# FINDING OF NO SIGNIFICANT IMPACT

## 2009 DROUGHT WATER BANK

United States Department of the Interior
Bureau of Reclamation
Mid-Pacific Region
Sacramento, California

Recommended: Rebecca Victorine 4/14/09
Natural Resource Specialist Date

Concur: 4/14/09
Program Manager Date

Concur: 4/14/09
Program Management Branch Chief Date

Concur: 4/14/09
Regional Environmental Affairs Officer Date

Approved: 4/14/09
Regional Resources Manager Date

FONSI Number: 09-03-MP

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## BACKGROUND

Since 2007 and 2008 were critically dry years and reservoir storage levels are expected to be low in 2009, it is likely that some California water providers will need to supplement local and imported supplies with water transfers from willing sellers. Based on the initial water supply allocations from the CVP and SWP, the nature of the supply shortage will likely severely limit supply for existing agricultural use and limit supply for municipal needs including minimum health and safety requirements. To help facilitate the transfer of water throughout the State, the Department of Water Resources (DWR) proposes to initiate a 2009 Drought Water Bank (DWB). To implement the DWB, DWR will purchase water from willing sellers upstream of the Sacramento-San Joaquin Delta (Delta). This water will be conveyed, using State Water Project (SWP) or Central Valley Project (CVP) facilities, to water users that are at risk of experiencing water shortages in 2009 due to drought conditions and that require supplemental water supplies to meet anticipated demands. The Governor of California has requested emergency drought assistance under the Reclamation States Emergency Drought Relief Act of 1991 (Act), Public Law 102-250, as amended. The Commissioner of the Bureau of Reclamation (Reclamation) has determined that emergency drought assistance is merited. The Mid Pacific Region of Reclamation will participate in the DWB pursuant to Section 101 of the Act, to ensure that operations of the two projects can be coordinated effectively to maximize the ability of the DWB to move water from willing sellers to buyers to address critical water needs. Reclamation will review and approve, as appropriate, proposed transfers by CVP contractors in accordance with the Interim Guidelines for the Implementation of Water Transfers under the Central Valley Project Improvement Act (CVPIA).

Since the transfers Reclamation proposes to approve for the DWB represent only a portion of overall transfers supporting the DWB, the DWB is not dependent upon Reclamation's approval, and DWR would likely proceed with DWB transfers that do not require Reclamation's approval, the Proposed Action only includes those actions over which Reclamation has approval authority. The remainder of the transfers that could occur under the DWB are considered in the context of cumulative impacts.

Twenty CVP contractors have expressed interest in submitting proposals for transfer of water to DWR for the 2009 DWB. Subject to approval in accordance with the Interim Guidelines for the Implementation of Water Transfers under the CVPIA, as applicable, Reclamation proposes to approve these transfers. The proposed action would make water available to the DWB from willing sellers upstream of the Delta during the 2009 water year only. A total of up to 199,885 af of CVP water would be made available for transfer through a combination of crop idling, crop substitution, groundwater substitution, and

reservoir reoperation.

An environmental assessment (EA) was prepared to evaluate the potential environmental impacts associated with the proposed action and the no action alternative. The EA is attached for reference. The estimates analyzed in the EA reflect the potential upper limit of available water. However, actual transfers would depend on hydrology, DWB funding (interested buyers), and the amounts that sellers would ultimately have available for transfer in 2009, as well as compliance with CVPIA transfer requirements, as applicable.

Also, not all of the potential buyers analyzed in the EA may end up actually purchasing water from the DWB in 2009. It is anticipated that water made available to them from the DWB would be prioritized based on criteria DWR developed as follows: existing health and safety domestic needs, municipal supply subject to water shortage contingency plan measures, and agricultural irrigation for existing crops and livestock subject to water shortage contingency plan measures. Buyers' participation in the DWB will be subject to the terms identified in on DWR's DWB website (http://www.water.ca.gov/drought/), including meeting a needs assessment and having a plan with the goal of 20% reduction in water demand based on conservation efforts.

**FINDINGS**

In accordance with the National Environmental Policy Act of 1969, as amended, the Mid-Pacific Regional Office of the U.S. Bureau of Reclamation (Reclamation) has found that the approval of proposed transfers of CVP water in support of the 2009 DWB is not a major Federal action that would significantly affect the human environment. Therefore, an environmental impact statement is not required.

This finding of no significant impact is based on the following:

**Surface Water Resources:** Acquisition of water via crop idling would reduce water supply for Sacramento River users not participating in the DWB who rely on return flows from fields that, under the proposed action, would be idled. In order to minimize this impact, sellers would be required to maintain water levels in drainage systems that do not reduce supplies to downstream users.

Groundwater substitution could decrease water levels in neighboring surface water channels. Well reviews and monitoring programs will be implemented in accordance with all applicable local, regional and State regulations and basin management objectives to minimize this potential impact.

Acquisition of water via groundwater substitution or crop idling would change the rate and timing of flows in the Sacramento and Lower American Rivers. However, flow and temperature requirements, including Water Right Orders 90-5 and 91-1 temperature control planning requirements for the Sacramento River, will continue to be met under the proposed action, which would minimize the magnitude of such changes.

Transfer of stored reservoir water from Reclamation via Orland Unit Water Users Association could reduce carryover storage compared to the no action alternative. To avoid potential adverse effects, DWR and Reclamation will not approve reservoir reoperation transfers that would draw down reservoirs beyond historic operational levels. Additionally, the State Water Resources Control Board will review the proposed reservoir release to ensure that potential effects to supply or to other legal users will be minimized.

Water transfers will be conveyed through existing facilities. Water transfers involving conveyance through the Delta will be implemented within the operational parameters of the Biological Opinions on the Continued Long-term Operations of the CVP/SWP (Opinions) and any other regulatory restrictions in place at the time of implementation of the water transfers. Current Operational parameters applicable to conveyance of transfer water for the DWB include: a maximum amount of 600,000 acre feet per year is allowed for all types of water transfers; and transfer water will be conveyed during July through September only. Contract provisions of the SWP and CVP will be honored in determining access to Delta pumping capability if this capacity becomes constrained.

Under the Proposed Action, additional water supply would benefit water users who meet the previously mentioned critical needs criteria for existing uses only. Given these factors, the effects of the Proposed Action on surface water resources will not be significant.

**Groundwater Resources:** Crop idling and groundwater substitution transfers under the proposed action could affect groundwater resources, including changes in groundwater levels and related secondary effects. Also, groundwater pumping within the vicinity of a surface water body could change existing interactions between surface water and groundwater, potentially adversely affecting riparian habitat and downstream users. Excessive groundwater extraction from confined and unconfined aquifers could result in a lowering of groundwater levels and, in confined aquifers, a decline in water pressure, increasing the potential for subsidence. Changes in groundwater levels or in the prevailing groundwater flow regime could cause a change in groundwater quality through a number of mechanisms.

Well reviews and monitoring and mitigation plans will be implemented under the proposed action to minimize potential effects to groundwater resources. These reviews and plans will be required from sellers for review by DWR and Reclamation during the transfer approval process. DWR and Reclamation will be responsible for ensuring that well reviews and monitoring and mitigation plans are coordinated and implemented in conjunction with local ordinances, basin management objectives, and all other applicable regulations. Therefore, the Proposed Action will not have a significant adverse impact on groundwater resources.

**Water Quality:** Transfer of water via stored reservoir water, groundwater substitution and crop idling under the proposed action would alter surface water elevation and reservoir storage in Lake Shasta and Folsom Reservoir. However, any differences in water surface elevation and reservoir storage would not be of sufficient magnitude and frequency to affect water quality in such a way that would result in long-term adverse effects to designated beneficial uses, exceedance of existing regulatory standards or substantial degradation of water quality. Also, transfer of water under the proposed action via stored reservoir water, groundwater substitution, and crop idling under the proposed action would not substantially change Sacramento or Lower American River flows or water temperatures.

Because there would be little to no increase in sediment transport under the proposed action as compared to the no action alternative, there would be little to no decrease in the physiochemical qualities of surface water and adverse effects to designated beneficial uses, exceedance of existing regulatory standards, or substantial degradation of water quality would not be expected.

Because there would be less total leaching potential under the proposed action as compared to the no action alternative due to a decrease in applied irrigation water with crop idling, there would not be a decrease in water quality due to timing and application of water to the land as a result of crop idling. In fact, there would potentially be an improvement in the quality of surface water runoff returning to rivers and lakes.

Under the Proposed Action, there would be an increase in the amount of groundwater substituted for surface water under the proposed action, as compared to the no action alternative. However, this increase would be so small in comparison to the amount of surface water currently used to irrigate agricultural fields that the quality of the surface water, even after mixing with groundwater, would not be substantially decreased. The previously mentioned reviews, monitoring and mitigation plans that will be required of sellers will also minimize the potential for adverse effects to water quality from groundwater substitution under the proposed action.

Conveyance of transfer water under the Proposed Action will be implemented using standard CVP and SWP operating procedures designed to improve the water quality to users south and downstream of the Delta. Carriage water will be used to protect and maintain chloride concentrations in the Delta and Reclamation will only approve water transfers under the proposed action if they meet all of the required provisions of DWR's acceptance criteria governing conveyance of non-Project water through the California Aqueduct. Therefore, the proposed action would not have a significant adverse effect on water quality.

**Geology and Soils:** Water transfers via crop idling would result in temporary conversion of lands from rice crops to fallowed fields. However, the rice crop cycle and soil texture reduces the potential for erosion. Therefore, there would be little to no soil loss from wind erosion off the idled rice fields, and the proposed action would not significantly affect geology and soils.

**Agriculture and Land Use:** Water transfers via crop idling would temporarily alter agricultural land use conditions. However, temporal (one year) water transfers from the DWB are expected to contribute a relatively small amount of rice idling acreage in relation to the normal variation in planted rice acreage resulting from typical farming practices. To minimize potential adverse impacts to agricultural land use, proposed water transfers would be approved only if no more than 20 percent of rice fields would be idled cumulatively (from all sources of fallowing) in each county. If crop idling would change the classification of farmland to levels less than Prime Farmland, Farmland of Statewide Importance, or Unique Farmland under the Farmland Mapping and Monitoring Program and Prime Farmland under the Williamson Act, Reclamation would not approve transfer of water from that parcel. Therefore, the Proposed Action will not have a significant adverse impact on agriculture and land use.

**Vegetation and Wildlife:** Decreasing groundwater levels could reduce part of the water base for habitat. The well review and required monitoring and mitigation plans described in the groundwater section would minimize or avoid potential adverse effects to habitat from groundwater - surface water interaction.

Crop idling under the proposed action would reduce return flows, potentially affecting neighboring managed seasonal wetlands. As a part of the contractual agreements, DWR will require the willing seller of water for crop idling to maintain their drainage systems at a water level that will maintain existing wetlands and provide habitat for western pond turtle.

Crop idling of seasonally flooded agricultural land under the Proposed Action could reduce the amount of over winter forage for migratory birds. In order to limit reduction in the amount of over-winter forage for migratory birds, Reclamation will avoid or minimize actions near known wintering areas and areas that support core populations of special status species such as the black tern and greater sandhill crane. Therefore, the Proposed Action will not have a significant impact on vegetation and wildlife.

**Fisheries:** Potential changes in flows and water temperatures under the Proposed Action would not be of sufficient frequency or magnitude to affect Chinook salmon or steelhead adult immigration, spawning, egg incubation, and initial rearing, or juvenile rearing and emigration. Transfers involving conveyance through the Delta will be implemented within the operational parameters of the Biological Opinions on Continued Long-term Operations of the CVP/SWP. Water transfers under the Proposed Action will be implemented in accordance with meeting flow and temperature requirements on the

Sacramento River. Therefore, the Proposed Action will not have a significant impact on fisheries.

**Special Status Species:** In compliance with Section 7 of the Endangered Species Act, Reclamation conducted formal consultation with the Service on the Proposed Action. Reclamation has determined that the Proposed Action is not likely to adversely affect the San Joaquin kit fox and may adversely affect the giant garter snake (GGS).

The 2009 DWB will adopt the crop idling conservation measures from the Environmental Water Account (EWA) Biological Opinion (2004) with some modifications. The following conservation measures to protect the giant garter snake (GGS) will be incorporated into contracts between DWR and the water seller:

- The block size of idled rice parcels will be limited to 320 acres in size with no more than 20 percent of rice fields idled cumulatively (from all sources of fallowing) in each county, or area within 1 mile of the following refuge areas: Sacramento National Wildlife Refuge Complex (Sacramento, Delevan, Colusa, Sutter, Butte Sink and Llano Seco Unit), Gray Lodge Wildlife Area (WA), Upper Butte Basin WA, and Gilsizer Slough Conservation Easement. The 320-acre blocks will not be located on opposite sides of a canal or other waterway, and will not be immediately adjacent to another fallowed parcel (a checkerboard pattern is the preferred layout);

- Parcels participating in crop idling for the 2009 DWB will not include:

  - Lands between Refuges that serve as corridors: lands adjacent to Hunters and Logan Creeks between Sacramento National Wildlife Refuge (NWR) and Delevan NWR; the Colusa Basin drainage canal between Delevan and Colusa NWRs; Little Butte Creek between Llano Seco (NWR unit) and Upper Butte Basin WA; and Butte Creek between Upper Butte Basin and Gray Lodge WA;

  - Lands adjacent to Butte Creek, Colusa Drainage Canal, Gilsizer Slough, the land side of the Toe Drain along the Sutter Bypass, Willow Slough and Willow Slough Bypass in Yolo County, and

  - Lands in the Natomas Basin;

- The water seller will maintain a depth of at least two feet of water in the major irrigation and drainage canals (but never more than existing conditions) to provide movement corridors;

- Water will not be purchased from a field fallowed by another program in the two previous years;

- As part of a Giant Garter Snake Baseline Monitoring and Research Strategy for the development of a GGS Conservation Strategy, DWR and Reclamation

are proposing research goals to help quantify and evaluate the response of the GGS to riceland idling.

- In addition, during formal consultation with the Service, Reclamation has committed to implementing the following measures as described in the April 14, 2009 Biological Opinion:

    - Reclamation will work with DWR to document the compliance with the commitment to assure that idled parcels are no more then 320 acres in size, not located across a canal or other waterway, are not immediately adjacent to another fallowed parcel, and are distributed across the landscape in a checkerboard pattern.

    - Reclamation will reject parcels that do not conform to these criteria from participating in the DWB.

    - Reclamation will create maps showing the location of parcels enrolled to sell water to the DWB by rice fallowing or crop substitution which demonstrate compliance with the spatial criteria for fallowing rice. Reclamation will provide the maps to the Service by June 14, 2009.

    - Reclamation will gather information on the level of participation by DWB entities in the BMP's for giant garter snake.

    - Reclamation will provide this information to the Service at the end of August 2009.

    - Reclamation will submit a monthly compliance report prepared by DWR to the Sacramento Fish and Wildlife Office beginning thirty (30) calendar days from signing contracts to participate in the DWB. This report will detail: (i) total acreage affected and location where the fallowing occurred; (ii) confirmation that acreage fallowed conformed to the checkerboard pattern; (iii) confirmation that buffer zones have been complied with; (iv) confirmation that water levels are being maintained in ditches around affected fields; (v) occurrences of incidental take of any giant garter snake, if any; (vi) an explanation of failure to meet such measures, if any; and (vii) other pertinent information.

In their April 14, 2009 Biological Opinion (BO), the Service concurred that the Proposed Action is not likely to adversely affect the San Joaquin kit fox and determined that the proposed action is not likely to result in jeopardy to the giant garter snake (GGS). The proposed conservation measures that have been coordinated with the Service and will be incorporated into the Proposed Action will minimize adverse impacts to GGS populations by reducing stressors, and therefore the Proposed Action will not have a significant impact on GGS. The BO also determined that effects of the Proposed Action on delta smelt were included in the consultation for the Continued Long-term Operation

of the Central Valley Project and State Water Project, and that no additional adverse effects to delta smelt will occur beyond those evaluated in that consultation.

**Air Quality:** Increased groundwater pumping under the Proposed Action will increase $NO_x$ emissions. Reclamation, DWR and willing sellers will work together to implement one, or a combination, of the following mitigation measures to reduce air quality impacts within their district: retrofit non-program pumps in amounts necessary to offset the maximum increases in project-related air pollutant emissions; or purchase offsets to compensate for producing project-related emissions. Inclusion of the proposed mitigation measures into the Proposed Action will ensure that the Proposed Action will be implemented in compliance with all applicable air quality standards, and therefore will not have a significant impact on air quality.

**Power:** The proposed action will not change the amount of water that is released from the reservoirs, but could alter the release pattern. Buyers will be responsible for covering any additional costs associated with changes in release patterns. The proposed action will result in an average electricity increase at the Project pumps during July, August, and September, depending on the amount of water actually transferred under the proposed action. In addition, groundwater wells in the Sacramento Valley will increase their use of electricity for water supply replacement. However, this increase in electricity use will represent less than 2 percent of the projected statewide electrical surplus during these months. Therefore, the Proposed Action will not have a significant impact on power.

**Cultural Resources:** Under the Proposed Action, Reclamation will not approve transfers that would drawdown reservoirs beyond historic operational levels. If reservoir operations remain within historic levels, then the proposed action will have no potential to affect historic properties pursuant to the regulations at 36 CFR Part 800.3(a)(1) resulting in no affect to cultural resources.

**Indian Trust Assets:** Based on the actions to be undertaken it is determined that there will be potential effects to Indian Trust Assets (ITAs). However, during the transfer approval process, if Reclamation identifies potential impacts to ITAs, tribal consultation will then precede any approval of a DWB groundwater transfer in the vicinity of the identified tribes and avoidance and mitigation measures will be collaboratively developed and implemented by sellers so that the Proposed Action will not have a significant impact on ITAs.

**Socioeconomics:** The maximum amount of water that will be made available by crop idling under the Proposed Action is 183,385 af. This equates to approximately 55,571 acres of crop idling. However, it is likely that the actual amount of water that is actually transferred via this method in 2009 will be less. This is a worst case scenario analysis. In order to avoid or decrease adverse social effects on community stability, Reclamation and DWR will not approve DWB water transfers via crop idling if more than 20 percent of recent harvested rice acreage in the county would be idled.

Therefore, the Proposed Action will not have a significant adverse impact on socioeconomics.

**Environmental Justice:** Because of the farmworker profile, crop idling could have disproportionate effects on low income and minority farmworkers. However, to minimize the potential for this effect, crop idling (from all sources) would be restricted to no more than 20% of rice acreage in any county. The proposed action also has the potential benefit of alleviating the need for some idling and or farm laborer job loss in areas receiving transfer water through the DWB. As the Proposed Action would not disproportionately expose low income or minority populations to adverse environmental or human health impacts, the Proposed Action would not have a significant environmental justice impact.

**Climate Change:** Since the proposed action would have no construction element and would use existing facilities within the range of normal operations, it would have no effect on climate change. As the proposed action is for a one year program, climate change is not expected to affect the proposed action.

**Aesthetics:** The proposed action does not involve construction, introduction of new scenic features, or activities that would visually change the landscape for more than one season. The proposed action could, however, result in temporary changes or seasonal changes in the landscape. These changes would be minor, and thus the Proposed Action would not significantly impact aesthetics.

**Cumulative Effects:** Crop idling and groundwater substitution transfers have been implemented in previous drought response efforts, such as in the 1990's. Crop idling is also done on a regular basis as part of crop rotation and for other reasons, such as in response to hydrologic conditions, in the potentially affected areas. Groundwater use has also been implemented to supplement surface water in the past in many of the potentially affected areas, and other potential programs utilizing groundwater are described in the EA.

Fourteen non-CVP entities have indicated interest in providing water for the 2009 DWB. As previously described for potential CVP sellers, the EA analyzes estimates that reflect the potential upper limit of available water. From non-CVP sources, the DWB could potentially transfer up to 62,750 af from crop idling, 48,300 af from groundwater substitution, and 60,000 af from reservoir reoperation. Totals from all sources for the DWB would be up to 183,385 af from crop idling, 117,550 af from groundwater substitution, and 70,000 af from reservoir reoperation. The cumulative total amount potentially transferred under the DWB from all sources would be up to 370,935 af. All water transfers under the DWB will be implemented in accordance with requirements for meeting flow and temperature requirements on the Sacramento River. Also, all water transfers involving conveyance through the Delta will be implemented within the operational parameters of all applicable water quality standards and the Biological Opinions on Continued Long-term Operations of the CVP/SWP, including the limitations

of 600,000 af for all water transfers and transfer window of July through September.

Approval of the proposed water transfers under the DWB would not have highly controversial or uncertain environmental effects or involve unique or unknown environmental risks. Given the short-term nature of the proposed water transfer program, impacts to the previously discussed resource categories associated with the Proposed Action would be temporary in nature, and would not contribute to a cumulatively significant adverse impact when added to other past, present and reasonably foreseeable future actions.