering and reconstruction of infrastructure to allow surface water to flow at an acceptable level.<sup>44</sup>*

*The effects of subsidence to Mendota WA are discussed in the IS/ND on page 33. The IS/ND concludes, “Two existing potential CIP wells that would be operated under the Project are located directly adjacent to the MWA, and are unlikely to contribute to ongoing subsidence because of the shutdown provision described in Section 15.10, Hydrology and Water Quality which protect the water level from achieving historic lows... The rate of groundwater pumping under the Project is not anticipated to result in an undesirable or adverse rate of subsidence which would impact CDFW operations or the quantity or quality of habitat within the MWA.”*

The 2020 WQMP includes requirements for groundwater level management. As described therein, well owners participating in the Pump-in Project are required to measure the initial depth to groundwater in each well before pumping into the canal, monthly from April to August, and bi-monthly from September to March. Individual wells will be shut off if the depth to groundwater reaches 75 percent of the difference between the Fall/Winter median groundwater level and the maximum depth to groundwater.

It is encouraging to see that the IS/ND and the 2020 WQMP includes groundwater level monitoring and shutoff triggers. But neither the IS/ND nor the WQMP identify rates of pumping or quantities of water that could be safely pumped from the areas that have experienced high subsidence (including near MWA) while staying within these generous thresholds. And while the IS/ND indicates that the subsidence rate will be monitored during the implementation of the Pump-in Project, it provides no clear plan for what happens when monitoring reveals excessive subsidence. The impacts of this action are complex, broad and far reaching, and need to be considered in a full EIR analysis. Consistent with recommendations from CDFW on the Project, a full EIR should evaluate all areas that would be affected by increased subsidence, including the Mendota WA, and develop a plan to offset losses of wetland and riparian vegetation communities caused by changes in hydrology associated with subsidence caused by Project pumping. CDFW recommended that the plan address mitigation for impacted habitat value and function, to achieve a minimum no net loss of these habitats, consistent with California Fish and Game Commission policy on Wetlands Resources.

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<sup>44</sup> See: <https://ceqanet.opr.ca.gov/2020050434/2/Attachment/5CSO8N>

### **Compliance with Clean Water Act is Absent.**

As the U.S. EPA noted in scoping comments submitted for the Westlands pump-ins in 2010 the proposed discharge of contaminated groundwater from Westlands with potentially high salt, boron, chromium, arsenic, selenium and other metals would be subject to NPDES permitting requirements pursuant to the federal Clean Water Act (CWA). Further EPA noted, “*Permits will need to be designed to ensure the discharges do not cause or contribute to exceedences of applicable State water quality standards or degradation of designated beneficial uses.*”<sup>45</sup> Westlands has failed to obtain the required CWA permits.

The Clean Water Act prohibits the discharge of "pollutants" through a "point source" into a "water of the United States" unless they have an NPDES permit. Such a permit would contain limits on what can be discharged, monitoring and reporting requirements, and other provisions to ensure that the discharge does not harm water quality or human health. The term point source is also defined very broadly in the Clean Water Act. It means any discernible, confined and discrete conveyance, such as a pipe, ditch, channel, tunnel, conduit, discrete fissure, or container.<sup>46</sup>

No compliance with the federal CWA is provided in the IS/ND. Thus, the public is precluded from analyzing the permit and conditions to ensure protection and non-degradation of water supplies under the NPDES permit and potential mitigation measures. As we have noted above, 35 of the 88 discharge points included in Table 1 of the IS/ND under Westlands' previous pump-in projects had at least one well that exceeded maximum contaminant levels (MCLs) identified for the constituents As, Se or TDS. These elevated concentrations of constituents such as selenium can bioaccumulate in the food chain and have amplifying impacts in the environment.<sup>47</sup>

### **A Final NEPA Document has Not Been Provided.**

As described on page 10 of the IS/ND, footnote 5, USBR's approval of the Westlands' 2020-2025 Warren Act Contract authorizing the Pump-in Project is subject to environmental review under the National Environmental Protection Act (NEPA) pursuant to the Council on Environmental Quality regulations (40 Code of Federal Regulations Parts 1500- 1508). Review of Reclamation's approval of Westlands' 2020-2025 Warren Act Contract pursuant to the requirements of NEPA is being prepared under an Environmental Assessment (EA). A draft EA for the Pump-in Project was made available for public comment thru August 20, 2020. A Final EA has not yet been completed for this project. A Negative Declaration is not supported and especially not supported absent a Final EA for this project.

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<sup>45</sup> See: <http://calsport.org/news/wp-content/uploads/EPA-comments-Westlands-WD-EIR-NOP-3-4-10.pdf>

<sup>46</sup> See: <https://www.epa.gov/npdes/npdes-permit-basics>

<sup>47</sup> DWR Groundwater Data from WWD 2008 Pump Ins at:  
<https://wdl.water.ca.gov/waterdatalibrary/WaterQualityDataLib.aspx>

And the following DWR Groundwater Data from previous WWD SLC Pump-ins:

<https://calsport.org/news/wp-content/uploads/Water-Quality-Assessment-of-Non-Project-Turn-ins-to-the-California-Aqueduct-2014.pdf>

<https://calsport.org/news/wp-content/uploads/Water-Quality-Assessment-of-Non-Project-Turn-ins-to-the-California-Aqueduct-2015.pdf>

<https://calsport.org/news/wp-content/uploads/Water-Quality-Assessment-of-Non-Project-Turn-ins-to-the-California-Aqueduct-2016.pdf>

## Inadequate Cumulative Impacts Analysis.

When assessing whether a cumulative effect requires an EIR, the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable. An EIR must be prepared if the cumulative impact may be significant and the project's incremental effect, though individually limited, is cumulatively considerable. "Cumulatively considerable" means that "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." (CEQA Guidelines § 15064(h).) The IS/ND fails to follow these standards and fails to consider the cumulative impacts, including water quality, well drawdown and subsidence impacts, of past, current and future probable projects, whether they may be significant, or whether the Project's contribution would be cumulatively considerable.

Cumulative impacts from other water exchanges are not disclosed or analyzed. We adopt by reference our comments from previous exchanges and transfers and previous scoping comments.<sup>48</sup> In addition to the continued extraction of water from already over drafted groundwater basins, the impacts from discharging this groundwater on Westlands' toxic soils and exacerbating an existing subsurface agricultural drainage problem on the west-side of the San Joaquin Valley are not disclosed nor mitigated. Selenium found in groundwater and drainage water in Westlands is known to create life threatening impacts to migratory birds, wildlife and fish, magnifying up the food chain as these pollutants accumulate. These impacts are merely brushed aside. No data from previous pump-ins is provided to support Westland's conclusions of less than significant impact in the IS/ND. No alternatives are considered. Finally, there is insufficient analysis of the cumulative impact of discharging these contaminants into drinking water, wildlife refuge supplies, or downstream fish and wildlife beneficial uses.

Additionally, we refer to CDFW's recommendations on the previous IS/ND<sup>49</sup> for this project with respect to cumulative effects, "...lowered water quality and increased salt loading could potentially

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<sup>48</sup> See: [http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc\\_ID=14341](http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=14341) "Resnicks' Westside Mutual Water District member lands in Westlands Water District to the AEWSO service area and Westside Exchange Program are not disclosed nor analyzed. Nor are the impacts to Madera County from the potential groundwater transfers likely contemplated under the proposed action. The existing Exchange Program involves delivery of Arvin's supplies to Westside member lands as exchange water, based on a 1 for 1 or "bucket for bucket" basis, up to 50,000 acre feet (AF)."

See 30,000 acre feet of groundwater proposed to be transferred to Westlands et. al. from the Mendota Pool:

<http://www.usbr.gov/newsroom/newsrelease/detail.cfm?RecordID=49107>

See also North Valley Regional Recycled Water Program-- <http://www.nvrrecycledwater.org/description.asp> The NVRWP could produce and deliver up to 32,900 acre-feet per year of tertiary-treated recycled water to the drought-impacted west side. This water can be used to irrigate food crops, public and privately owned landscaping, and for industrial uses. This basin transfer would alter San Joaquin River Flows and flows to refuges, and the South Delta Bay Estuary. The project would deliver up to 59,000 acre feet per year (AFY) of recycled water produced by the cities of Modesto and Turlock via the Delta-Mendota Canal (DMC), a feature of the Central Valley Project owned by Reclamation. Instead of discharging fresh treated water into the San Joaquin River, recycled water would be conveyed from Modesto and Turlock through pipelines from their wastewater treatment facilities, crossing the San Joaquin River, ending at the DMC.

<sup>49</sup> See: <https://ceqanet.opr.ca.gov/2020050434/2/Attachment/5CSO8N>

*impact sensitive aquatic species such as the giant garter snake, and affect habitats for sensitive status species, especially in the context of other existing and pending projects affecting water quality and ground subsidence of Mendota Pool, the MWA, and surrounding areas. CDFW recommends that the cumulative impacts analysis include the effects to special status species from this Project and other current and foreseeable projects.”* These and other cumulative impacts must be adequately studied in an EIR.

### **More Robust Monitoring Program & Enforcement Are Needed.**

To protect downstream beneficial uses, we recommend the following be incorporated into a revised WQMP for the Pump-in Project:

- Well water should not be conveyed into the Aqueduct until it has been confirmed that the well water does not exceed the selenium wellhead standard of 2 µg/L (from Table 4 of the WQMP);
- Weekly monitoring of wells (while pumps are running) that have had at least one water quality sample above 2 µg/L selenium during the 2015 and 2016 pump-ins;
- Weekly water quality sampling for selenium at Check 21 of the California Aqueduct while Westlands is pumping groundwater into the Aqueduct;
- The selenium objective for the California Aqueduct should be 1.5 µg/L to be protective of downstream beneficial uses associated with the Aqueduct and Mendota Pool;
- Well water pumped into the Mendota Pool should not exceed 600 mg/L TDS to protect Mendota Wildlife Area water quality;
- Weekly water monitoring of wells and the Aqueduct at Check 21 should require rapid turnaround so results are received within 7 days and can be responsive to current and changing conditions.
- Well water from Westlands should not be pumped into the Aqueduct if Dos Amigos Pumping Plant is not operating.
- There needs to be an established protocol dictating required actions and enforcement when water quality standards are exceeded at individual wells or in the aqueduct and related conveyance canals.

### **Conclusion**

CEQA requires that an Environmental Impact Report ("EIR") be prepared for any project that may have a significant impact on the environment. (Public Resources Code §§ 21000, 21151.) CEQA establishes mandatory findings of significance that require the preparation of an EIR when a project has the potential to substantially degrade the quality of the environment, to achieve short-term environmental goals to the disadvantage of long-term environmental goals, and when a project has possible environmental effects, which are cumulatively considerable (CEQA Guidelines § 15065). Moreover, whenever an agency is presented with a fair argument based upon substantial evidence that a project may have a significant effect on the environment, an EIR must be prepared, even though there may be evidence to the contrary in the record. (CEQA Guidelines § 15064(f)(1).

We find that the IS/ND fails CEQA's "most important" purpose, to fully inform the decision-makers and the public of the environmental impacts of the choices before them." (83 Cal.App.4th at p. 920.) The IS/ND does not adequately assess the potentially significant environmental impacts from the Pump-in Project or consider alternatives to the project. There are reasonably available alternatives that have not been considered and should be analyzed in order to reduce the potentially significant environmental impacts. Absent from the document is any assessment of the cumulative impacts including third party impacts and impacts to fish, wildlife and water quality. Required permits and compliance with the Clean Water Act that would govern the discharge of contaminants into the waters of the State and Nation have not been provided; nor have necessary consultations with Federal and State fish and wildlife agencies concerning potential endangered and threatened species impacts. The Project as described in the IS/ND would violate terms under Article 16(b)(2) of Westlands WIIN Act repayment contracts. The Warren Act Contract and associated Contract Exhibits and Agreement between Westlands and DWR governing the full discharge into the Aqueduct from 2020-2025 is absent and therefore, could not be reviewed.

Prior to commencing with the proposed Project, which has in the past and likely will continue to harm downstream uses, a complete EIR is required. This document needs to include, among other things, a revised Water Quality Monitoring Plan to ensure waters of the State and Nation are not degraded, compilation and analysis of prior groundwater water quality data, flow rates and quantities pumped from participating wells from previous pump-ins, a mass-balance model for selenium in the Aqueduct, the Warren Act Contract and Exhibits, the Agreement between DWR and Westlands, documentation of Clean Water Act permit compliance, and full analysis of alternatives and cumulative impacts. This information should be included in the EIR that replaces the IS/ND. We object to the adoption of a Negative Declaration for this project, and the proposed 25-year authorization for all the discharge points in Table 1 of the IS/ND because they are not supported by data from past groundwater pump-ins into the Aqueduct from Westlands. Lastly, the conveyance period for the Pump-in Project in 2020 should not commence prior to the completion of the appropriate CEQA and NEPA decision documents.

Thank you for the opportunity to comment. Please add our names to Westlands' electronic notification lists for environmental documents regarding water supplies or contracts or conveyance.

Sincerely,



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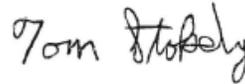
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### References Cited

(DWR) California Department of Water Resources. November 2017. Water Quality Assessment of Non-Project Turn-ins to the California Aqueduct, 2016. Technical Memorandum Report, Division of Operations and Maintenance State Water Project Operations Support Office Environmental Assessment Branch Sacramento, California, 146 pp.

(DWR) California Department of Water Resources. December 2016. Water Quality Assessment of Non-Project Turn-ins to the California Aqueduct, 2015. Technical Memorandum Report, Division of Operations and Maintenance State Water Project Operations Support Office Environmental Assessment Branch Sacramento, California, 172 pp.

- (DWR) California Department of Water Resources. October 2015. Water Quality Assessment of Non-Project Turn-ins to the California Aqueduct, 2014. Technical Memorandum Report, Division of Operations and Maintenance State Water Project Operations Support Office Environmental Assessment Branch Sacramento, California, 140 pp.
- (DWR) California Department of Water Resources. 2008. Fishing Along the SWP. Brochure. DWR, Sacramento, 9 pp.
- (USFWS) U.S. Fish and Wildlife Service. October 2017. Species at Risk from Selenium Exposure in California Inland Surface Waters, Enclosed Bays and Estuaries, Final Report to the U. S. Environmental Protection Agency Inter-Agency Agreement No. DW-14-95825001-0. USFWS, Sacramento, CA, 156 pp.

## Appendix A. Proposed Discharge and Well Locations from the DEA that have exceeded MCLs for As, Se or TDS in previous years of pump-ins.

Table 1. Proposed Discharge and Well Locations from the DEA that have exceeded MCLs for As, Se or TDS.<sup>50</sup>

SLC Milepost Discharge Location	State Well ID(s)	# of samples exceeding MCL for As <sup>51</sup> and (range of As reported)	# of samples exceeding MCL for Se <sup>52</sup> and (range of Se reported)	# of samples exceeding MCL for TDS <sup>53</sup> and (range of TDS reported)
105.20L	141202R02	0	1 (4 µg/L)	1 (1290 mg/L)
115.43L, Lateral 7	151509R03,151509R04 151509R05,151503A02 151504A03,151503H01	2 (10.2-11.8 µg/L)	0	8 (1010-1390 mg/L)
117.52L	151419F01	0	12 (3.4-5.8 µg/L)	1 (1300 mg/L)
127.40L	161521N03 <sup>54</sup>	0	2 (2.8-3.9 µg/L)	0
128.49R	171413A01 <sup>55</sup>	0	6 (8.4-22 µg/L)	0
128.50L	161533J01 <sup>56</sup>	0	12 (4.2-6 µg/L)	0
128.54L	161532A06	0	6 (3-6.5 µg/L)	1 (1400 mg/L)
130.81R	171510M01	0	3 (2.1-2.5 µg/L)	0
133.80L	171601N03	0	2 (2.1-2.2 µg/L)	0
137.31L	181606F01	0	1 (3 µg/L)	1 (1200 mg/L)
139.40L	181609R01	0	1 (3 µg/L)	0
140.55LA	181617R02	0	0	1 (1040 mg/L)
142.58R	181629N02	0	1 (12 µg/L)	1 (1230 mg/L)
143.00L	181627N01	0	1 (7 µg/L)	1 (1070 mg/L)
152.75L	191723R01	0	0	2 (1014-1100 mg/L)

<sup>50</sup> Data Sources: DWR 2008, 2016, 2017. Locations/wells identified in blue were marked as new facilities in DEA.

<sup>51</sup> MCL for As is 10 µg/L from page 13 of 2020 WQMP, Table 5 Water Quality Standards Short List.

<sup>52</sup> MCL for Se is 2 µg/L from page 13 of 2020 WQMP, Table 5 Water Quality Standards Short List.

<sup>53</sup> MCL for TDS is 1000 mg/L from page 13 of 2020 WQMP, Table 5 Water Quality Standards Short List.

<sup>54</sup> Samples from adjacent State Well ID 161521N02.

<sup>55</sup> Samples from adjacent State Well ID 171413A06.

<sup>56</sup> Samples from adjacent State Well ID 161533J02.

155.15L	191831N01	0	1 (2.1 µg/L)	0
156.36R	201714K01	0	8 (2.1-7.4 µg/L)	1 (1200 mg/L)
	201712H01	0	2 (2.5-2.9 µg/L)	0
156.37LA	201806Q01 <sup>57</sup>	3 (12-13 µg/L)	5 (2.8-4.7 µg/L)	0
157.98L	201817G01	0	9 (2.4-3.2 µg/L)	0
158.95L	201820E01	0	1 (2.6 µg/L)	0
159.98R	201831C01	0	5 (2.3-2.6 µg/L)	0
<b>161.49L</b>	<b>201831Q01</b>	0	8 (5.3-11 µg/L)	0
161.60L	211805C01	0	6 (2.3-5.4 µg/L)	0
	211809D02	0	1 (7 µg/L)	0
162.08L	211805C01	0	6 (2.3-5.4 µg/L)	0
	211805M01	0	8 (5.2-7.5 µg/L)	0
162.10R	211806G01	0	2 (17-18 µg/L)	0
162.64L	211809L01	0	1 (7 µg/L)	0
164.11R	211818G03	0	6 (14-19 µg/L)	0
164.55L-A	211817N03	0	7 (10-12 µg/L)	0
	211816N01	0	7 (2.9-5.1 µg/L)	0
164.63R	211818G03	0	6 (14-19 µg/L)	0
164.95R	211833G01	0	8 (3-12 µg/L)	0
<b>166.70R</b>	<b>211828G06</b>	0	4 (3.9-4.6 µg/L)	1 (1200 mg/L)
166.90R	211827K02	0	6 (3.7-5.6 µg/L)	0
167.04L, Lateral 37	211823D06	0	1 (3 µg/L)	0
167.86R	211833N02	2 (11 µg/L)	0	0
	211833G01	0	8 (3-12 µg/L)	0

**Data Sources:**

<sup>57</sup> Samples from adjacent State Well ID 201806Q02.

(DWR) California Department of Water Resources. November 2017. Water Quality Assessment of Non-Project Turn-ins to the California Aqueduct, 2016. Technical Memorandum Report, Division of Operations and Maintenance State Water Project Operations Support Office Environmental Assessment Branch Sacramento, California, 146 pp.

(DWR) California Department of Water Resources. December 2016. Water Quality Assessment of Non-Project Turn-ins to the California Aqueduct, 2015. Division of Operations and Maintenance State Water Project Operations Support Office Environmental Assessment Branch Sacramento, California, 172 pp.

(DWR) California Department of Water Resources. 2008. DWR Groundwater Data from WWD 2008 Pump Ins project at: <https://wdl.water.ca.gov/waterdatalibrary/WaterQualityDataLib.aspx>