

Appendix A

Comments and Responses

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Appendix A

Comments and Responses

A.1 Introduction

This appendix contains responses to comments received on the Proposed Mitigated Negative Declaration (MND) and Draft Environmental Assessment/Initial Study (EA/IS). Each commenter, their associated agency/group, and assigned number identification is listed in Section A.2. Section A.3 includes the comments and responses to those comments. Appendix B includes the full comment letters.

A.2 List of Commenters

Table A-1 presents commenters and associated agencies or groups that submitted comments on the 2015 TCCA Water Transfers EA/IS.

Table A-1. List of Commenters

Commenter	Agency/Group	Letter ID
Jim Brobeck	AquAlliance	1
Scott Cantrell	California Department of Fish and Wildlife	2
Trevor Cleak	Central Valley Regional Water Quality Control Board	3
Rachel Zwillinger	Defenders of Wildlife	4

A.3 Detailed Comments and Responses

Individual responses to comments are presented in the following section.

Comment Letter 1, Jim Brobeck, AquAlliance

Comment 1-1 **Comment**

This letter is to express AquAlliance's concern with water transfers, particularly groundwater substitution transfers, evaluated in the above referenced project.

This Draft Environmental Assessment (EA) and Initial Study/Negative Declaration (IS/ND) is for water transfers in contract year 2015. The

proponents, Tehama-Colusa Canal Authority Water (TCCA), claim on pdf page 61/78 of the Draft EA/IS/ND that, “Water transfers under the Proposed Action would have a less than significant impact on the natural communities that are covered in these plans because of the temporary nature of the transfers...” These “temporary” transfers are certainly not temporary and are occurring on a regular basis due to increased demand and decreased precipitation. It is in response to numerous protests against the inadequate piecemeal environmental review of these transfers that the San Luis & Delta-Mendota Water Authority (SLDMWA) and Reclamation released a Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) on Long-Term Water Transfers from 2015 to 2024. Other transfers not involving the TCCA and its Member Units could occur during the same time period. The urgency and shortened review period for this project is inappropriate given the ongoing Long-Term Water Transfer EIS/EIR process, the obvious multi-year deficit in Shasta Reservoir storage and the recognized historic low levels of groundwater in the Sacramento Valley.

Response

TCCA requested a shortened review period based on two criteria from the CEQA Guidelines Appendix K:

- (2) The public project application is under severe time constraints with regard to obtaining financing or exercising options which cannot be met without shortening the review period; and
- (3) The health and safety of the community would be at risk unless the project is approved expeditiously.

Uncertainty about water available for transfers delayed the analysis of transfers such that the draft documents were not complete until March 3, 2015. Sellers, however, need to determine whether they will idle land to develop transfer water by April 15, 2015. As such, the State Clearinghouse approved the shortened review period to meet the severe time constraint.

The Proposed Action is not part of the Long-Term Water Transfers EIS/EIR discussed in the comment. The current Proposed Action for temporary transfers during 2015 has independent utility and is not dependent on, nor does it dictate the nature and scope of, the long-term transfers addressed in the EIS/EIR. Chapter 3, Section XVIII, item (b) describes the potential cumulative effects of the Proposed Action with other water transfers.

The EA/IS assesses the potential impacts of the dry conditions in 2015 as part of the No Action Alternative. The Proposed Action is analyzed as a change from these conditions, and the EA/IS considers whether the Proposed Action could exacerbate conditions under the No Action Alternative to cause significant

impacts. The comment specifically addresses surface and groundwater resources; these analyses are in Chapter 3, Section IX, items (a), (b), and (f).

Comment 1-2
Comment

Pdf page 61/78: “Water transfers under the Proposed Action would have a less than significant impact on the natural communities that are covered in these plans because of the temporary nature of the transfers...” The USBR knows that a higher level of environmental review is needed prior to proceeding with the aggressive groundwater substitution transfers (GWST) that are occurring every year out of the Tuscan Aquifer. It is unclear why cumulative GWSTs are increasing when they have not been analyzed by a more robust environmental review that examines the true cumulative impacts associated with multiple water transfers over an extended period of time and increased demand by groundwater dependent farming operations in the region. While 1-year transfers are analyzed as stand-alone projects year after year it is obvious that there is a permanently escalating demand for groundwater in the Sacramento Valley to be integrated into the statewide water market. GWSTs are occurring every year as opportunity to make money selling water entitlements arises. Cumulative impacts of the reality of long-term GWST have not been presented clearly as required by NEPA and CEQA.

Response

The lead agencies have included groundwater monitoring data in Appendix C of the Final EA/IS to provide additional background related to this statement. The hydrographs in Appendix C show that over time, water levels have decreased in drier periods but have not shown long-term increasing or decreasing trends. Maps from the Department of Water Resources (DWR) that show decreases in groundwater levels from 2004 to 2014 are also provided in Appendix C. The DWR maps show the change from one point (2004) to another point (2014). These maps show that the groundwater levels decline in a dry year, but, as noted above, there is no evidence of a material increase or decrease in long-term trends for groundwater level when groundwater data for additional years, such as those shown in the hydrographs in Appendix C, are taken into account.

The record contains no substantial evidence that any significant environmental impact may occur as a result of the Proposed Action, as mitigated. Thus, it is entirely appropriate for the agencies to assess single-year 2015 transfers in an EA/IS and prepare a Findings of No Significant Impact (FONSI) and MND, because substantial evidence demonstrates that the Proposed Action, as mitigated, will not result in a significant impact on the environment.

Comment 1-3

Comment

GWST from one region to another, even from adjacent groundwater basins, is increasingly controversial. The risks are borne by the majority while the benefits accrue to the few. The term “willing sellers” should not be applied to those who are tapping a common resource (groundwater) to profit from selling surface water entitlements. The majority of groundwater users in the sellers’ regions have not been fully informed of the ramifications of this water market scheme. In Butte County, the supervisors have submitted comments opposing regional GWST that may impact the Tuscan Aquifer System.

Response

Public notices regarding the release of the Draft EA/IS were published in the Appeal-Democrat and Sacramento Bee on March 3, 2015. The Draft EA/IS documents were made available for public review on Reclamation’s website at http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=20761. Furthermore, the Notice of Completion was posted in the office of the county clerk of each county affected by the project, including Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, and Yolo Counties. As a result, groundwater users in the sellers’ region were adequately notified about the Draft EA/IS and were given the opportunity to provide comments to the document.

The Butte County Board of Supervisors’ opposition to transfers of local groundwater is so noted. The EA/IS addresses potential impacts to existing groundwater basins in the project study area and determined that the Proposed Action (with mitigation measures identified in the EA/IS) would not result in significant impacts to groundwater resources.

Comment 1-4

Comment

As a result of the significantly reduced water supplies available from Reclamation, the TCCA is in need of approximately 98,000 AF of water to irrigate permanent crops to prevent the long-term impacts of allowing these crops to die. The Proposed Action includes potential transfers of up to 98,000 AF of surface water from 20 entities. It is during critically dry years that groundwater usage increases in the Sacramento Valley putting stress on aquifers and exacerbating already historic low levels of groundwater in the Tuscan aquifer system. In spite of the need to have flexible irrigation needs that fit the water-year, farms have been converting from annual crops that may be easily fallowed to permanent crops. This is particularly un-strategic on the part of farms that rely on river-diversion entitlements that were originally intended to reduce stressful groundwater demands. Farms that were developed with the intention of using intermittent river supplies should not be relying on

groundwater imported from other parts of the state, even if these are nearby regional aquifers.

Response

As indicated in Section 1.2 of the Draft EA/IS, the lead agencies recognize that 2015 is a critically dry year, as indicated by the service contractors' initial allocations, which is not only a key factor in the purpose and objectives of the Proposed Action, but has also been taken into account in the impacts analyses in the Draft EA/IS. As discussed in Chapter 3, the agencies used a model to estimate potential impacts on groundwater, choosing to model the transfers in year 1977 because that was the driest year during the period included in the groundwater model. The model incorporates increased groundwater pumping during dry conditions as part of the baseline condition; therefore, modeling groundwater substitution transfers in 1977 enabled an analysis of whether groundwater substitution transfers could exacerbate drought conditions in groundwater aquifers. The modeling results indicate that the groundwater substitution transfers would not cause significant groundwater level drawdowns, which led to the less than significant finding in Chapter 3.

Comment 1-5
Comment

The maximum potential transfer from the Glenn-Colusa Irrigation District (which overlies the deepest portion of the Tuscan Aquifer System) under March 1 water-year conditions is 76,000 A/F with 10,000 A/F coming from groundwater. The cumulative impact of reducing surface water irrigation recharge (fallowing) combined with 10,000 A/F of GWST is significant and requires an expanded monitoring and mitigation plan.

Response

Commenters expressed concerns that transfer-related pumping would be concentrated in the Tuscan Formation. As shown in Figure A-1, groundwater substitution pumping associated with the range of potential activities analyzed under the Proposed Action would occur primarily outside the Tuscan formation, either from the Tehama Formation or other formations. Some of the groundwater substitution pumping wells for Glenn-Colusa Irrigation District and Reclamation District 1004 lie within (or near) the Tuscan and Tehama subsurface formations. Pumping from these wells will be closely monitored through the implementation of Mitigation Measure GW-1 to avoid potentially adverse effects.

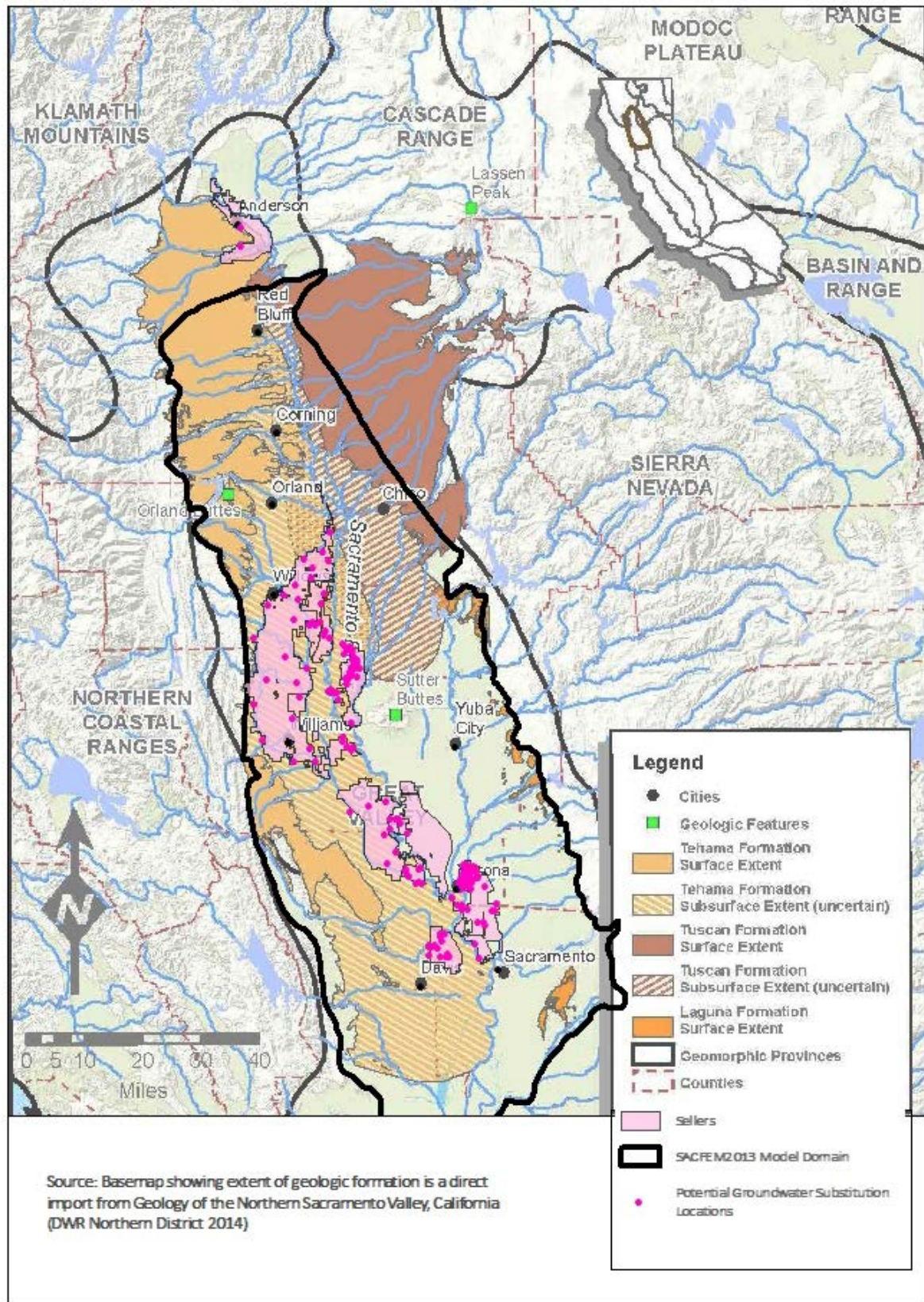


Figure A-1. Extent of Tuscan and Tehama Formations with respect to groundwater substitution pumping under Proposed Action

Additionally, Glenn-Colusa Irrigation District could transfer 66,000 AF through crop land idling. Water transfers via cropland idling could decrease applied water recharge to the local groundwater system. Since only a small portion of the applied (i.e., transferred) water would have percolated to the groundwater table, this reduction in recharge would be insubstantial when compared to the total amount of water that recharges the Sacramento Valley Groundwater Basin.

Comment 1-6
Comment

The 2007 Sacramento Valley Water Resource Monitoring, Data Collection and Evaluation Framework (Framework) was developed by participants in the Sacramento Valley Integrated Regional Water Management Plan (SVIRWMP) and referenced in the Glenn County groundwater management plan. While monitoring currently occurs throughout the valley, it is recognized that improvements can be made with respect to data collection/monitoring approach and focus at both the project and regional level.

Accordingly, an informal panel of Sacramento Valley water resources scientists and engineers developed a proposed framework aimed toward assisting in improved regional and project-specific water resource monitoring, data collection, information exchange, and evaluation to better understand the valleys' water resources to improve upon their management. This Framework emphasized the importance of creating "a program-specific network of shallow monitor monitoring wells should be developed to detect changes in water levels over the shallowest portion of the aquifer. In evaluating impacts to certain wetlands species, it is important to discern both the rate of groundwater level change, as well as the cumulative change over the entire year." The failure to complete this prerequisite habitat monitoring step prior to proceeding with GWST is irresponsible and may lead to permanent degradation of habitat such as Valley Oak groves as has occurred in the southern portions of the Central Valley where ~400 square miles of Valley Oak woodlands have disappeared due in part to greatly lowered water tables. According to the USDA Valley Oak Trees are resistant to short-term drought; mature trees suffer drought damage only when a series of dry seasons lower water tables to extreme depths. <http://www.fs.fed.us/database/feis/plants/tree/quelob/all.html>. The monitoring networks in the 2015 transfer project does not include a program-specific network of shallow monitor monitoring wells to detect changes in water levels over the shallowest portion of the aquifer as recommended by the Framework.

Response

The 2007 Framework for Sacramento Valley Water Resource Monitoring, Data Collection, and Evaluation Program (Framework) was developed as part of the Sacramento Valley Integrated Regional Water Management Plan (IRWMP) and is therefore a much broader effort than the monitoring needed for the proposed 2015 water transfers. Reclamation has identified monitoring requirements that

will allow the agencies to assess changes to groundwater levels, quality, or subsidence associated with groundwater substitution transfers; these requirements are included in Mitigation Measure GW-1. The Framework was designed to better characterize surface water and groundwater resources throughout the Sacramento Valley, which is a much broader goal that is better achieved through the IRWMP effort.

The EA/IS analyzed the potential effects to biological resources from groundwater substitution transfers, and found them to be less than significant. The Monitoring and Mitigation Plans in Mitigation Measure GW-1 provide an extra precaution to prevent effects.

Comment 1-7

Comment

The failure of GCID and other agencies to comply with the Framework or to complete comprehensive environmental review while proceeding with annual GWSTs is unacceptable. Butte County has voiced objection to GCID's GWST as has the City of Chico. The Framework was developed in the hopes that regional interests could share information and create policies that would minimize conflict and maximize sustainability in groundwater management. Why should the farms and urban dwellers in Butte County strive to conserve water when their neighbor (GCID) is tapping the same resource to sell for profit?

Response

Implementation of the Framework is part of the IRWMP planning efforts in the Sacramento Valley, and is not a requirement for water transfers. The monitoring plans for transfers are designed specifically for transfers. Mitigation Measure GW-1 includes information on monitoring requirements associated with the Proposed Action. The groundwater analysis in Chapter 3 shows potential areas of groundwater drawdown associated with the proposed groundwater substitution transfers, and the modeling indicates that changes in groundwater levels in Butte County would be negligible.

Comment 1-8

Comment

Impacts to groundwater dependent ecosystems and streamflow are insufficiently analyzed. On March 24, 2014 the California Natural Resources Agency, the California Department of Food and Agriculture, and the Ca Environmental Protection Agency held a workshop to gather ideas, proposals and feedback on sustainable groundwater management actions. Dan Wendell, Nature Conservancy spokesman explained:

If we want to avoid problems in areas that are reasonably healthy today, it is imperative that we consider the overall value of the hydrologic system, both to man and to nature. Time is of the essence in these cases, since the environmental and surface water rights impacts occur very early in groundwater development, when modest water level declines of only 20 to 40 feet can result in significant depletion of streamflow and even perhaps loss of perennial flow and the impact of surface water rights.

The Sacramento Valley still has water levels that are fairly shallow,” he said. “There are numerous perennial streams and healthy ecosystems, and the basin is largely within a reasonable definition of sustainable groundwater yield. However, since the 1940s, groundwater discharge to streams in this area has decreased by about 600,000 acre-feet per year due to groundwater pumping, and it’s going to decrease an additional 600,000 acre-feet in coming years under 2009 status quo conditions due to the time it takes effects of groundwater pumping to reach streams. It takes years to decades, our work is showing.

“This represents a loss of 1.2 million acre-feet of stream flow,” Mr. Wendell said. “This is real water. This is streamflow that would have otherwise ended up in the Delta. And our current estimates are that 400,000 acre-feet of this 1.2 MAF per year is lost export capacity. This represents a very real decrease in the yield of the Central Valley Project and the State Water Project, especially for purveyors south of the Delta. At a time when we’re trying to increase water supplies, we are actually moving in opposite direction from the perspective of these particular areas.”

<http://mavensnotebook.com/2014/04/28/groundwater-management-workshop-part-1-sustainable-groundwater-management-panel/>

Pdf page 55/78: “Groundwater substitution transfers under the Proposed Action would reduce groundwater levels and potentially deplete surface water flows in rivers and creeks (see Section IX (b)). Surface water depletions in the Sacramento and American rivers as a result of groundwater substitution transfers would not be substantial, nor would they be of sufficient magnitude to affect special status fish species.”

Pdf page 56/78: “For creeks with the presence of special status fish species, there would be a less than 1 cfs reduction in average monthly flow in Stony Creek, Salt River, Little Chico Creek, and Putah Creek. A flow reduction of 1 cfs or less is not of sufficient magnitude to affect special status fish species. There would be no changes in flows in Colusa Basin Drain, Coon Creek, Eastside Cross Canal, Cache Creek, Butte Creek and Big Chico Creek. As a result, effects to special status fish species would be less than significant.”

The participants of the proposed GWST recognize that groundwater and SW are connected and that extractions will decrease streamflow. The EA/IS/ND claims that stream flow losses resulting from pumping are primarily occurring during the wet season. Stream based replenishment may be the greatest during high flows, but there will be streamflow loss occurring at all times of the year until the aquifer is fully replenished. This is particularly important in tributary streams that are vulnerable to even modest declines. Project proponents are failing to monitor tributary streamflow that contributes to the health of out-migrating anadromous fish. A study by Dr. Paul Maslin, *Intermittent Streams as Rearing Habitat for Sacramento River Chinook Salmon*, 1998, explains that, “Between 100,000 and 1,000,000 juvenile chinook rear annually in small, non-natal streams. The listed winter-run chinook seems to use tributaries for rearing proportionally more than do other races.” Dr. Maslin emphasizes that, “Because of [the] loss of habitat quantity and quality, it is important that all remaining rearing habitats be evaluated and measures be taken to preserve or enhance important components.” Dr. Maslin mentions 36 tributaries of the Sacramento River with a special focus on Mud Creek, an intermittent stream that is less than 5 miles up gradient from the GCID wells used in recent GWST and likely to be used in this project.

Response

The groundwater model results show that drawdown levels near the Sacramento and American Rivers as a result of transfers are relatively small. The American River is disconnected from the groundwater basin; therefore, there would be no impacts to stream flows as a result of groundwater substitution transfers. The Sacramento River is connected to the basin, but the changes in streamflow are negligible compared to the flows in the rivers. The biological resources analysis in Chapter 3 compares potential changes in streamflow in smaller waterways (estimated through groundwater modeling) to the streamflow under existing conditions or the future No Action Alternative. The analysis found that the changes in streamflow would be insubstantial and would not have significant effects on terrestrial or aquatic resources. There are no proposed water transfers near Mud Creek and groundwater model results do not show any potential drawdown in the area. Mud Creek is near Chico and is now operated as a flood control channel that does not support fisheries habitat.

Comment 1-9

Comment

Pdf page 35/78: “Groundwater levels in the Sacramento Valley Groundwater Basin have declined considerably over the last decade (spring 2004 to spring 2014), by approximately 40 feet (see figure in Appendix A). These decreases in groundwater levels have caused wells to go dry in parts of the valley... Though the Sacramento Valley Groundwater Basin and other parts of California are currently noticing declining groundwater level trends, past groundwater trends are indicative of groundwater levels declining moderately during extended

droughts and recovering to pre-drought levels after subsequent wet periods.” This paragraph contradicts itself and makes no effort to incorporate new information that indicates California should not expect sufficient “subsequent wet periods” to replenish obviously declining aquifer levels. Dr. B. Lynn Ingram, a climate expert at UN Berkeley, explains that, “The 20th Century, Ingram said, was a particularly wet one, and development in California took place under those favorable conditions, when dams and irrigation systems were built. That infrastructure and the assumptions on which it was built may not hold up during a long dry spell.”
<http://www.bizjournals.com/sanfrancisco/news/2014/01/21/californias-driest-winter-in-500-years.html?page=2>

Response

The information in the paragraph is not contradictory because it acknowledges that groundwater levels in the Sacramento Valley have declined over the last 10-year period (2004 to 2014), but suggests that groundwater levels would replenish with subsequent wet periods. Although the article referenced in the comment states that 2013 could be the driest water year in 500 years, it does not provide any new information that indicates that California would not have subsequent wet periods. Rather, the article states that it is difficult to predict whether California is heading into a drier period. Mitigation Measure GW-1 was modified to include additional protections to avoid potentially significant adverse effects to groundwater levels.

Comment 1-10 **Comment**

Pdf page 36/78: “Groundwater Quality. Groundwater quality in the Sacramento Valley Groundwater Basin is generally good and sufficient for municipal, agricultural, domestic, and industrial uses. However, there are some localized groundwater quality issues in the basin. Some of the water quality issues within the Sacramento Valley may include occurrences of saltwater intrusion...” The EA/IS/ND fails to incorporate the range of known water quality degradation mechanisms that can occur as exploitation of aquifers accelerates, especially during dry periods. Graham E. Fogg Professor of Hydrogeology and Hydrogeologist, speaking at the California Water Policy Seminar Series explained some of these mechanisms missing in the EA/IS/ND: *“In many cases, we find as you go deeper, the total dissolved solids or the quality of the water in these fine-grain non-aquifer materials gets worse. But we can’t sample water from these to figure out what the water quality is. It is reasonable to assume that the quality of water of these non-aquifer materials gets worse with depth, because the water turns over much more slowly the deeper you go. If you over-produce it and start pulling in too much water from a non-aquifer materials, that can also degrade the water quality,”* he said. *“It’s something you don’t want to explore through over-pumping of the system and then find out what’s happened when it’s too late.”* *“The one that scares the hell out of me is the*

basin salt imbalance,” he said. He noted that the figure shows water levels in the Central Valley, and pointed out the arrows in the southern San Joaquin Valley and the Tulare Lake Basin. “The arrows are pointed inward towards a pumping center, so essentially all the groundwater in that area is exiting through wells there,” he said. “There’s no water exiting through natural outlets in the basin. Down here in the Tulare Lake Basin, there’s no natural outlet for the groundwater. In the past, it’s questionable whether there ever was, but it appears that there was some groundwater exiting into the Southern San Joaquin Valley. This is important because when the hydrologic basin loses its outlet, you risk salinating the basin.”

Response

Chapter 3, Hydrology and Water Quality, item (a) analyzes the potential changes to water quality relative to existing conditions and the No Action Alternative, as required by CEQA and NEPA. Mitigation Measure GW-1 contains provisions for a comprehensive water quality testing program to avoid water quality degradation. Dr. Fogg’s comments are focused on the San Joaquin Valley and Tulare Lake regions, which are not included in this EA/IS.

Comment 1-11

Comment

Pdf page 25/78: “All plans were to be coordinated and implemented in conjunction with local ordinances, basin management objectives, and all other applicable regulations.”

Management of groundwater basins that extend over multiple county jurisdictions is non-existent in the Northern Sacramento Valley. While Butte County has a groundwater export ordinance that discourages irrigation Districts in Butte County from proposing GWST from wells in the county, Glenn County allows GCID to extract enormous amounts of groundwater from the shared aquifer system for sale less than 1 mile West of Butte. The Framework provided some hope that a regional plan would be developed but that has not occurred. The quality of life for non-participating counties and citizens is not protected by the proposed monitoring plans or by local ordinances, BMOs or other regulations. Butte County’s Needs Assessment Tuscan Aquifer Monitoring, Recharge, and Data Management Project explained: “Clearly the current ordinances, AB3030 plans, and local BMO activities, which were intended for localized groundwater management, are not well suited for management of a regional groundwater resource like that theorized of the Lower Tuscan aquifer system.”

http://www.buttecounty.net/Water%20and%20Resource%20Conservation/Tuscan%20Aquifer%20Project/~/_media/County%20Files/Water%20Resource/Public%20Internet/Tuscan%20Aquifer%20Project/Reports/Rivised%20Tuscan%20Aquifer%20Needs%20Assessment_6-28-07dmedits.ashx

Response

See responses to Comments 1-6 and 1-7.

Comment 1-12

Comment

GCID is currently drafting water transfer policies. The draft policy document indicates that the district owned wells would not be used while private wells would be pumping into their distribution canals to make up for GWST water that is forgone. The 2014 GCID/TCCA GWST wells were not clearly described with GCID claiming that private wells do not have to share critical well construction details with the public. Screen intervals for these wells are presumably variable and may exploit aquifer regions as shallow as 25' and as deep as 1,300'. The deepest wells are tapping aquifer zones near the bottom of the fresh water system and at depths that have historically not been exploited in the region. The public needs this detailed information to predict impacts to existing wells, native vegetation, streamflow, etc.

Response

Environmental effects to surface and groundwater resources are specifically discussed in Chapter 3, Section IX, items (a), (b), and (f). Furthermore, effects to biological resources are discussed in Chapter 3, Section IV. The groundwater modeling completed for the EA/IS evaluated groundwater substitution-related pumping and did not show any significant environmental impacts, which led to the less than significant determination. Before any transfer could proceed, GCID would submit the details of the groundwater substitution to Reclamation for approval, and Reclamation must verify that the transfer falls within the parameters analyzed in the EA/IS. Generally, groundwater substitution transfers could include either district-owned wells or privately-owned wells.

Comment 1-13

Comment

The EA/IS/ND provides no discussion of how the proposed project might affect water supplies and aquifer dynamics in light of climate change in California, but blithely predicts that aquifer levels will eventually rebound in accordance with 20th century precipitation patterns. Add to this the significant uncertainty regarding stream/aquifer interaction, impacts to groundwater dependent ecosystems overlying the shallowest portions of aquifer systems, and the multiple dry years already experienced by the State. What affect might this project, in addition to other transfer programs, have on the human and natural environment in light of the impacts of climate change?

Response

Impacts to the aquifers from groundwater substitution are discussed in detail in Section 3.3, Groundwater Resources. As described in Section 3.3, any effects on the aquifers from groundwater substitution would be less than significant with implementation of Mitigation Measure GW-1. Because the groundwater modeling indicates that groundwater levels would recover after potential transfer activities, any pumping from groundwater substitution is not expected to have adverse effects on the aquifers, including cumulative effects from climate change.

Comment 1-14

Comment

AquAlliance is concerned that irrigation districts (both junior and senior water right claimants) will expand permanent cropping patterns that demand water regardless of how many dry years the Central Valley watershed endures. The Central Valley Project was implemented to take pressure off rapidly declining groundwater resources. Now the canals are increasingly being used to move groundwater beyond aquifer boundaries. This will inevitably expand the quantity and extent of exhausted aquifers in the Sacramento Valley.

TCCA and the Bureau failed to analyze the cumulative impacts of serial GWSTs designed to meet the inflexible demand for water by growers reliant on irrigation district infrastructure in the EA/IS/ND. As proposed, the Project will negatively impact our regional economy and environment.

Thank you for responding to these comments.

Response

The Central Valley Project was implemented to take pressure off groundwater resources in the San Joaquin and Tulare Lake groundwater basins; the proposed transfers do not involve actions in these areas. The Proposed Action considers transfers only within the Sacramento Valley. The irrigation water in the proposed water transfers would be used for supplemental water supply in 2015, a very dry year. Water transfers would be used to fulfill the need of water users for flexible supplemental water supplies to alleviate shortages.

See response to comment 1-2 regarding cumulative impacts.

Comment Letter 2, Scott Cantrell, California Department of Fish and Wildlife

Comment 2-1

Comment

As trustee for California's fish and wildlife resources, the California Department of Fish and Wildlife (Department) has jurisdiction over the

conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (FGC §1802). The Department has reviewed the 2015 Draft EA/IS and MND prepared by the Bureau of Reclamation (Reclamation) and Tehama-Colusa Canal Authority (TCCA) for the 2015 TCCA Water Transfers and provides the following comments in our role as both a trustee agency and a California Environmental Quality Act (CEQA) responsible agency.

The 2015 Draft EA/IS analyzes environmental impacts of proposed water transfers (Proposed Action) of up to 98,000 acre feet (AF) in contract year 2015 from 20 entities to the Member Units of the TCCA. The transfers included in the 2015 Draft EA/IS are only those involving Central Valley Project (CVP) Base Supply, Project Water or CVP facilities. Water may be transferred through groundwater substitutions or cropland idling/crop shifting. No other types of water transfers are covered by the evaluation in the 2015 Draft EA/IS.

Response

This description is a summary of the Proposed Action.

Comment 2-2

Comment

The Draft EA/IS includes a list of fish species of management concern that occur in the project area (p. 2-17) and concludes that these species would not be affected by the Proposed Action beyond those impacts considered in the existing biological opinions for the state and federal water projects operated by the Department of Water Resources and Reclamation or through current consultations with the National Marine Fisheries Service and U.S. Fish and Wildlife Service (USFWS) (p. 3-17). Changes in Sacramento River flows (the largest being 400cfs in June) downstream from Shasta Dam are described as being a fairly small percentage of the overall flows. While there are ample data and figures in the document showing simulated changes to groundwater table elevations, we could not locate modeling outputs that describe simulated changes in surface flows and surface water elevations in reservoirs and streams (p. 3-17, 3-32). Changes in reservoir releases and altered flows on the Sacramento River would be a concern of ours to the extent that changes in these parameters exceed critical thresholds for fish.

Response

Chapter 3, Section IV Biological Resources, discusses effects of water transfers to biological resources in Shasta Reservoir and the Sacramento River qualitatively. Surface water modeling was not completed for the EA/IS because the maximum quantity of water transfers relative to total reservoir storage and river flows would be minor and the Proposed Action would not result in significant impacts to biological resources.

Comment 2-3

Comment

As a result of groundwater substitution transfers, surface water depletions in smaller creeks could affect special status fish species, but these would be less than a 1 cfs reduction in average monthly flow (p. 3.18). The Department recommends that the 2015 Draft EA/IS analyze the impacts from groundwater pumping on the low-flow period of each month, rather than the average flow for an entire month, in order to determine the significance of impacts during this sensitive period.

Response

While Reclamation and TCCA recognize the importance of low flow periods, limitations to the model's precision preclude such types of analysis. Mean monthly flows provide a reasonable and appropriate basis to characterize impacts for disclosure and decision-making purposes.

Comment 2-4

Comment

Additionally, the purpose of Mitigation Measure GW-1 is to monitor groundwater levels during transfers to avoid potential significant adverse effects (p. 3-54). However, it is unclear how potential impacts to streams, wetlands, and sensitive species will be monitored. The Department recommends that the 2015 Draft EA/IS analyze the need for monitoring of other water features and resources and include discussion of the types of monitoring and mitigation efforts conducted for past transfers, what will be duplicated for the Proposed Action, and any new/revised activities to ensure impacts on fish and wildlife resources are reduced to less than significant. The Department requests Reclamation provide copies of all monitoring programs, mitigation plans, and final summary reports for review.

Response

The biological resources analysis does not identify potentially significant effects to terrestrial or aquatic species; therefore, it does not require measures to mitigate effects. However, the groundwater level monitoring included in Mitigation Measure GW-1 can also provide useful information to verify that effects to these resources stay at less-than-significant levels during implementation. See also response to comment 2-6.

Reclamation will provide copies of all monitoring programs, mitigation plans, and the final summary reports to the California Department of Fish and Wildlife (CDFW).

Comment 2-5

Comment

We believe the 2015 Draft EA/IS has appropriately focused on terrestrial species, in particular, species that use seasonally flooded rice fields that may be impacted by cropland idling transfers. Rice fields and irrigation canals provide important habitat for species including giant garter snake (*Thamnophis giga*, GGS), greater sandhill crane (*Grus canadensis tabida*), black tern (*Chlidonias niger*), and western pond turtle (*Actinemys marmorata*). Environmental Commitments state that sellers seeking to transfer water via groundwater substitution who are in the same groundwater subbasin as “protected aquatic habitats, such as GGS preserves and conservation banks” must demonstrate that any impacts to water resources needed for special-status species protection have been addressed in their mitigation plan (p. 2-12). However, the Proposed Action may adversely affect aquatic habitats that are not clearly designated as “protected aquatic habitats,” such as public lands under conservation easement, State wildlife areas and ecological reserves, federal refuges, and private managed wetlands where management efforts to protect GGS also occur. The Department recommends the definition of “protected aquatic habitats” also include these types of land.

Response

Protected aquatic habitats include those lands with aquatic habitat and natural resource protections such as those identified by the commenter.

Comment 2-6 **Comment**

The Department provided comments on the Reclamation and TCAA Draft Environmental Assessment/Initial Study for 2014 Water Transfers. In addition to the above, our specific comments and recommendations to improve the TCCA water transfers process in 2014 are reiterated for 2015:

- We request that the Department be consulted, along with U.S. Fish and Wildlife Service, to evaluate suitability of GGS habitat (and other wetland dependent species) and to participate in implementation of the water transfer program overall. We suggest collaboratively developing a process to define how sellers that have lands with priority suitable habitat for GGS would be evaluated for participation in the water transfers program.

Response

Reclamation and TCCA will continue to collaborate and consult with CDFW and USFWS on implementation of water transfers, particularly on transfers proposed in areas of suitable habitat for giant garter snake (GGS). Reclamation appreciates CDFW assistance in the development of environmental commitments and will coordinate with CDFW, as appropriate, in the provision of information regarding water transfer proposals, monitoring, and review of the

monitoring data collected. The environmental commitments have been clarified to specify coordination with CDFW.

Comment 2-7

Comment

- We recommend that terms used in the Environmental Commitments, such as “adequate water,” “drains,” “canals,” “conveyance infrastructure,” and “major irrigation and drainage canals” be better defined so that it is abundantly clear what the sellers’ responsibilities are under the water transfers program.

Response

The term “adequate water” is used in the environmental commitments along with objectives of what must be accomplished with this water. Reclamation will review each transfer proposal to make sure that the seller meets these objectives, in accordance with the Mitigation Monitoring and Reporting Plan in Appendix D. These other terms describe agricultural water conveyance and drainage facilities, and are also considered during review of each transfer proposal.

Comment 2-8

Comment

- Implementation of monitoring and mitigation plans for cropland idling and groundwater substitution transfers should be tailored to local conditions so that impacts to aquatic habitats and sensitive species will be avoided, minimized and mitigated. Monitoring and mitigation programs are also needed to ensure cumulative impacts are less than significant.

Thank you for the opportunity to provide comments on the 2015 Draft EA/IS and MND. The Department looks forward to working with Reclamation and TCCA to ensure that public trust resources are adequately protected as the 2015 water transfers are implemented. James Rosauer, Environmental Scientist, is available to further discuss any of our comments. James can be reached at (916) 445-8360 or James.Rosauer@wildlife.ca.gov.

Response

See response to Comment 2-2. Reclamation will review monitoring and mitigation based on local conditions for each transfer and the potential for cumulative effects.

Comment Letter 3, Trevor Cleak, Central Valley Regional Water Quality Control Board

Comment 3-1
Comment

Pursuant to the State Clearinghouse's 2 March 2015 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the Request for Review for the Mitigated Negative Declaration for the Tehama-Colusa Canal Authority Water Transfers Project, located in Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, and Yolo Counties.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

Response

The Proposed Action does not include construction actions, so this type of permit is not necessary.

Comment 3-2
Comment

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits¹

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Response

The Proposed Action does not include development or redevelopment actions, so this type of permit is not necessary.

Comment 3-3

Comment

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 97-03-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

Response

¹ Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

The Proposed Action does not include industrial discharges, so this type of permit is not necessary.

Comment 3-4
Comment

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USA COE at (916) 557-5250.

Response

The Proposed Action does not include dredge or fill actions, so this type of permit is not necessary.

Comment 3-5
Comment

Clean Water Act Section 401 Permit -Water Quality Certification

If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Response

The Proposed Action does not include disturbances of waters of the United States. The Lead Agencies are not applying for permits from the United States Corps of Engineers or other related federal permits, so a Water Quality Certification is not necessary.

Comment 3-6

Comment

Waste Discharge Requirements

If USACOE determines that only non-jurisdictional waters of the State (i.e., “non-federal” waters of the State) are present in the proposed project area, the proposed project will require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Response

The Proposed Action does not involve actions in jurisdictional or non-jurisdictional waters, so a Waste Discharge Requirement permit is not necessary.

Comment 3-7

Comment

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board’s website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/index.shtml; or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.
2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order RS-2013-0100.** Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install

monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently \$1,084 + \$6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

Response

The agricultural lands that are part of the Proposed Action are already involved in agriculture and will not change purposes as part of the Proposed Action. The growers are already complying with the relevant requirements.

Comment 3-8

Comment

Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water* (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

If you have questions regarding these comments, please contact me at (916) 464-4684 or tcleak@waterboards.ca.gov.

Response

The Proposed Action does not involve a new point discharge, so a National Pollutant Discharge Elimination system permit is not necessary.

Comment Letter 4, Rachel Zwillinger, Defenders of Wildlife

Comment 4-1

Comment

On behalf of Defenders of Wildlife and its more than 1.2 million members and supporters, I am writing to provide comments on the Draft Environmental Assessment/Initial Study for the 2015 Tehama-Colusa Canal Authority Water Transfers (“EA/IS”). Under the proposed action, willing sellers in the Sacramento Valley would transfer up to 98,000 acre feet of water to members of the Tehama-Colusa Canal Authority (“TCCA”) for irrigation of permanent crops. EA/IS at 1-3. We understand that, particularly during drought, transfers are an effective way to satisfy demands for water with limited supplies, and we are not opposed to water transfers that include appropriate environmental protections. All transfers must proceed, however, with safeguards to ensure that wildlife is not significantly and unnecessarily impacted.

Unfortunately, the proposed action does not include critical wildlife safeguards. For example, the proposed action’s crop idling transfers will harm and even kill imperiled giant garter snakes, and the EA/IS’s environmental commitments are insufficient to avoid or mitigate this significant impact. The environmental commitments are ineffective, among other reasons, because they fail to limit the size and distribution of parcels that can be idled, do not restrict the total acreage that can be idled in any county, and may permit transfers from particularly important habitat areas. Further, the EA/IS provides so little information and analysis that it is impossible to discern whether the proposed action will have a significant impact on birds that rely on rice fields and on fish and terrestrial species that depend on streams that will be impacted by groundwater pumping. The EA/IS also includes an inadequate analysis of cumulative impacts, and fails to consider a reasonable range of alternatives.

Response

This introductory comment includes multiple points that are addressed in more detail in subsequent comments; the detailed responses are included with the subsequent comments.

Comment 4-2

Comment

Because the environmental commitments are insufficient to avoid the proposed action’s significant wildlife impacts, and because the EA/IS’s analysis is deficient, the U.S. Bureau of Reclamation (“Reclamation”) and TCCA must further analyze the proposed action and significantly strengthen the

environmental commitments in a full environmental impact statement (“EIS”)/environmental impact report (“EIR”).

Response

Based on the analysis presented in Section IV, as supported by substantial evidence provided therewith, impacts associated with cropland idling and groundwater substitution under the Proposed Action would be less than significant. That conclusion takes into account the environmental commitments related to biological resources. The environmental commitments have been further revised to protect additional habitat for waterfowl and shorebirds. Environmental commitments have also been refined to include requirement of an annual monitoring report to the USFWS and CDFW that includes maps of idled fields in the previous year, results of current giant garter snake surveys, new scientific research, and recommendations for future protection measures. The monitoring report will be followed by coordination efforts between Reclamation and the wildlife agencies.

The Draft EA/IS and proposed MND satisfy NEPA and CEQA requirements. NEPA requires federal agencies to prepare a detailed Environmental Impact Statement (EIS) on all major Federal actions significantly affecting the quality of the human environment (42 U.S.C. 4332 (2)(c)). Similarly, CEQA requires state agencies to prepare an Environmental Impact Report (EIR) if there is substantial evidence that a project may have a significant effect on the environment (CEQA Guidelines Section 15061(b)). The EA/IS provides a thorough and systematic evaluation of a broad range of environmental issues and demonstrates that no potentially significant impacts would occur over the transfer period as a result of the Proposed Action. The record contains no substantial evidence that any significant environmental impacts may occur as a result of the Proposed Action, as mitigated. Preparation of an EIS/EIR therefore is not warranted or required.

Comment 4-3 **Comment**

I. The EA/IS’s Environmental Commitments Fail to Avoid or Mitigate the Proposed Action’s Significant Impacts on the Giant Garter Snake

The National Environmental Policy Act (“NEPA”) requires federal agencies to prepare an EIS prior to taking “major Federal actions significantly affecting the quality” of the environment. 42 U.S.C. § 4332(2)(C). Before completing a full EIS, an agency may prepare an environmental assessment (“EA”) to discern whether the action could have a significant effect on the environment. *See* 40 C.F.R. § 1501.4. “If there is a substantial question whether an action ‘may have a significant effect’ on the environment, then the agency must prepare an [EIS].” *Ctr. for Biological Diversity v. Natl. Hwy. Traffic Safety Admin.*, 538 F.3d 1172, 1185 (9th Cir. 2008) (citation omitted). Whether an action may

“significantly” affect the environment “requires consideration of ‘context’ and ‘intensity.’” *Id.* (quoting 40 C.F.R. § 1508.27). Context focuses on the scope of the agency’s action. 40 C.F.R. § 1508.27(a). Intensity “refers to the severity of the impact,” and requires consideration of a variety of factors, including “[t]he degree to which the action may adversely affect an endangered or threatened species.” *Id.* § 1508.27(b).

Similarly, the California Environmental Quality Act (“CEQA”) permits the use of a negative declaration in lieu of an EIR only when an initial study shows that there is no substantial evidence that the project may have a significant effect on the environment. *See Rominger v. County of Colusa*, 229 Cal. App. 4th 690, 713 (2014); 14 Cal. Code Regs. § 15070. CEQA also requires that any significant effect on the environment be avoided or fully mitigated. Cal. Pub. Res. Code § 21081.

Here, the EA/IS makes clear that the cropland idling transfers included in the proposed action are likely to significantly, adversely impact giant garter snakes, and the EA/IS’s avoidance/mitigation measures are inadequate to reduce this impact to a less-than-significant level. Because the proposed action’s impacts will be significant, Reclamation and TCCA must prepare a full EIS/EIR.

Response

See Response to Comment 4-2 regarding preparation of an EIS/EIR and Response to Comment 4-4 regarding environmental commitments.

Comment 4-4 **Comment**

The giant garter snake is a wetland-dependent species that is endemic to California’s Central Valley. It is listed as threatened under both the federal and California Endangered Species Acts. Because the vast majority of the giant garter snake’s habitat has been destroyed, the species now relies on flooded rice fields for foraging, protective cover, and other important lifecycle needs. EA/IS at 3-19. The EA/IS recognizes that fallowing rice fields in order to transfer water will harm and even kill giant garter snakes:

Rice idling would affect available habitat for GGS. The GGS displaced from idled rice fields would need to find other areas to live and may face increased predation risk, competition, and reduced food supplies. This may lead to increased mortality, reduced reproductive success, and reduced condition prior the start of the overwintering period.

Id. The EA/IS concludes, however, that “[r]ice idling under the Proposed Action would have a less than significant impact on GGS because the Environmental Commitments would avoid or reduce many of the potential

impacts associated with displacement of GGS.” *Id.*² The EA/IS thus acknowledges that impacts to giant garter snakes could be significant, and relies on the environmental commitments to mitigate those impacts.

The environmental commitments that the EA/IS relies upon to mitigate and avoid significant impacts to the snakes, however, fail to adequately protect the species, and significant impacts will remain after the measures are implemented. Of particular concern is the fact that the environmental commitments remove protections that the U.S. Fish and Wildlife Service (“FWS”) previously determined are necessary to protect giant garter snakes from crop idling transfers. The Biological Opinion for Reclamation’s 2010-2011 Water Transfer Program included, *inter alia*, the following protective measures for giant garter snakes:

- (a) the block size of idled rice parcels could not exceed 320 acres;³
- (b) no more than 20% of rice fields could be idled cumulatively (from all sources of fallowing) in each county;
- (c) the idled parcels could not be located on opposite sides of a canal or other waterway, and could not be immediately adjacent to another fallowed parcel, with a preference for a checkerboard distribution of idled parcels;
- (d) a field could not be fallowed for more than two irrigation seasons in a row; and
- (e) transfers from the Natomas Basin were prohibited.

FWS, *Endangered Species Consultation on the Bureau of Reclamation’s Proposed Central Valley Project Water Transfer Program for 2010 – 2011* (Mar. 2010) at 5-7 (attached as Exhibit C). The Biological Opinion for the 2009 Drought Water Bank included similar protections, and also flatly prohibited transfers in a wide range of particularly important giant garter snake areas. FWS, *Endangered Species Consultation on the Proposed 2009 Drought Water Bank for the State of California* (Apr. 2009) at 7-8 (attached as Exhibit D).

² The EA/IS acknowledges that, even with full implementation of the environmental commitments, “[s]ome individual snakes would be exposed to displacement and the associated increased risk of predation, reduced food availability, increased competition, and potentially reduced fecundity.” EA/IS at 3-19.

³ Prior to the 2009 and 2010 biological opinions, FWS had concluded that a 160-acre limitation on the size of idled rice parcels was appropriate. See FWS, *Programmatic Biological Opinion on the Proposed Environmental Water Account Program* (Jan. 2004) at 18 (attached as Exhibit A). Defenders of Wildlife previously submitted comments indicating that increasing the parcel size from 160 to 320 acres would be harmful to giant garter snakes because the size of their home range is 40 and 90 acres, and forcing individuals to travel farther than this range may result in mortality. See *Comments on Addendum to the Environmental Water Account EIR/EIS* (Jan. 2009) (attached as Exhibit B). We continue to believe that limiting the size of idled parcels to 160 acres would more effectively protect giant garter snakes.

None of these important environmental commitments were included in the proposed action.

Response

The environmental commitments contained in the Draft EA/IS are not identical to information in past Biological Opinions issued by USFWS for water transfer projects or in the *2013 Draft Technical Information for Preparing Water Transfer Proposals*. The comment questions why the Draft EA/IS does not include previously approved commitments to ensure protection of giant garter snake (i.e., limiting parcel size for idling and prohibiting the same field from being idled more than two consecutive seasons). The commenter is correct that environmental commitments in the Draft EA/IS are modified from past water transfer documents, including the 2013 Draft Technical Information. However, commitments in the Draft EA/IS are consistent with the 2014 Water Transfer Biological Opinion.

Refinement of prior year's environmental commitments was based on best available scientific data that provides better information on where giant garter snake populations are likely to be found. Commitments that broadly restrict idling across the service area were refined to focus on cropland idling restrictions in areas where giant garter snake have a high likelihood of occurrence.

Giant garter snake priority habitat areas have been identified by Reclamation and maps have been developed (Halstead 2014) for each water district using the best available scientific information on habitat use, known populations, and historic tule marsh zones. The purpose of these maps is to identify areas with the highest probability of giant garter snake occurrence so that water transfer actions can be avoided within these areas. The range of transfer activities in the action alternatives could result in up to 18.0 percent of rice field idling throughout the sellers' service area; however, idling would be focused in areas where giant garter snake occurrence probability is low. Environmental commitments state that lands in the Natomas Basin will not be permitted to participate in cropland idling transfers, in addition to locations of other known priority giant garter snake populations. These habitat restrictions, along with retaining water within conveyance structures that provide habitat movement corridor, avoid potentially significant impacts from cropland idling.

Guidance for preparation of water transfer proposals will be revised annually (as necessary) to reflect how transfers would be implemented, and includes the prescribed measures in CEQA/NEPA and Section 7 documents that cover the area where transfers are proposed. Reclamation has also clarified environmental commitments regarding coordination with USFWS and CDFW and priority habitat. Reclamation must provide annual monitoring reports to USFWS and CDFW to report on idling actions and resulting effects on sensitive

species and hold annual meetings with the agencies to discuss contents of the report.

Comment 4-5

Comment

The environmental commitments from the 2010-2011 Water Transfer Program and 2009 Drought Water Bank Biological Opinions are exceedingly important for giant garter snakes. Among other things, they ensure that wetted rice habitat is distributed throughout the landscape to preserve habitat connectivity, limit the total amount of fallowed acreage to ensure that adequate habitat remains, and prohibit water transfers in areas that are known to provide particularly important habitat. In the Biological Opinions for the 2009 and 2010-2011 transfer programs, FWS concluded that these environmental commitments were necessary to minimize the impact of take caused by the crop idling transfers.

The EA/IS has replaced these important safeguards with environmental commitments that fail to protect the snakes. The new environmental commitments focus on efforts to map and identify “priority habitat with a high likelihood of GGS occurrence.” EA/IS at 2-12 to 2-13. Once the priority habitat is identified, however, the environmental commitments do not limit the amount or spatial distribution of idling that can occur in the identified areas. Instead, they merely require the sellers to make sure adequate water remains in drains and canals. *Id.* at 2-13. Additionally, the new environmental commitments list specific areas that are known to have priority giant garter snake populations, but do not prohibit transfers from those areas. *Id.* Rather, they permit potential sellers in those areas to request permission to transfer water. *Id.* The new environmental commitments do not include limitations on the size, distribution, or total acreage of fallowed parcels. By focusing exclusively on maintaining water in drains and canals, the proposed action’s environmental commitments would allow for unlimited habitat destruction and could have devastating consequences for the giant garter snake.

Response

See Response to Comment 4-4.

Reclamation reviews and approves potential transfer activities based on detailed review of the specific proposed transfer. Reclamation will not permit transfers in areas that are known to have priority giant garter snake populations. Reclamation technical experts review all proposed transfers prior to approval of the transfer to ensure that impacts of the proposed transfer are within the scope of analysis in this EA/IS. Reclamation ensures that the identified environmental commitments and mitigation measures are implemented through review of monthly reports, field visits, and necessary coordination with transfer participants.

Comment 4-6

Comment

Further, the EA/IS mischaracterizes the proposed action's environmental commitments to conclude they adequately avoid/mitigate giant garter snake impacts. For example, the EA/IS states that "[t]he number of individual snakes affected is expected to be small because Environmental Commitments avoid areas known to be priority habitat for GGS," and that "Environmental Commitments discourage rice idling in areas of suitable habitat where GGS are likely to occur." *Id.* at 3-19 to 3-20, 3-22. Nothing in the proposed environmental commitments, however, discourages or avoids water transfers in areas with priority giant garter snake habitat.

With only the proposed environmental commitments in place, the TCCA transfers will have a significant impact on the imperiled giant garter snake and its habitat. Accordingly, the lead agencies must prepare a full EIS/EIR. *See* 42 U.S.C. § 4332(2)(C); *Ctr. for Biological Diversity*, 538 F.3d at 1185 ("If there is a substantial question whether an action 'may have a significant effect' on the environment, then the agency must prepare an [EIS]."); *Rominger*, 229 Cal. App. 4th at 713. Pursuant to CEQA, TCCA must also identify additional mitigation measures that, if implemented, would reduce the impacts of the proposed action to below the significance threshold. *See* Cal. Pub. Res. Code § 21081.

Response

See Response to Comment 4-4 and 4-5.

Comment 4-7

Comment

In addition to conducting further analysis in an EIS/EIR, we recommend that Reclamation and TCCA improve the environmental protections included in the proposed action. As explained above, the proposed action should include the giant garter snake-focused environmental commitments from the 2010-2011 Water Transfer Program and 2009 Drought Water Bank Biological Opinions. We also suggest including an environmental commitment that requires landowners on idled rice fields to cultivate or retain nonirrigated cover crops or natural vegetation to provide habitat and forage for migratory birds. Such a commitment would be in keeping with California Water Code section 1018, which provides that, "[w]hen agricultural lands are being idled in order to provide water for transfer . . . , landowners shall be encouraged to cultivate or retain nonirrigated cover crops or natural vegetation to provide waterfowl, upland game bird, and other wildlife habitat, provided that all other water transfer requirements are met." A report issued by California Waterfowl suggests that vetch and other cover crops can provide valuable habitat for birds,

helping to mitigate impacts from idled rice fields. *See* California Waterfowl, *Rice-Cover Crop Rotation Pilot Project* (Feb. 2013) (attached as Exhibit E).

Response

See Response to Comment 4-4. Consistent with the provisions contained in Water Code Section 1018, Reclamation and DWR recognize that rice fields and irrigation/drainage ditches can provide habitat for terrestrial wildlife and waterfowl species. Potential sellers are encouraged to incorporate measures in their crop idling proposal to protect habitat value in the areas to be idled, and language has been added to the description of cropland idling in Chapter 2 to clarify this issue. CDFW can advise landowners in the use of nonirrigated cover crops or natural vegetation as it applies to the provision of waterfowl, upland game bird and other wildlife habitat to provide habitat benefits while still meeting the conditions necessary to make water available for transfer.

Comment 4-8

Comment

II. The EA/IS Fails to Provide Sufficient Information to Support a Determination that the Proposed Action's Impacts to Birds, Fish, and Other Species Will Be Insignificant

Under NEPA, if an EA is not followed by an EIS, it “must provide sufficient information and detail to demonstrate that the agency took the required ‘hard look’ at the environmental consequences of the project before concluding that those impacts were insignificant.” *Pac. Coast Fed’n of Fishermen’s Assns. v. U.S. Dep’t of the Interior*, 929 F. Supp. 2d 1039, 1056 (E.D. Cal. 2013) (citing *Save the Yaak Comm. v. Block*, 840 F.2d 714, 717 (9th Cir.1988) (“[A]n agency’s decision not to prepare an EIS will be considered unreasonable if the agency fails to supply a convincing statement of reasons why potential effects are insignificant.”)). Further, “conclusions in the EA must be supported by ‘some quantified or detailed information,’ and the underlying environmental data relied upon to support the expert conclusions must be made available to the public.” *Id.* (quoting *Klamath–Siskiyou Wildlands v. Bureau of Land Mgmt.*, 387 F.3d 989, 993, 996 (9th Cir. 2004)). Similarly, under CEQA, a negative declaration is inappropriate if the agency has failed to gather information and undertake an adequate environmental analysis. *Ctr. for Sierra Nevada Conservation v. El Dorado*, 136 Cal. Rptr. 3d 351, 362 (2012) (citation omitted).

Response

Section IV of the EA/IS evaluates effects to birds, fish, and other species. Specifically, Section IV(a) evaluates effects to special status fish in main stem rivers and smaller creeks. These effects were based on groundwater modeling described in Section IX(b). Section IV(a) also evaluates effects to special status

wildlife species, including giant garter snake, greater sandhill crane, black tern, and pacific pond turtle. Section IV(d) evaluates effects on movement corridors for fish and wildlife in the project area. These effects were based on evaluation of existing habitat in the project area and known populations in these areas.

Comment 4-9

Comment

A. The EA/IS Fails to Adequately Analyze the Impacts of Crop Idling Transfers on Migratory Birds

The EA/IS acknowledges that the proposed action could impact migratory birds and particular special status bird species, but does not provide sufficient information or analysis to allow decision makers or the public to discern whether those impacts may be significant. Rice fields provide resting, nesting, and breeding habitat for migratory birds that are similar to natural wetlands. EA/IS at 2-16. As the EA/IS recognizes, fallowing rice fields “could affect special status species that use rice fields for forage, cover, nesting, breeding, or resting.” *Id.* at 3-18. The EA/IS further explains that “[m]igratory bird species, including the black tern, use seasonally flooded agricultural land for nesting and forage habitat during the summer rearing season. The greater sandhill crane uses rice fields during the fall, winter, and early spring. Rice idling that reduces habitat could adversely affect these species.” *Id.* at 3-20.

The EA/IS concludes, however, that the proposed action’s impacts on birds will be less than significant because the birds are mobile and can find alternative habitat, and because the environmental commitments protect migratory birds. *Id.* First, the EA/IS’s assertion that migratory birds will not be significantly impacted because they “are highly mobile and can fly to other areas of rice production or nearby wildlife refuges” is unsupported by any analysis regarding the availability and accessibility of alternative habitat. *Id.* This is particularly problematic because the proposed action will take place under extremely dry conditions when alternative habitat in agricultural fields and wildlife refuges is severely limited. In fact, the EA/IS recognizes that, even without the transfers, migratory birds will likely have limited habitat in 2015: “Because of the dry conditions, refuge surface water supplies may be reduced in 2015. A reduction in available water supply to refuges and rice growers would result in less available habitat for migratory bird species.” *Id.* at 3-17. Particularly in light of these dry conditions, the EA/IS’s failure to provide any information or analysis regarding habitat availability for migratory birds in the Sacramento Valley in 2015 makes it impossible to tell whether the habitat destruction permitted by the proposed action will have a significant impact.

Response

Section IV(a) Draft EA/IS identify and evaluate potential impacts of cropland idling/shifting on terrestrial wildlife species that use seasonally flooded

agriculture for some portion of their lifecycle, including wintering waterfowl and shorebirds. To address commenters' concerns regarding impacts specific to migratory birds, additional information was added to the section to further describe these potential impacts. Impacts would still be less than significant.

The Draft EA/IS acknowledges the importance of agricultural lands within the project area for migratory birds, particularly those traveling on the Pacific Flyway. Cropland idling transfers would only be on rice fields and would not reduce availability of forage from upland crops, which is a substantial acreage in the Sacramento Valley. Although the project may reduce the availability of cropland, it would not affect post-harvest practices (i.e., flooding, burning, disking, or rolling). Specifically, the project would not include transfers of rice decomposition water and so would not reduce the availability of water for post-harvest flooding. The majority of forage available to migratory birds in the project area is in the form of decomposing waste grains during post-harvest flooding. Farmers in the Sacramento Valley only flood-up a fraction of the cropland planted; typically around 60 percent in normal water years (Miller et al 2010, Central Valley Joint Venture 2006) and as little as 15 percent in critically dry years (Buttner 2014). Cropland idling does not change the amount of water available for post-harvest flooding; this water would be used to flood other fields that had been planted during the growing season. Therefore, the project would not result in a reduction of winter forage for migrating birds, specifically waterfowl and shorebirds, because it would not affect the availability of water for post-harvest flooding.

To further ensure there are no significant adverse impacts on migratory birds, including greater sandhill crane, the environmental commitment pertaining to the Butte Sink has been refined to limit water transfer activities near all wildlife refuges and established wildlife areas within the seller's service area that support high concentrations of waterfowl and shorebirds.

Comment 4-10
Comment

Second, the EA/IS's conclusion that the environmental commitments will reduce any potentially significant impacts to migratory birds lacks support. The only bird-focused environmental commitment states that, "[i]n order to limit reduction in the amount of over-winter forage for migratory birds, including greater sandhill crane, cropland idling transfers will be minimized near known wintering areas in the Butte Sink." *Id.* at 2-14. This protection is insufficient to reduce impacts to migratory birds because (a) it focuses only on the Butte Sink, which is a small part of the region in which crop idling transfers would occur, and only emphasizes protection of sandhill crane habitat; and (b) the promise that "cropland idling transfers will be minimized" is so vague that effective implementation and enforcement of the commitment may be impossible. The other environmental commitments, which are focused on retaining water in

drains and canals, fail to safeguard the flooded rice fields that migratory birds depend upon.

Because the EA/IS includes insufficient analysis to show that impacts to migratory birds will be insignificant, and because the environmental commitments will not avoid or mitigate the potential impacts, the agencies should further analyze the proposed action's effects in an EIS/EIR.

Response

See Response to Comment 4-2 and 4-11.

Comment 4-11

Comment

Further, the EA/IS's analysis of impacts to special status bird species improperly omits any discussion of the tricolored blackbird. In December 2014, because of recent, dramatic population declines, the California Fish and Game Commission acted on an emergency basis to list the tricolored blackbird as endangered under the California Endangered Species Act. *See* 14 Cal. Code Regs. § 670.5(a)(5)(Q); <http://www.latimes.com/science/la-me-1204-blackbirds-20141204-story.html>. Reclamation's Draft EIS/EIR for the proposed Long-Term Water Transfers recognized that tricolored blackbirds "would be affected by idling seasonally flooded agriculture." Long-Term Water Transfers Draft EIS/EIR at 3.8-74. Yet the EA/IS does not list the tricolored blackbird as a special status species, *see* EA/IS at 2-16, and does not provide details regarding the nature and extent of the proposed action's impacts on the bird.⁴ Particularly because of the tricolored blackbird's precarious status, a full EIS/EIR should include a detailed analysis of the proposed action's potential impacts on this species.

Response

Discussion of the tricolored blackbird has been added to Chapters 2 and 3. The Environmental Commitments will reduce potential effect to migratory bird species, including the tricolored blackbird.

Comment 4-12

Comment

⁴ Appendix C of the EA/IS improperly lists the tricolored blackbird as a state species of special concern (as opposed to as a state endangered species), and states that "occurrences have been documented within both the Seller and Buyer Service Area. Suitable habitat is present within the project area. Foraging habitat may be affected by the project. Environmental commitments limit cropland idling and birds can relocate to other adjacent foraging habitats within the area." EA/IS at App. C-7. For the reasons discussed above, this assessment is insufficient to show that the proposed action's impacts to tricolored blackbirds will not be significant or that the environmental commitments will avoid or mitigate any potentially significant impacts.

B. The EA/IS Fails to Adequately Analyze the Impacts of Groundwater Substitution Transfers on Fish and Terrestrial Species

Under the proposed action, “[g]roundwater substitution transfers . . . would reduce groundwater levels and potentially deplete surface water flows in rivers and creeks . . .” EA/IS at 3-17. The EA/IS provides insufficient information and analysis to support its conclusion that impacts to fish and terrestrial species from these flow reductions will be insignificant.

For example, the EA/IS acknowledges that the proposed action could result in flow depletions in creeks that contain special status fish species, but concludes that “there would be a less than 1 cfs reduction in average monthly flow,” and that “[a] flow reduction of 1 cfs or less is not of sufficient magnitude to affect special status fish species.” *Id.* at 3-18. There is no information or analysis, however, to support the assertion that a flow reduction of 1 cfs or less will not affect fish. Moreover, some of the relevant creeks are small, and it seems possible that even a very small flow reduction at certain times of year that are important for particular fish species could impact habitat suitability and affect the fishes’ survival and reproductive success. This is particularly true in a dry year like 2015. Further, the EA/IS doesn’t even provide information about which special status fish species are present in which creeks, which makes it extremely difficult to understand the impact that the proposed action could have on imperiled fish.

Response

Section IV(a) included detailed analysis of groundwater substitution transfers on fish species, based on groundwater modeling results. Section IV(b,c) also quantify potential changes of transfers, including groundwater substitution transfers, on flows in the Sacramento River. Section IV(b,c) further evaluates effects to terrestrial species and natural communities of groundwater substitution transfers, based on groundwater model results.

The use of one cfs threshold to evaluate effects was biological in nature and was applied to every month of groundwater modeling. If a change of greater than 1 cfs occurred in any single month during the entire modeled period (1976-2003), the waterway was examined further for potential biological effects. Flows in smaller waterways with less than 1 cfs are expected to be within the normal range of annual fluctuation; some of these waterways are ephemeral and are subject to a wide range of flow conditions dependent on annual hydrology. Other smaller waterways are part of a managed system (i.e., canals) that also results in variation in flows. These small waterways were not analyzed further as groundwater substitution impacts on surface waterways are expected to be within this annual variation.

The EA/IS does say the following “Based on a review of field sampling data and reports, this analysis concluded that there is no evidence of the presence of special-status fish species in the following creeks and any streamflow depletion would have no effects on special status fish species: Walker Creek, French Creek, Willow Creek, South Fork Willow Creek, Funks Creek, Stone Corral Creek, Lurline Creek, Cortina Creek, Sand Creek, Sycamore Slough (Colusa County), Wilkins Slough Canal, Honcut Creek, North Honcut Creek, South Honcut Creek, and Dry Creek (tributary of Bear River)” and then goes on to evaluate effects to creeks where special status species may be present.

Comment 4-13
Comment

The EA/IS also states that “groundwater substitution transfers could result in streamflow depletion in rivers and creeks, which could directly impact natural communities by changing the timing and volume of flows within rivers.” *Id.* at 3-18. The EA/IS concludes, however, that “[i]f the flow reduction caused by implementing the transfer would be one cfs or less, then no further analysis was required because the effect was considered too small to have a substantial effect on terrestrial species.” *Id.* at 3-21. Based on application of this screening threshold, the EA/IS declined to consider the proposed action’s impacts on terrestrial species in over two dozen waterways.⁵ *Id.* Yet the EA/IS does not explain why a flow reduction of less than 1 cfs could not impact terrestrial species. And it seems likely that, in a dry year like this one, even a minor flow reduction in a small creek could impact natural communities and the terrestrial species within them. Further information and analysis, including a discussion of which terrestrial species may be impacted and how, is required before it is possible to determine whether the proposed action will have a significant impact.

Response

See Response to Comment 4-12. Existing conditions information has been added in Section 2.5.3 on potentially affect natural communities, including terrestrial species that occupy them.

Comment 4-14
Comment

The mitigation measure and environmental commitment focused on reducing impacts from groundwater pumping do not ensure that adverse impacts to fisheries and terrestrial species will be insignificant. Among other flaws, the

⁵ The EA/IS indicates that two waterways could see flow reductions of greater than 1 cfs, but concludes that the impacts to natural communities will not be significant, in part, because of the timing of the flow reductions. This analysis is insufficient to show that the impacts will be insignificant, among other reasons, because it does not even discuss the species that could potentially be impacted or the times at which the impacted species rely on the creeks’ flows.

provisions' focus on mitigation is problematic because irreparable harm to imperiled species may have already occurred by the time a mitigation plan is implemented. *See id.* at 2-12, 3-51 to 3-54.

Response

Mitigation Measure GW-1 has been revised to include the following:

“Sellers will monitor groundwater depth data to verify that significant adverse effects to deep-rooted vegetation are avoided or allow sellers to modify actions before significant effects occur. If monitoring data indicate that water levels have dropped below root zones (i.e., more than 10 feet where groundwater was 10 to 25 feet below ground surface prior to starting the transfer of surface water made available from groundwater substitution actions), the seller must implement actions set forth in the mitigation plan. If historic data show that groundwater elevations in the area of transfer have typically varied by more than this amount annually during the proposed transfer period, then the transfer may be allowed to proceed. If there is no deep-rooted vegetation (i.e., oak trees and riparian trees that would have tap roots greater than 10 feet deep) within one-half mile of the transfer wells or the vegetation is located along waterways that will continue to have water during the transfer, the transfer may be allowed to proceed. If no existing monitoring points exist in the shallow aquifer, monitoring would be based on visual observations of the health of these areas of deep-rooted vegetation. If significant adverse impacts to deep-rooted vegetation (that is, loss of a substantial percentage of the deep-rooted vegetation as determined by Reclamation based on site-specific circumstances in consultation with a qualified biologist) occur as a result of the transfer despite the monitoring efforts and implementation of the mitigation plan, the seller will prepare a report documenting the result of the restoration activity to plant, maintain, and monitor restoration of vegetation for 5 years to replace the losses.”

Comment 4-15

Comment

In addition to flow reductions caused by groundwater pumping, the EA/IS indicates that “Sacramento River flows would slightly decrease from the TCCA point of diversion at Red Bluff to the point of diversion of the seller, located downstream, during the transfer period.” *Id.* at 3- 17. The document states, in an entirely conclusory manner, that the anticipated flow reduction would not be substantial enough to impact special status fish species or natural communities. *Id.* at 3-17, 3-21. Further information about the magnitude and timing of the anticipated flow depletions is necessary to assess whether the impacts to species that rely on the Sacramento River may be substantial.

Response

Section IV(b,c) quantifies potential changes of transfers on flows in the Sacramento River. The largest change in flow could be approximately 400 cfs in June (if the Sacramento River Settlement Contractors receive 100 percent of the Contract Total). For comparison, flow in the Sacramento River near Colusa averaged 6,244 cfs in June (USGS 2014) during the dry conditions in 1977. Fish species would not be affected by a maximum 6% decrease in Sacramento River flow during one month.

Comment 4-16

Comment

III. The EA/IS's Cumulative Impacts Analysis is Deficient

Under both NEPA and CEQA, an EA/IS must include a cumulative impacts analysis. *See Kern v. U.S. Bureau of Land Mgmt.*, 284 F.3d 1062, 1076 (9th Cir. 2002); 14 Cal. Code Regs. § 15064(h). In a cumulative impacts analysis, an agency must take a “hard look” at all actions:

An EA's analysis of cumulative impacts must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment. . . . Without such information, neither the courts nor the public . . . can be assured that the [agency] provided the hard look that it is required to provide.

Te-Moak Tribe of W. Shoshone v. U.S. Dept. of Interior, 608 F.3d 592, 603 (9th Cir. 2010) (quotation marks and citations omitted) (rejecting EA for mineral exploration that had failed to include detailed analysis of impacts from nearby proposed mining operations). A cumulative impacts analysis must provide a “useful analysis” that includes a detailed and quantified evaluation of cumulative impacts to allow for informed decision-making and public disclosure. *Kern*, 284 F.3d at 1075.

With respect to impacts from rice idling, the EA/IS's cumulative impacts analysis is deficient because it relies on the environmental commitments to conclude that the proposed action's contribution to a potentially significant cumulative impact would not be considerable. EA/IS at 3-67 (“The Environmental Commitments would reduce potential effects of the Proposed Action to special status species under the cumulative condition, such that the Proposed Action's contribution would not be cumulatively considerable.”). As explained above, the environmental commitments are inadequate to avoid or mitigate the proposed action's significant impacts on giant garter snakes and do almost nothing to protect migratory birds. Because the environmental commitments do not effectively avoid the proposed action's impacts, they cannot be relied upon to limit the proposed action's contribution to cumulatively significant impacts.

The cumulative impacts analysis also fails to account for actions other than water transfers that will reduce available habitat for wildlife in the project area. The EA/IS indicates that the proposed action, in combination with other cropland idling transfers, could result in idling of up to 87,901 acres of rice in 2015. EA/IS at 3-67. Cropland idling water transfers, however, are only one of several sources of habitat loss that are expected to occur in 2015. The EA/IS explains, for example, that drought-related water supply reductions could result in additional rice idling within the project area. *Id.* at 3-17 (“Under No Action Alternative, growers in the sellers’ area would idle crops if surface water supplies are reduced. Rice idling actions could have an adverse effect to GGS that use flooded rice fields for foraging and protective cover habitat during the summer months.”). The EA/IS further acknowledges that, under the no-action alternative, water supply reductions could have a profound impact on giant garter snakes:

The lack of available water due to critically dry conditions could affect movement corridors or nursery sites for GGS and other fish and wildlife. Wildlife that is dependent on water as a means of moving from one area to another may be unable to relocate due to the parched landscape. Snakes present in areas of rice idling would have to move across dewatered habitat to find suitable areas with water. Moving across dewatered areas could expose snakes to a number of potential impacts associated with the need to relocate. These include the energetic costs associated with relocation, a reduction in food supplies associated with the decrease in habitat, increased predation, potential for increased competition in new habitats, and potentially reduced reproduction and recruitment for those individuals displaced.

Id. at 3-22. The EA/IS also explains that water deliveries to wildlife refuges could be reduced because of dry conditions, further limiting available habitat for giant garter snakes, migratory birds, and other wetland dependent-species. *Id.* at 3-17. Initial Central Valley Project and State Water Project allocations have confirmed that water deliveries to agricultural contractors and wildlife refuges are likely to be substantially reduced in 2015.

Though the EA/IS recognizes that the proposed action’s crop idling transfers are only one part of the habitat loss that is likely to occur in the Sacramento Valley in 2015, it fails to analyze the cumulative impact to special status species and other wildlife from all of the foreseeable actions that will result in wetland losses. This shortcoming is problematic in light of the proposed action’s substantial contribution to habitat loss in the Valley—up to 55,041 acres—and the high likelihood that impacts to giant garter snakes and other species from habitat loss associated with water management decisions will be significant.

Response

See Response to Comment 4-2, 4-4, and 4-14 regarding effectiveness of Environmental Commitments.

The Draft EA/IS analyzes cumulative impacts of transfers in Chapter 3, Section XVIII(b), including as related to air quality, biological resources, and groundwater resources. That section includes a list of transfers that could occur in addition to the Proposed Action as part of a cumulative condition. To determine this list, the lead agencies reached out to other potential buyers and sellers (including both state and federal as suggested in the comment) to characterize the potential transfers under consideration for 2015. Public comments have not disclosed any additional transfers that are missing from this list. Because of the short-term nature of this project, the lead agencies did not identify other current or future projects that may contribute to the cumulative effects identified in this analysis after the proposed project is complete. Cumulative effects to special status species are evaluated in Chapter 3, Section XVII.

Comment 4-17
Comment

IV. The EA/IS Fails to Consider an Adequate Range of Alternatives

Both CEQA and NEPA require consideration of a reasonable range of alternative actions that might achieve similar goals with less environmental impact. Cal. Pub. Res. Code § 21002; 42 U.S.C. § 4332; 40 C.F.R. § 1508.9. The lead agency must “rigorously explore and objectively evaluate all reasonable alternatives” to the proposed action. *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1310 (9th Cir. 1990).

Here, the EA/IS only analyzes the proposed action and a no action alternative. There are, however, other alternatives that could achieve the project purpose with a less substantial impact on the environment. For example, the EA/IS could have considered an alternative that would permit the transfer of less than 98,000 acre feet, such as a maximum transfer quantity of 50,000 acre feet. Additionally, the EA/IS could have considered an alternative that included a reasonable maximum on the total acreage of rice that could be fallowed, or an alternative that did not permit any crop idling transfers. Such alternatives would achieve the project purpose of providing additional water supply to TCCA, and would reduce the project’s impacts on wildlife.

Response

Under CEQA, the purpose of an IS is to determine if a proposed project may have a significant effect on the environment; therefore, a discussion of alternatives is not required.

According to the DOI NEPA Regulations regarding the contents of an EA at 43 CFR 46.310 (b), “when the Responsible Official determines that there are no unresolved conflicts about the proposed action with respect to alternative uses of available resources, the environmental assessment need only consider the proposed action and does not need to consider additional alternatives, including the no action alternative. (See section 102(2)(E) of NEPA)”, and (c) “in addition, an environmental assessment may describe a broader range of alternatives to facilitate planning and decision-making.” The EA/IS concluded that implementation of the Proposed Action, as mitigated, would not result in any unavoidable significant impacts and the record contains no substantial evidence that any significant impacts would result from the Proposed Action. In addition, analyzing a different mix of transfers, including a lesser amount of water to be made available, would not facilitate planning or decision-making since any potential impacts associated with a lesser quantity of water would be contained within the amounts analyzed. Therefore, a discussion of alternatives within the EA/IS is unnecessary.

Comment 4-18
Comment

V. Conclusion

We want to reiterate that we are not opposed to water transfers, and believe transfers can be an important tool for meeting water demand during dry years. We are concerned, however, that the EA/IS is designed so that the transfers will have a significant impact on giant garter snakes in particular, and also on migratory birds. To ensure that the transfers can move forward, we recommend that Reclamation and TCCA revise the proposed action to better protect these species. Among other possible approaches to giant garter snake protection, the agencies could incorporate the environmental commitments from the Biological Opinions for the 2010-2011 Water Transfer Program and the 2009 Drought Water Bank. To reduce impacts to migratory birds, we recommend that the agencies include an environmental commitment that requires landowners on idled rice fields to cultivate or retain nonirrigated cover crops or natural vegetation that provides habitat and forage. With these changes, we believe the TCCA transfers can move forward while protecting wildlife from significant and unnecessary harm.

Thank you for considering our views. Please feel free to contact me at your convenience if you have any questions or concerns.

Response

Responses to the above comments have addressed the concerns summarized in this conclusion statement.

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Appendix B

Comment Letters

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AQUALLIANCE

DEFENDING NORTHERN CALIFORNIA WATERS

March 23, 2015

Tehama-Colusa Canal Authority
Attention: Jeff Sutton
P.O. Box 1025
Willows, CA 95988
Sent via email to: jsutton@tccanal.com

U.S. Bureau of Reclamation
Attention: Brad Hubbard
2800 Cottage Way, MP-410
Sacramento, CA 95825
Sent via email to: bhubbard@usbr.gov

**Re. ENVIRONMENTAL ASSESSMENT/MITIGATED NEGATIVE DECLARATION FOR
2015 TEHAMA-COLUSA CANAL AUTHORITY WATER TRANSFERS**

Dear Messrs. Sutton and Hubbard:

This letter is to express AquAlliance's concern with water transfers, particularly groundwater substitution transfers, evaluated in the above referenced project.

This Draft Environmental Assessment (EA) and Initial Study/Negative Declaration (IS/ND) is for water transfers in contract year 2015. The proponents, Tehama-Colusa Canal Authority Water (TCCA), claim on pdf page 61/78 of the Draft EA/IS/ND that, "Water transfers under the Proposed Action would have a less than significant impact on the natural communities that are covered in these plans because of the temporary nature of the transfers..." These "temporary" transfers are certainly not temporary and are occurring on a regular basis due to increased demand and decreased precipitation. It is in response to numerous protests against the inadequate piecemeal environmental review of these transfers that the San Luis & Delta-Mendota Water Authority (SLDMWA) and Reclamation released a Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) on Long-Term Water Transfers from 2015 to 2024. Other transfers not involving the TCCA and its Member Units could occur during the same time period. The urgency and shortened review period for this project is inappropriate given the ongoing Long-Term Water Transfer EIS/EIR process, the obvious multi-year deficit in Shasta Reservoir storage and the recognized historic low levels of groundwater in the Sacramento Valley.

Pdf page 61/78: "Water transfers under the Proposed Action would have a less than significant impact on the natural communities that are covered in these plans because of the temporary nature of the transfers..." The USBR knows that a higher level of environmental review is needed prior to proceeding with the aggressive groundwater substitution transfers (GWST) that are occurring every year out of the Tuscan Aquifer. It is unclear why cumulative GWSTs are increasing when they have not been analyzed by a more robust environmental review that examines the true cumulative impacts associated with multiple water transfers over an extended period of time and increased demand by groundwater dependent farming operations in the region. While 1-year transfers are

analyzed as stand-alone projects year after year it is obvious that there is a permanently escalating demand for groundwater in the Sacramento Valley to be integrated into the statewide water market. GWSTs are occurring every year as opportunity to make money selling water entitlements arises. Cumulative impacts of the reality of long-term GWST have not been presented clearly as required by NEPA and CEQA.

GWST from one region to another, even from adjacent groundwater basins, is increasingly controversial. The risks are borne by the majority while the benefits accrue to the few. The term “willing sellers” should not be applied to those who are tapping a common resource (groundwater) to profit from selling surface water entitlements. The majority of groundwater users in the sellers’ regions have not been fully informed of the ramifications of this water market scheme. In Butte County, the supervisors have submitted comments opposing regional GWST that may impact the Tuscan Aquifer System.

As a result of the significantly reduced water supplies available from Reclamation, the TCCA is in need of approximately 98,000 AF of water to irrigate permanent crops to prevent the long-term impacts of allowing these crops to die. The Proposed Action includes potential transfers of up to 98,000 AF of surface water from 20 entities. It is during critically dry years that groundwater usage increases in the Sacramento Valley putting stress on aquifers and exacerbating already historic low levels of groundwater in the Tuscan aquifer system. In spite of the need to have flexible irrigation needs that fit the water-year, farms have been converting from annual crops that may be easily fallowed to permanent crops. This is particularly un-strategic on the part of farms that rely on river-diversion entitlements that were originally intended to reduce stressful groundwater demands. Farms that were developed with the intention of using intermittent river supplies should not be relying on groundwater imported from other parts of the state, even if these are nearby regional aquifers.

The maximum potential transfer from the Glenn-Colusa Irrigation District (which overlies the deepest portion of the Tuscan Aquifer System) under March 1 water-year conditions is 76,000A/F with 10,000 A/F coming from groundwater. The cumulative impact of reducing surface water irrigation recharge (fallowing) combined with 10,000 A/F of GWST is significant and requires an expanded monitoring and mitigation plan. The 2007 Sacramento Valley Water Resource Monitoring, Data Collection and Evaluation Framework (Framework) was developed by participants in the Sacramento Valley Integrated Regional Water Management Plan (SVIRWMP) and referenced in the Glenn County groundwater management plan. While monitoring currently occurs throughout the valley, it is recognized that improvements can be made with respect to data collection/monitoring approach and focus at both the project and regional level.

Accordingly, an informal panel of Sacramento Valley water resources scientists and engineers developed a proposed framework aimed toward assisting in improved regional and project-specific water resource monitoring, data collection, information exchange, and evaluation to better understand the valleys’ water resources to improve upon their management. This Framework emphasized the importance of creating “a program-specific network of shallow monitor monitoring wells should be developed to detect changes in water levels over the shallowest portion of the aquifer. In evaluating impacts to certain wetlands species, it is important to discern both the rate of groundwater level change, as well as the cumulative change over the entire year.” The failure to complete this prerequisite habitat monitoring step prior to proceeding with GWST is irresponsible

and may lead to permanent degradation of habitat such as Valley Oak groves as has occurred in the southern portions of the Central Valley where ~400 square miles of Valley Oak woodlands have disappeared due in part to greatly lowered water tables. According to the USDA Valley Oak Trees are resistant to short-term drought; mature trees suffer drought damage only when a series of dry seasons lower water tables to extreme depths.

<http://www.fs.fed.us/database/feis/plants/tree/quelob/all.html>. The monitoring networks in the 2015 transfer project does not include a program-specific network of shallow monitor monitoring wells to detect changes in water levels over the shallowest portion of the aquifer as recommended by the Framework.

The failure of GCID and other agencies to comply with the Framework or to complete comprehensive environmental review while proceeding with annual GWSTs is unacceptable. Butte County has voiced objection to GCID's GWST as has the City of Chico. The Framework was developed in the hopes that regional interests could share information and create policies that would minimize conflict and maximize sustainability in groundwater management. Why should the farms and urban dwellers in Butte County strive to conserve water when their neighbor (GCID) is tapping the same resource to sell for profit?

Impacts to groundwater dependent ecosystems and streamflow are insufficiently analyzed. On March 24, 2014 the California Natural Resources Agency, the California Department of Food and Agriculture, and the Ca Environmental Protection Agency held a workshop to gather ideas, proposals and feedback on sustainable groundwater management actions. Dan Wendell, Nature Conservancy spokesman explained:

If we want to avoid problems in areas that are reasonably healthy today, it is imperative that we consider the overall value of the hydrologic system, both to man and to nature. Time is of the essence in these cases, since the environmental and surface water rights impacts occur very early in groundwater development, when modest water level declines of only 20 to 40 feet can result in significant depletion of streamflow and even perhaps loss of perennial flow and the impact of surface water rights.

The Sacramento Valley still has water levels that are fairly shallow," he said. "There are numerous perennial streams and healthy ecosystems, and the basin is largely within a reasonable definition of sustainable groundwater yield. However, since the 1940s, groundwater discharge to streams in this area has decreased by about 600,000 acre-feet per year due to groundwater pumping, and it's going to decrease an additional 600,000 acre-feet in coming years under 2009 status quo conditions due to the time it takes effects of groundwater pumping to reach streams. It takes years to decades, our work is showing. "This represents a loss of 1.2 million acre-feet of stream flow," Mr. Wendell said. "This is real water. This is streamflow that would have otherwise ended up in the Delta. And our current estimates are that 400,000 acre-feet of this 1.2 MAF per year is lost export capacity. This represents a very real decrease in the yield of the Central Valley Project and the State Water Project, especially for purveyors south of the Delta. At a time when we're trying to increase water supplies, we are actually moving in opposite direction from the perspective of these particular areas."

<http://mavensnotebook.com/2014/04/28/groundwater-management-workshop-part-1-sustainable-groundwater-management-panel/>

Pdf page 55/78: “Groundwater substitution transfers under the Proposed Action would reduce groundwater levels and potentially deplete surface water flows in rivers and creeks (see Section IX (b)). Surface water depletions in the Sacramento and American rivers as a result of groundwater substitution transfers would not be substantial, nor would they be of sufficient magnitude to affect special status fish species.”

Pdf page 56/78: “For creeks with the presence of special status fish species, there would be a less than 1 cfs reduction in average monthly flow in Stony Creek, Salt River, Little Chico Creek, and Putah Creek. A flow reduction of 1 cfs or less is not of sufficient magnitude to affect special status fish species. There would be no changes in flows in Colusa Basin Drain, Coon Creek, Eastside Cross Canal, Cache Creek, Butte Creek and Big Chico Creek. As a result, effects to special status fish species would be less than significant.”

The participants of the proposed GWST recognize that groundwater and SW are connected and that extractions will decrease streamflow. The EA/IS/ND claims that stream flow losses resulting from pumping are primarily occurring during the wet season. Stream based replenishment may be the greatest during high flows, but there will be streamflow loss occurring at all times of the year until the aquifer is fully replenished. This is particularly important in tributary streams that are vulnerable to even modest declines. Project proponents are failing to monitor tributary streamflow that contributes to the health of out-migrating anadromous fish. A study by Dr. Paul Maslin, *Intermittent Streams as Rearing Habitat for Sacramento River Chinook Salmon*, 1998, explains that, “Between 100,000 and 1,000,000 juvenile chinook rear annually in small, non-natal streams. The listed winter-run chinook seems to use tributaries for rearing proportionally more than do other races.” Dr. Maslin emphasizes that, “Because of [the] loss of habitat quantity and quality, it is important that all remaining rearing habitats be evaluated and measures be taken to preserve or enhance important components.” Dr. Maslin mentions 36 tributaries of the Sacramento River with a special focus on Mud Creek, an intermittent stream that is less than 5 miles up gradient from the GCID wells used in recent GWST and likely to be used in this project.

Pdf page 35/78: “Groundwater levels in the Sacramento Valley Groundwater Basin have declined considerably over the last decade (spring 2004 to spring 2014), by approximately 40 feet (see figure in Appendix A). These decreases in groundwater levels have caused wells to go dry in parts of the valley... Though the Sacramento Valley Groundwater Basin and other parts of California are currently noticing declining groundwater level trends, past groundwater trends are indicative of groundwater levels declining moderately during extended droughts and recovering to pre-drought levels after subsequent wet periods.” This paragraph contradicts itself and makes no effort to incorporate new information that indicates California should not expect sufficient “subsequent wet periods” to replenish obviously declining aquifer levels. Dr. B. Lynn Ingram, a climate expert at UN Berkeley, explains that, “The 20th Century, Ingram said, was a particularly wet one, and development in California took place under those favorable conditions, when dams and irrigation systems were built. That infrastructure and the assumptions on which it was built may not hold up during a long dry spell.” <http://www.bizjournals.com/sanfrancisco/news/2014/01/21/californias-driest-winter-in-500-years.html?page=2>

Pdf page 36/78: “Groundwater Quality. Groundwater quality in the Sacramento Valley Groundwater Basin is generally good and sufficient for municipal, agricultural, domestic, and industrial uses. However, there are some localized groundwater quality issues in the basin. Some of

the water quality issues within the Sacramento Valley may include occurrences of saltwater intrusion..." The EA/IS/ND fails to incorporate the range of known water quality degradation mechanisms that can occur as exploitation of aquifers accelerates, especially during dry periods. Graham E. Fogg Professor of Hydrogeology and Hydrogeologist, speaking at the California Water Policy Seminar Series explained some of these mechanisms missing in the EA/IS/ND: *"In many cases, we find as you go deeper, the total dissolved solids or the quality of the water in these fine-grain non-aquifer materials gets worse. But we can't sample water from these to figure out what the water quality is. It is reasonable to assume that the quality of water of these non-aquifer materials gets worse with depth, because the water turns over much more slowly the deeper you go. If you over-produce it and start pulling in too much water from a non-aquifer materials, that can also degrade the water quality,"* he said. *"It's something you don't want to explore through over-pumping of the system and then find out what's happened when it's too late."* *"The one that scares the hell out of me is the basin salt imbalance,"* he said. He noted that the figure shows water levels in the Central Valley, and pointed out the arrows in the southern San Joaquin Valley and the Tulare Lake Basin. *"The arrows are pointed inward towards a pumping center, so essentially all the groundwater in that area is exiting through wells there,"* he said. *"There's no water exiting through natural outlets in the basin. Down here in the Tulare Lake Basin, there's no natural outlet for the groundwater. In the past, it's questionable whether there ever was, but it appears that there was some groundwater exiting into the Southern San Joaquin Valley. This is important because when the hydrologic basin loses its outlet, you risk salinating the basin."*

Pdf page 25/78: "All plans were to be coordinated and implemented in conjunction with local ordinances, basin management objectives, and all other applicable regulations."

Management of groundwater basins that extend over multiple county jurisdictions is non-existent in the Northern Sacramento Valley. While Butte County has a groundwater export ordinance that discourages irrigation Districts in Butte County from proposing GWST from wells in the county, Glenn County allows GCID to extract enormous amounts of groundwater from the shared aquifer system for sale less than 1 mile West of Butte. The Framework provided some hope that a regional plan would be developed but that has not occurred. The quality of life for non-participating counties and citizens is not protected by the proposed monitoring plans or by local ordinances, BMOs or other regulations. Butte County's Needs Assessment Tuscan Aquifer Monitoring, Recharge, and Data Management Project explained: "Clearly the current ordinances, AB3030 plans, and local BMO activities, which were intended for localized groundwater management, are not well suited for management of a regional groundwater resource like that theorized of the Lower Tuscan aquifer system."

http://www.buttecounty.net/Water%20and%20Resource%20Conservation/Tuscan%20Aquifer%20Project/~/_media/County%20Files/Water%20Resource/Public%20Internet/Tuscan%20Aquifer%20Project/Reports/Rivised%20Tuscan%20Aquifer%20Needs%20Assessment_6-28-07dmedits.ashx

GCID is currently drafting water transfer policies. The draft policy document indicates that the district owned wells would not be used while private wells would be pumping into their distribution canals to make up for GWST water that is forgone. The 2014 GCID/TCCA GWST wells were not clearly described with GCID claiming that private wells do not have to share critical well construction details with the public. Screen intervals for these wells are presumably variable and may exploit aquifer regions as shallow as 25' and as deep as 1,300'. The deepest wells are tapping aquifer zones near the bottom of the fresh water system and at depths that have historically not been

exploited in the region. The public needs this detailed information to predict impacts to existing wells, native vegetation, streamflow, etc.

The EA/IS/ND provides no discussion of how the proposed project might affect water supplies and aquifer dynamics in light of climate change in California, but blithely predicts that aquifer levels will eventually rebound in accordance with 20th century precipitation patterns. Add to this the significant uncertainty regarding stream/aquifer interaction, impacts to groundwater dependent ecosystems overlying the shallowest portions of aquifer systems, and the multiple dry years already experienced by the State. What affect might this project, in addition to other transfer programs, have on the human and natural environment in light of the impacts of climate change?

AquAlliance is concerned that irrigation districts (both junior and senior water right claimants) will expand permanent cropping patterns that demand water regardless of how many dry years the Central Valley watershed endures. The Central Valley Project was implemented to take pressure off rapidly declining groundwater resources. Now the canals are increasingly being used to move groundwater beyond aquifer boundaries. This will inevitably expand the quantity and extent of exhausted aquifers in the Sacramento Valley.

TCCA and the Bureau failed to analyze the cumulative impacts of serial GWSTs designed to meet the inflexible demand for water by growers reliant on irrigation district infrastructure in the EA/IS/ND. As proposed, the Project will negatively impact our regional economy and environment.

Thank you for responding to these comments.

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CHARLTON H. BONHAM, Director



March 18, 2015

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Mr. Jeff Sutton
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Subject: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT/INITIAL STUDY (2015 DRAFT EA/IS) AND MITIGATED NEGATIVE DECLARATION (MND) FOR THE 2015 TEHAMA-COLUSA CANAL AUTHORITY WATER TRANSFERS

Dear Mr. Hubbard and Mr. Sutton:

As trustee for California's fish and wildlife resources, the California Department of Fish and Wildlife (Department) has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (FGC §1802). The Department has reviewed the 2015 Draft EA/IS and MND prepared by the Bureau of Reclamation (Reclamation) and Tehama-Colusa Canal Authority (TCCA) for the 2015 TCCA Water Transfers and provides the following comments in our role as both a trustee agency and a California Environmental Quality Act (CEQA) responsible agency.

The 2015 Draft EA/IS analyzes environmental impacts of proposed water transfers (Proposed Action) of up to 98,000 acre feet (AF) in contract year 2015 from 20 entities to the Member Units of the TCCA. The transfers included in the 2015 Draft EA/IS are only those involving Central Valley Project (CVP) Base Supply, Project Water or CVP facilities. Water may be transferred through groundwater substitutions or cropland idling/crop shifting. No other types of water transfers are covered by the evaluation in the 2015 Draft EA/IS.

The Draft EA/IS includes a list of fish species of management concern that occur in the project area (p. 2-17) and concludes that these species would not be affected by the

Conserving California's Wildlife Since 1870

Proposed Action beyond those impacts considered in the existing biological opinions for the state and federal water projects operated by the Department of Water Resources and Reclamation or through current consultations with the National Marine Fisheries Service and U.S. Fish and Wildlife Service (USFWS) (p. 3-17). Changes in Sacramento River flows (the largest being 400cfs in June) downstream from Shasta Dam are described as being a fairly small percentage of the overall flows. While there are ample data and figures in the document showing simulated changes to groundwater table elevations, we could not locate modeling outputs that describe simulated changes in surface flows and surface water elevations in reservoirs and streams (p. 3-17, 3-32). Changes in reservoir releases and altered flows on the Sacramento River would be a concern of ours to the extent that changes in these parameters exceed critical thresholds for fish.

As a result of groundwater substitution transfers, surface water depletions in smaller creeks could affect special status fish species, but these would be less than a 1cfs reduction in average monthly flow (p. 3.18). The Department recommends that the 2015 Draft EA/IS analyze the impacts from groundwater pumping on the low-flow period of each month, rather than the average flow for an entire month, in order to determine the significance of impacts during this sensitive period. Additionally, the purpose of Mitigation Measure GW-1 is to monitor groundwater levels during transfers to avoid potential significant adverse effects (p. 3-54). However, it is unclear how potential impacts to streams, wetlands, and sensitive species will be monitored. The Department recommends that the 2015 Draft EA/IS analyze the need for monitoring of other water features and resources and include discussion of the types of monitoring and mitigation efforts conducted for past transfers, what will be duplicated for the Proposed Action, and any new/revised activities to ensure impacts on fish and wildlife resources are reduced to less than significant. The Department requests Reclamation provide copies of all monitoring programs, mitigation plans, and final summary reports for review.

We believe the 2015 Draft EA/IS has appropriately focused on terrestrial species, in particular, species that use seasonally flooded rice fields that may be impacted by cropland idling transfers. Rice fields and irrigation canals provide important habitat for species including giant garter snake (*Thamnophis giga*, GGS), greater sandhill crane (*Grus canadensis tabida*), black tern (*Chlidonias niger*), and western pond turtle (*Actinemys marmorata*). Environmental Commitments state that sellers seeking to transfer water via groundwater substitution who are in the same groundwater subbasin as "protected aquatic habitats, such as GGS preserves and conservation banks" must demonstrate that any impacts to water resources needed for special-status species protection have been addressed in their mitigation plan (p. 2-12). However, the Proposed Action may adversely affect aquatic habitats that are not clearly designated as "protected aquatic habitats," such as public lands under conservation easement, State wildlife areas and ecological reserves, federal refuges, and private managed wetlands where management efforts to protect GGS also occur. The Department recommends the definition of "protected aquatic habitats" also include these types of land.

Mr. Brad Hubbard, Program Manager
Bureau of Reclamation
March 18, 2015
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The Department provided comments on the Reclamation and TCAA Draft Environmental Assessment/Initial Study for 2014 Water Transfers. In addition to the above, our specific comments and recommendations to improve the TCCA water transfers process in 2014 are reiterated for 2015:

- We request that the Department be consulted, along with U.S. Fish and Wildlife Service, to evaluate suitability of GGS habitat (and other wetland dependent species) and to participate in implementation of the water transfer program overall. We suggest collaboratively developing a process to define how sellers that have lands with priority suitable habitat for GGS would be evaluated for participation in the water transfers program.
- We recommend that terms used in the Environmental Commitments, such as "adequate water," "drains," "canals," "conveyance infrastructure," and "major irrigation and drainage canals" be better defined so that it is abundantly clear what the sellers' responsibilities are under the water transfers program.
- Implementation of monitoring and mitigation plans for cropland idling and groundwater substitution transfers should be tailored to local conditions so that impacts to aquatic habitats and sensitive species will be avoided, minimized and mitigated. Monitoring and mitigation programs are also needed to ensure cumulative impacts are less than significant.

Thank you for the opportunity to provide comments on the 2015 Draft EA/IS and MND. The Department looks forward to working with Reclamation and TCCA to ensure that public trust resources are adequately protected as the 2015 water transfers are implemented. James Rosauer, Environmental Scientist, is available to further discuss any of our comments. James can be reached at (916) 445-8360 or James.Rosauer@wildlife.ca.gov.

Sincerely,



Scott Cantrell
Chief, Water Branch
California Department of Fish and Wildlife

Enclosure(s)

ec: Department of Fish and Wildlife

Mr. Brad Hubbard, Program Manager
Bureau of Reclamation
March 18, 2015
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Central Valley Regional Water Quality Control Board

16 March 2015

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COMMENTS TO REQUEST FOR REVIEW FOR THE MITIGATED NEGATIVE DECLARATION, 2015 TEHAMA-COLUSA CANAL AUTHORITY WATER TRANSFERS PROJECT, SCH# 2015032007, COLUSA, GLENN, SACRAMENTO, SHASTA, SUTTER, TEHAMA, AND YOLO COUNTIES

Pursuant to the State Clearinghouse's 2 March 2015 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Mitigated Negative Declaration* for the Tehama-Colusa Canal Authority Water Transfers Project, located in Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, and Yolo Counties.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits¹

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 97-03-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

¹ Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Waste Discharge Requirements

If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project will require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program.

There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/index.shtml; or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.
2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100.** Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently \$1,084 + \$6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring

costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water* (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

If you have questions regarding these comments, please contact me at (916) 464-4684 or tcleak@waterboards.ca.gov.



Ar Trevor Cleak
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento



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March 23, 2015

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Sent via U.S. Mail and via email to bhubbard@usbr.gov.

Re: Comments on the Draft Environmental Assessment/Initial Study for the 2015
Tehama-Colusa Canal Authority Water Transfers

Dear Mr. Hubbard:

On behalf of Defenders of Wildlife and its more than 1.2 million members and supporters, I am writing to provide comments on the Draft Environmental Assessment/Initial Study for the 2015 Tehama-Colusa Canal Authority Water Transfers ("EA/IS"). Under the proposed action, willing sellers in the Sacramento Valley would transfer up to 98,000 acre feet of water to members of the Tehama-Colusa Canal Authority ("TCCA") for irrigation of permanent crops. EA/IS at 1-3. We understand that, particularly during drought, transfers are an effective way to satisfy demands for water with limited supplies, and we are not opposed to water transfers that include appropriate environmental protections. All transfers must proceed, however, with safeguards to ensure that wildlife is not significantly and unnecessarily impacted.

Unfortunately, the proposed action does not include critical wildlife safeguards. For example, the proposed action's crop idling transfers will harm and even kill imperiled giant garter snakes, and the EA/IS's environmental commitments are insufficient to avoid or mitigate this significant impact. The environmental commitments are ineffective, among other reasons, because they fail to limit the size and distribution of parcels that can be idled, do not restrict the total acreage that can be idled in any county, and may permit transfers from particularly important habitat areas. Further, the EA/IS provides so little information and analysis that it is impossible to discern whether the proposed action will have a significant impact on birds that rely on rice fields and on fish and terrestrial species that depend on streams that will be impacted by groundwater pumping. The EA/IS also includes an inadequate analysis of cumulative impacts, and fails to consider a reasonable range of alternatives.

Because the environmental commitments are insufficient to avoid the proposed action's significant wildlife impacts, and because the EA/IS's analysis is deficient, the U.S. Bureau of Reclamation ("Reclamation") and TCCA must further analyze the proposed action and significantly strengthen the environmental commitments in a full environmental impact statement ("EIS")/environmental impact report ("EIR").

I. The EA/IS's Environmental Commitments Fail to Avoid or Mitigate the Proposed Action's Significant Impacts on the Giant Garter Snake

The National Environmental Policy Act ("NEPA") requires federal agencies to prepare an EIS prior to taking "major Federal actions significantly affecting the quality" of the environment. 42 U.S.C. § 4332(2)(C). Before completing a full EIS, an agency may prepare an environmental assessment ("EA") to discern whether the action could have a significant effect on the environment. *See* 40 C.F.R. § 1501.4. "If there is a substantial question whether an action 'may have a significant effect' on the environment, then the agency must prepare an [EIS]." *Ctr. for Biological Diversity v. Natl. Hwy. Traffic Safety Admin.*, 538 F.3d 1172, 1185 (9th Cir. 2008) (citation omitted). Whether an action may "significantly" affect the environment "requires consideration of 'context' and 'intensity.'" *Id.* (quoting 40 C.F.R. § 1508.27). Context focuses on the scope of the agency's action. 40 C.F.R. § 1508.27(a). Intensity "refers to the severity of the impact," and requires consideration of a variety of factors, including "[t]he degree to which the action may adversely affect an endangered or threatened species." *Id.* § 1508.27(b).

Similarly, the California Environmental Quality Act ("CEQA") permits the use of a negative declaration in lieu of an EIR only when an initial study shows that there is no substantial evidence that the project may have a significant effect on the environment. *See Rominger v. County of Colusa*, 229 Cal. App. 4th 690, 713 (2014); 14 Cal. Code Regs. § 15070. CEQA also requires that any significant effect on the environment be avoided or fully mitigated. Cal. Pub. Res. Code § 21081.

Here, the EA/IS makes clear that the cropland idling transfers included in the proposed action are likely to significantly, adversely impact giant garter snakes, and the EA/IS's avoidance/mitigation measures are inadequate to reduce this impact to a less-than-significant level. Because the proposed action's impacts will be significant, Reclamation and TCCA must prepare a full EIS/EIR.

The giant garter snake is a wetland-dependent species that is endemic to California's Central Valley. It is listed as threatened under both the federal and California Endangered Species Acts. Because the vast majority of the giant garter snake's habitat has been destroyed, the species now relies on flooded rice fields for foraging, protective cover, and other important lifecycle needs. EA/IS at 3-19. The EA/IS recognizes that fallowing rice fields in order to transfer water will harm and even kill giant garter snakes:

Rice idling would affect available habitat for GGS. The GGS displaced from idled rice fields would need to find other areas to live and may face increased predation risk, competition, and reduced food supplies. This may lead to increased mortality, reduced reproductive success, and reduced condition prior the start of the overwintering period.

Id. The EA/IS concludes, however, that "[r]ice idling under the Proposed Action would have a less than significant impact on GGS because the Environmental Commitments would avoid or

reduce many of the potential impacts associated with displacement of GGS.” *Id.*¹ The EA/IS thus acknowledges that impacts to giant garter snakes could be significant, and relies on the environmental commitments to mitigate those impacts.

The environmental commitments that the EA/IS relies upon to mitigate and avoid significant impacts to the snakes, however, fail to adequately protect the species, and significant impacts will remain after the measures are implemented. Of particular concern is the fact that the environmental commitments remove protections that the U.S. Fish and Wildlife Service (“FWS”) previously determined are necessary to protect giant garter snakes from crop idling transfers. The Biological Opinion for Reclamation’s 2010-2011 Water Transfer Program included, *inter alia*, the following protective measures for giant garter snakes:

- (a) the block size of idled rice parcels could not exceed 320 acres;²
- (b) no more than 20% of rice fields could be idled cumulatively (from all sources of fallowing) in each county;
- (c) the idled parcels could not be located on opposite sides of a canal or other waterway, and could not be immediately adjacent to another fallowed parcel, with a preference for a checkerboard distribution of idled parcels;
- (d) a field could not be fallowed for more than two irrigation seasons in a row; and
- (e) transfers from the Natomas Basin were prohibited.

FWS, *Endangered Species Consultation on the Bureau of Reclamation’s Proposed Central Valley Project Water Transfer Program for 2010 – 2011* (Mar. 2010) at 5-7 (attached as Exhibit C). The Biological Opinion for the 2009 Drought Water Bank included similar protections, and also flatly prohibited transfers in a wide range of particularly important giant garter snake areas. FWS, *Endangered Species Consultation on the Proposed 2009 Drought Water Bank for the State of California* (Apr. 2009) at 7-8 (attached as Exhibit D). None of these important environmental commitments were included in the proposed action.

The environmental commitments from the 2010-2011 Water Transfer Program and 2009 Drought Water Bank Biological Opinions are exceedingly important for giant garter snakes. Among other things, they ensure that wetted rice habitat is distributed throughout the landscape

¹ The EA/IS acknowledges that, even with full implementation of the environmental commitments, “[s]ome individual snakes would be exposed to displacement and the associated increased risk of predation, reduced food availability, increased competition, and potentially reduced fecundity.” EA/IS at 3-19.

² Prior to the 2009 and 2010 biological opinions, FWS had concluded that a 160-acre limitation on the size of idled rice parcels was appropriate. See FWS, *Programmatic Biological Opinion on the Proposed Environmental Water Account Program* (Jan. 2004) at 18 (attached as Exhibit A). Defenders of Wildlife previously submitted comments indicating that increasing the parcel size from 160 to 320 acres would be harmful to giant garter snakes because the size of their home range is 40 and 90 acres, and forcing individuals to travel farther than this range may result in mortality. See *Comments on Addendum to the Environmental Water Account EIR/EIS* (Jan. 2009) (attached as Exhibit B). We continue to believe that limiting the size of idled parcels to 160 acres would more effectively protect giant garter snakes.

to preserve habitat connectivity, limit the total amount of fallowed acreage to ensure that adequate habitat remains, and prohibit water transfers in areas that are known to provide particularly important habitat. In the Biological Opinions for the 2009 and 2010-2011 transfer programs, FWS concluded that these environmental commitments were necessary to minimize the impact of take caused by the crop idling transfers.

The EA/IS has replaced these important safeguards with environmental commitments that fail to protect the snakes. The new environmental commitments focus on efforts to map and identify “priority habitat with a high likelihood of GGS occurrence.” EA/IS at 2-12 to 2-13. Once the priority habitat is identified, however, the environmental commitments do not limit the amount or spatial distribution of idling that can occur in the identified areas. Instead, they merely require the sellers to make sure adequate water remains in drains and canals. *Id.* at 2-13. Additionally, the new environmental commitments list specific areas that are known to have priority giant garter snake populations, but do not prohibit transfers from those areas. *Id.* Rather, they permit potential sellers in those areas to request permission to transfer water. *Id.* The new environmental commitments do not include limitations on the size, distribution, or total acreage of fallowed parcels. By focusing exclusively on maintaining water in drains and canals, the proposed action’s environmental commitments would allow for unlimited habitat destruction and could have devastating consequences for the giant garter snake.

Further, the EA/IS mischaracterizes the proposed action’s environmental commitments to conclude they adequately avoid/mitigate giant garter snake impacts. For example, the EA/IS states that “[t]he number of individual snakes affected is expected to be small because Environmental Commitments avoid areas known to be priority habitat for GGS,” and that “Environmental Commitments discourage rice idling in areas of suitable habitat where GGS are likely to occur.” *Id.* at 3-19 to 3-20, 3-22. Nothing in the proposed environmental commitments, however, discourages or avoids water transfers in areas with priority giant garter snake habitat.

With only the proposed environmental commitments in place, the TCCA transfers will have a significant impact on the imperiled giant garter snake and its habitat. Accordingly, the lead agencies must prepare a full EIS/EIR. *See* 42 U.S.C. § 4332(2)(C); *Ctr. for Biological Diversity*, 538 F.3d at 1185 (“If there is a substantial question whether an action ‘may have a significant effect’ on the environment, then the agency must prepare an [EIS].”); *Rominger*, 229 Cal. App. 4th at 713. Pursuant to CEQA, TCCA must also identify additional mitigation measures that, if implemented, would reduce the impacts of the proposed action to below the significance threshold. *See* Cal. Pub. Res. Code § 21081.

In addition to conducting further analysis in an EIS/EIR, we recommend that Reclamation and TCCA improve the environmental protections included in the proposed action. As explained above, the proposed action should include the giant garter snake-focused environmental commitments from the 2010-2011 Water Transfer Program and 2009 Drought Water Bank Biological Opinions. We also suggest including an environmental commitment that requires landowners on idled rice fields to cultivate or retain nonirrigated cover crops or natural vegetation to provide habitat and forage for migratory birds. Such a commitment would be in keeping with California Water Code section 1018, which provides that, “[w]hen agricultural lands are being idled in order to provide water for transfer . . . , landowners shall be encouraged

to cultivate or retain nonirrigated cover crops or natural vegetation to provide waterfowl, upland game bird, and other wildlife habitat, provided that all other water transfer requirements are met.” A report issued by California Waterfowl suggests that vetch and other cover crops can provide valuable habitat for birds, helping to mitigate impacts from idled rice fields. *See* California Waterfowl, *Rice-Cover Crop Rotation Pilot Project* (Feb. 2013) (attached as Exhibit E).

II. The EA/IS Fails to Provide Sufficient Information to Support a Determination that the Proposed Action’s Impacts to Birds, Fish, and Other Species Will Be Insignificant

Under NEPA, if an EA is not followed by an EIS, it “must provide sufficient information and detail to demonstrate that the agency took the required ‘hard look’ at the environmental consequences of the project before concluding that those impacts were insignificant.” *Pac. Coast Fed’n of Fishermen’s Assns. v. U.S. Dep’t of the Interior*, 929 F. Supp. 2d 1039, 1056 (E.D. Cal. 2013) (citing *Save the Yaak Comm. v. Block*, 840 F.2d 714, 717 (9th Cir.1988) (“[A]n agency’s decision not to prepare an EIS will be considered unreasonable if the agency fails to supply a convincing statement of reasons why potential effects are insignificant.”)). Further, “conclusions in the EA must be supported by ‘some quantified or detailed information,’ and the underlying environmental data relied upon to support the expert conclusions must be made available to the public.” *Id.* (quoting *Klamath–Siskiyou Wildlands v. Bureau of Land Mgmt.*, 387 F.3d 989, 993, 996 (9th Cir. 2004)). Similarly, under CEQA, a negative declaration is inappropriate if the agency has failed to gather information and undertake an adequate environmental analysis. *Ctr. for Sierra Nevada Conservation v. El Dorado*, 136 Cal. Rptr. 3d 351, 362 (2012) (citation omitted).

A. The EA/IS Fails to Adequately Analyze the Impacts of Crop Idling Transfers on Migratory Birds

The EA/IS acknowledges that the proposed action could impact migratory birds and particular special status bird species, but does not provide sufficient information or analysis to allow decision makers or the public to discern whether those impacts may be significant. Rice fields provide resting, nesting, and breeding habitat for migratory birds that are similar to natural wetlands. EA/IS at 2-16. As the EA/IS recognizes, fallowing rice fields “could affect special status species that use rice fields for forage, cover, nesting, breeding, or resting.” *Id.* at 3-18. The EA/IS further explains that “[m]igratory bird species, including the black tern, use seasonally flooded agricultural land for nesting and forage habitat during the summer rearing season. The greater sandhill crane uses rice fields during the fall, winter, and early spring. Rice idling that reduces habitat could adversely affect these species.” *Id.* at 3-20.

The EA/IS concludes, however, that the proposed action’s impacts on birds will be less than significant because the birds are mobile and can find alternative habitat, and because the environmental commitments protect migratory birds. *Id.* First, the EA/IS’s assertion that migratory birds will not be significantly impacted because they “are highly mobile and can fly to other areas of rice production or nearby wildlife refuges” is unsupported by any analysis regarding the availability and accessibility of alternative habitat. *Id.* This is particularly problematic because the proposed action will take place under extremely dry conditions when

alternative habitat in agricultural fields and wildlife refuges is severely limited. In fact, the EA/IS recognizes that, even without the transfers, migratory birds will likely have limited habitat in 2015: “Because of the dry conditions, refuge surface water supplies may be reduced in 2015. A reduction in available water supply to refuges and rice growers would result in less available habitat for migratory bird species.” *Id.* at 3-17. Particularly in light of these dry conditions, the EA/IS’s failure to provide any information or analysis regarding habitat availability for migratory birds in the Sacramento Valley in 2015 makes it impossible to tell whether the habitat destruction permitted by the proposed action will have a significant impact.

Second, the EA/IS’s conclusion that the environmental commitments will reduce any potentially significant impacts to migratory birds lacks support. The only bird-focused environmental commitment states that, “[i]n order to limit reduction in the amount of over-winter forage for migratory birds, including greater sandhill crane, cropland idling transfers will be minimized near known wintering areas in the Butte Sink.” *Id.* at 2-14. This protection is insufficient to reduce impacts to migratory birds because (a) it focuses only on the Butte Sink, which is a small part of the region in which crop idling transfers would occur, and only emphasizes protection of sandhill crane habitat; and (b) the promise that “cropland idling transfers will be minimized” is so vague that effective implementation and enforcement of the commitment may be impossible. The other environmental commitments, which are focused on retaining water in drains and canals, fail to safeguard the flooded rice fields that migratory birds depend upon.

Because the EA/IS includes insufficient analysis to show that impacts to migratory birds will be insignificant, and because the environmental commitments will not avoid or mitigate the potential impacts, the agencies should further analyze the proposed action’s effects in an EIS/EIR.

Further, the EA/IS’s analysis of impacts to special status bird species improperly omits any discussion of the tricolored blackbird. In December 2014, because of recent, dramatic population declines, the California Fish and Game Commission acted on an emergency basis to list the tricolored blackbird as endangered under the California Endangered Species Act. *See* 14 Cal. Code Regs. § 670.5(a)(5)(Q); <http://www.latimes.com/science/la-me-1204-blackbirds-20141204-story.html>. Reclamation’s Draft EIS/EIR for the proposed Long-Term Water Transfers recognized that tricolored blackbirds “would be affected by idling seasonally flooded agriculture.” Long-Term Water Transfers Draft EIS/EIR at 3.8-74. Yet the EA/IS does not list the tricolored blackbird as a special status species, *see* EA/IS at 2-16, and does not provide details regarding the nature and extent of the proposed action’s impacts on the bird.³ Particularly

³ Appendix C of the EA/IS improperly lists the tricolored blackbird as a state species of special concern (as opposed to as a state endangered species), and states that “occurrences have been documented within both the Seller and Buyer Service Area. Suitable habitat is present within the project area. Foraging habitat may be affected by the project. Environmental commitments limit cropland idling and birds can relocate to other adjacent foraging habitats within the area.” EA/IS at App. C-7. For the reasons discussed above, this assessment is insufficient to show that the proposed action’s impacts to tricolored blackbirds will not be significant or that the environmental commitments will avoid or mitigate any potentially significant impacts.

because of the tricolored blackbird's precarious status, a full EIS/EIR should include a detailed analysis of the proposed action's potential impacts on this species.

B. The EA/IS Fails to Adequately Analyze the Impacts of Groundwater Substitution Transfers on Fish and Terrestrial Species

Under the proposed action, “[g]roundwater substitution transfers . . . would reduce groundwater levels and potentially deplete surface water flows in rivers and creeks . . .” EA/IS at 3-17. The EA/IS provides insufficient information and analysis to support its conclusion that impacts to fish and terrestrial species from these flow reductions will be insignificant.

For example, the EA/IS acknowledges that the proposed action could result in flow depletions in creeks that contain special status fish species, but concludes that “there would be a less than 1 cfs reduction in average monthly flow,” and that “[a] flow reduction of 1 cfs or less is not of sufficient magnitude to affect special status fish species.” *Id.* at 3-18. There is no information or analysis, however, to support the assertion that a flow reduction of 1 cfs or less will not affect fish. Moreover, some of the relevant creeks are small, and it seems possible that even a very small flow reduction at certain times of year that are important for particular fish species could impact habitat suitability and affect the fishes’ survival and reproductive success. This is particularly true in a dry year like 2015. Further, the EA/IS doesn’t even provide information about which special status fish species are present in which creeks, which makes it extremely difficult to understand the impact that the proposed action could have on imperiled fish.

The EA/IS also states that “groundwater substitution transfers could result in streamflow depletion in rivers and creeks, which could directly impact natural communities by changing the timing and volume of flows within rivers.” *Id.* at 3-18. The EA/IS concludes, however, that “[i]f the flow reduction caused by implementing the transfer would be one cfs or less, then no further analysis was required because the effect was considered too small to have a substantial effect on terrestrial species.” *Id.* at 3-21. Based on application of this screening threshold, the EA/IS declined to consider the proposed action’s impacts on terrestrial species in over two dozen waterways.⁴ *Id.* Yet the EA/IS does not explain why a flow reduction of less than 1 cfs could not impact terrestrial species. And it seems likely that, in a dry year like this one, even a minor flow reduction in a small creek could impact natural communities and the terrestrial species within them. Further information and analysis, including a discussion of which terrestrial species may be impacted and how, is required before it is possible to determine whether the proposed action will have a significant impact.

The mitigation measure and environmental commitment focused on reducing impacts from groundwater pumping do not ensure that adverse impacts to fisheries and terrestrial species

⁴ The EA/IS indicates that two waterways could see flow reductions of greater than 1 cfs, but concludes that the impacts to natural communities will not be significant, in part, because of the timing of the flow reductions. This analysis is insufficient to show that the impacts will be insignificant, among other reasons, because it does not even discuss the species that could potentially be impacted or the times at which the impacted species rely on the creeks’ flows.

will be insignificant. Among other flaws, the provisions' focus on mitigation is problematic because irreparable harm to imperiled species may have already occurred by the time a mitigation plan is implemented. *See id.* at 2-12, 3-51 to 3-54.

In addition to flow reductions caused by groundwater pumping, the EA/IS indicates that "Sacramento River flows would slightly decrease from the TCCA point of diversion at Red Bluff to the point of diversion of the seller, located downstream, during the transfer period." *Id.* at 3-17. The document states, in an entirely conclusory manner, that the anticipated flow reduction would not be substantial enough to impact special status fish species or natural communities. *Id.* at 3-17, 3-21. Further information about the magnitude and timing of the anticipated flow depletions is necessary to assess whether the impacts to species that rely on the Sacramento River may be substantial.

III. The EA/IS's Cumulative Impacts Analysis is Deficient

Under both NEPA and CEQA, an EA/IS must include a cumulative impacts analysis. *See Kern v. U.S. Bureau of Land Mgmt.*, 284 F.3d 1062, 1076 (9th Cir. 2002); 14 Cal. Code Regs. § 15064(h). In a cumulative impacts analysis, an agency must take a "hard look" at all actions:

An EA's analysis of cumulative impacts must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment. . . . Without such information, neither the courts nor the public . . . can be assured that the [agency] provided the hard look that it is required to provide.

Te-Moak Tribe of W. Shoshone v. U.S. Dept. of Interior, 608 F.3d 592, 603 (9th Cir. 2010) (quotation marks and citations omitted) (rejecting EA for mineral exploration that had failed to include detailed analysis of impacts from nearby proposed mining operations). A cumulative impacts analysis must provide a "useful analysis" that includes a detailed and quantified evaluation of cumulative impacts to allow for informed decision-making and public disclosure. *Kern*, 284 F.3d at 1075.

With respect to impacts from rice idling, the EA/IS's cumulative impacts analysis is deficient because it relies on the environmental commitments to conclude that the proposed action's contribution to a potentially significant cumulative impact would not be considerable. EA/IS at 3-67 ("The Environmental Commitments would reduce potential effects of the Proposed Action to special status species under the cumulative condition, such that the Proposed Action's contribution would not be cumulatively considerable."). As explained above, the environmental commitments are inadequate to avoid or mitigate the proposed action's significant impacts on giant garter snakes and do almost nothing to protect migratory birds. Because the environmental commitments do not effectively avoid the proposed action's impacts, they cannot be relied upon to limit the proposed action's contribution to cumulatively significant impacts.

The cumulative impacts analysis also fails to account for actions other than water transfers that will reduce available habitat for wildlife in the project area. The EA/IS indicates that the proposed action, in combination with other cropland idling transfers, could result in idling of up to 87,901 acres of rice in 2015. EA/IS at 3-67. Cropland idling water transfers, however, are only one of several sources of habitat loss that are expected to occur in 2015. The EA/IS explains, for example, that drought-related water supply reductions could result in additional rice idling within the project area. *Id.* at 3-17 (“Under No Action Alternative, growers in the sellers’ area would idle crops if surface water supplies are reduced. Rice idling actions could have an adverse effect to GGS that use flooded rice fields for foraging and protective cover habitat during the summer months.”). The EA/IS further acknowledges that, under the no-action alternative, water supply reductions could have a profound impact on giant garter snakes:

The lack of available water due to critically dry conditions could affect movement corridors or nursery sites for GGS and other fish and wildlife. Wildlife that is dependent on water as a means of moving from one area to another may be unable to relocate due to the parched landscape. Snakes present in areas of rice idling would have to move across dewatered habitat to find suitable areas with water. Moving across dewatered areas could expose snakes to a number of potential impacts associated with the need to relocate. These include the energetic costs associated with relocation, a reduction in food supplies associated with the decrease in habitat, increased predation, potential for increased competition in new habitats, and potentially reduced reproduction and recruitment for those individuals displaced.

Id. at 3-22. The EA/IS also explains that water deliveries to wildlife refuges could be reduced because of dry conditions, further limiting available habitat for giant garter snakes, migratory birds, and other wetland dependent-species. *Id.* at 3-17. Initial Central Valley Project and State Water Project allocations have confirmed that water deliveries to agricultural contractors and wildlife refuges are likely to be substantially reduced in 2015.

Though the EA/IS recognizes that the proposed action’s crop idling transfers are only one part of the habitat loss that is likely to occur in the Sacramento Valley in 2015, it fails to analyze the cumulative impact to special status species and other wildlife from all of the foreseeable actions that will result in wetland losses. This shortcoming is problematic in light of the proposed action’s substantial contribution to habitat loss in the Valley—up to 55,041 acres—and the high likelihood that impacts to giant garter snakes and other species from habitat loss associated with water management decisions will be significant.

IV. The EA/IS Fails to Consider an Adequate Range of Alternatives

Both CEQA and NEPA require consideration of a reasonable range of alternative actions that might achieve similar goals with less environmental impact. Cal. Pub. Res. Code § 21002; 42 U.S.C. § 4332; 40 C.F.R. § 1508.9. The lead agency must “rigorously explore and objectively evaluate all reasonable alternatives” to the proposed action. *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1310 (9th Cir. 1990).

Here, the EA/IS only analyzes the proposed action and a no action alternative. There are, however, other alternatives that could achieve the project purpose with a less substantial impact on the environment. For example, the EA/IS could have considered an alternative that would permit the transfer of less than 98,000 acre feet, such as a maximum transfer quantity of 50,000 acre feet. Additionally, the EA/IS could have considered an alternative that included a reasonable maximum on the total acreage of rice that could be fallowed, or an alternative that did not permit any crop idling transfers. Such alternatives would achieve the project purpose of providing additional water supply to TCCA, and would reduce the project's impacts on wildlife.

V. Conclusion

We want to reiterate that we are not opposed to water transfers, and believe transfers can be an important tool for meeting water demand during dry years. We are concerned, however, that the EA/IS is designed so that the transfers will have a significant impact on giant garter snakes in particular, and also on migratory birds. To ensure that the transfers can move forward, we recommend that Reclamation and TCCA revise the proposed action to better protect these species. Among other possible approaches to giant garter snake protection, the agencies could incorporate the environmental commitments from the Biological Opinions for the 2010-2011 Water Transfer Program and the 2009 Drought Water Bank. To reduce impacts to migratory birds, we recommend that the agencies include an environmental commitment that requires landowners on idled rice fields to cultivate or retain nonirrigated cover crops or natural vegetation that provides habitat and forage. With these changes, we believe the TCCA transfers can move forward while protecting wildlife from significant and unnecessary harm.

Thank you for considering our views. Please feel free to contact me at your convenience if you have any questions or concerns.

Sincerely,



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