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BEFORE THE

STATE WATER RESOURCES CONTROL BOARD

STATE OF CALIFORNIA

In re Petition of Imperial Irrigation District and San Diego County Water Authority for Approval of Long-Term Transfer of Conserved Water and Changes in Point of Diversion, Place of Use and Purpose of Use Under Permit No. 7643	**EXPERT WITNESS STATEMENT OF LARRY PURCELL**

I. INTRODUCTION

My name is Larry Purcell. I am a Water Resources Manager for the San Diego County Water Authority (SDCWA). My responsibilities for SDCWA include: providing day-to-day management for six professional staff performing environmental and water resource planning functions; developing and implementing environmental compliance policies and procedures; developing and pursuing water supply strategies to meet current and future demand projections; negotiating and procuring permits from state and federal regulatory agencies; participating on interagency and interstate advisory committees to resolve natural resource conflicts; participating in the drafting of proposed legislation; and coordinating water resource management programs and

plans with the Metropolitan Water District of Southern California (MWD), SDCWA member agencies and other organizations.

I have 24 years experience in environmental assessment and regulatory compliance in the public and private sectors, including preparation of environmental documents for the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA); federal and state permit applications; upland and wetland mitigation programs; natural resource and endangered species studies; and soil, water and air quality assessments using field and laboratory techniques.

I have a bachelor of science degree in Marine Biology and a master of science degree in Biology, both from California State University Long Beach.

II. PERSONAL PARTICIPATION IN ENVIRONMENTAL DOCUMENTATION FOR THE PROPOSED TRANSFER

My formal involvement in the proposed transfer of water from the Imperial Irrigation District (IID) to the SDCWA (the "Project") began with the execution of the Agreement for Transfer of Conserved Water between SDCWA and IID in April 1998 (Transfer Agreement).[1] At that time, IID and SDCWA agreed that IID would be the lead agency for compliance with CEQA, and SDCWA would be a responsible agency. Since the United States Secretary of Interior would be required to approve the change in point of diversion from Imperial Dam to Parker Dam on the Colorado River, NEPA compliance was also necessary. Based on the need for federal approval, the federal lead agency for NEPA compliance was determined to be the United States Bureau of Reclamation (USBR). In light of SDCWA's status as responsible agency, I was requested to participate in the consultant selection process as part of a multi-agency panel that ultimately led to IID hiring the firm of CH2M Hill to prepare the joint Environmental Impact Report/Environmental Impact Statement (EIR/EIS).[2]

Because of the need to closely coordinate activities during preparation of a joint CEQA/ NEPA document, a coordinating committee consisting of IID, USBR and SDCWA, was established

[1] IID Exh. 7: *Agreement for Transfer of Conserved Water by and between Imperial Irrigation District and the San Diego County Water Authority* (April 29, 1998).

[2] *See* IID Exh. 55: Imperial Irrigation District, *Water Conservation and Transfer Project, Draft Habitat Conservation Plan, Draft Environmental Impact Report/Environmental Impact Statement* (Jan., 2002) (DEIR/DEIS).

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through execution of a three-way Memorandum of Understanding. The committee served as a forum for resolving issues arising during the CEQA/NEPA process and served as the clearinghouse for all documents produced. As SDCWA's representative to that committee, I directly participated in all phases of- the preparation of the Draft EIR/EIS (DEIR/DEIS) to ensure that the document would adequately analyze the potential environmental impacts of the proposed Project components for which the SDCWA Board of Directors would have discretionary approval power.

In October 1999, I participated in six DEIR/DEIS scoping meetings held to solicit public comments on the types of issues and extent of analyses to be included in the DEIR/DEIS. The coordinating committee continued to meet monthly during preparation of the draft document to discuss issues related to significance criteria, impacts and mitigation, and consistency with other planning efforts in the region. As document preparation progressed, I was directly involved in reviewing all technical reports and administrative draft documents, in particular,~~and for revising~~ sections of the draft DEIR/ DEIS ~~text~~ related to impacts along the Colorado River and in San Diego County. In addition to attending public hearings scheduled to receive public comments on the adequacy of the document, I anticipate that I will also be directly involved in preparing any responses to comments that pertain to the analysis of impacts on the Colorado River and in San Diego County, as well as reviewing proposed responses to comments in all issue areas as the Final EIR/EIS is prepared.

III. SUMMARY OF PROPOSED PROJECT

The Project involves the implementation by IID of a long-term (75 years) water conservation program to conserve up to 300 thousand~~thousand~~ acre-feet per year (300 KAFY) of Colorado River water and the transfer of this conserved water by IID to SDCWA, Coachella Valley Water District (CVWD), and/or MWD. The project also includes a Habitat Conservation Plan (HCP) to address federal and state endangered species requirements under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA).[3]

Under the proposed ~~p~~Project, the water transfer would occur in accordance with the terms of the Transfer Agreement and, as an alternative scenario that would apply if the Quantification Settle-

[3] IID Exh. 55: DEIR/DEIS at ES-1. The HCP is discussed in more detail in the EIR/EIS at ES-4, § 2.2.6.

ment Agreement (QSA)[4] is finalized and implemented, in accordance with the modified water transfers provided for under the terms of the QSA.

In the event only the Transfer Agreement is implemented, the Project would include the conservation by IID of up to 300 KAFY ~~thousand acre-feet per year~~ of water and the transfer of up to 300 KAFY~~thousand acre-feet per year~~ to SDCWA (this scenario will apply if the QSA is not approved and implemented in its entirety). Alternatively, if the QSA is implemented in its entirety, the Project would include the conservation by IID of up to 300 KAFY~~thousand acre-feet per year~~, the transfer of no more than 200 KAFY~~thousand acre-feet~~ to SDCWA, and CVWD would have the option of acquiring up to 100 KAFY~~thousand acre-feet per year~~ of the conserved water, in two increments of 50 KAFY~~thousand acre-feet per year~~, for use within CVWD's service area. In addition, under the second scenario, the QSA would grant MWD an option to acquire all or any portion of the 100 KAFY~~thousand acre-feet~~ that CVWD does not acquire, for use in MWD's service area.[5]

IV. ENVIRONMENTAL IMPACT ASSESSMENT METHODOLOGY

IID's long-term water conservation program would be implemented within IID's water service area in Imperial County, California, which consists of approximately 500,000 acres. Additionally, six geographic subregions are within the region of influence of the Project. My testimony is limited to two of these geographic subregions: SDCWA's service area, which includes 234 retail water agencies that serve over~~about~~ 90 percent of the population of San Diego County; and the Lower Colorado River (LCR) and its historic 100-year floodplain, from Lake Havasu at Parker Dam to Imperial Dam. The environmental impact~~s~~ analys~~e~~is for the Project on all six subregions is provided in the DEIR/DEIS.[6]

The methodology employed for determining whether environmental impacts would occur in

[4] IID Exh. 22: Quantification Settlement Agreement (draft June 6, 2001).
[5] IID Exh. 55: DEIR/DEIS at ES-5 to ES-6, § 2.2.
[6] The six geographic subregions include: (1) the Lower Colorado River, (2) IID's water service area and the All American Canal, (3) the Salton Sea, (4) SDCWA's service area, (5) MWD's service area, and (6) CVWD's service area. (IID Exh. 55: DEIR/DEIS at ES-2 to ES-3.)

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either the SDCWA service area or the LCR as a result of the Project[7] is described below.

A. SDCWA Service Area

Impacts in SDCWA service area would only occur if existing conditions would be affected by the proposed Project.[8] No new construction or change in operations in the SDCWA service area is anticipated or are any changes in existing water delivery or treatment operations envisioned as a result of the proposed Project.

B. Lower Colorado River

1. Hydrology

The DEIR/DEIS assessment of the Project's potential impacts on Colorado River hydrology and for impacts to fish, wildlife and other instream uses (biological resources), was based on modeling contained in the Biological Assessment for Proposed Interim Surplus Criteria~~Guidelines~~ (USBR Biological Assessment).[9] In general, a specific impact assessment for the proposed Project was not performed, but rather was considered a subset of an ongoing comprehensive regional habitat conservation planning effort occurring along the LCR (the Lower Colorado River Multi-Species Conservation Program).[10] This larger effort, which involves the three lower Basin states (California, Nevada and Arizona), the federal government, Indian tribes, water and power interests, and other interested parties, includes a hypothetical change in point of diversion of 1.574 million acre-feet from Imperial to Parker Dams. The USBR Biological Assessment analyzed the potential environmental impacts associated with this larger effort. While USBR's approach followed generally accepted and reasonable procedures for conducting impact assessments, the conclusions reached

[7] In accordance with both CEQA Guidelines and NEPA requirements, Project alternatives were selected and analyzed. Four Project alternatives are carried forward in the DEIR/DEIS analysis. The same methodologies were employed in evaluating potential environmental impacts associated with the Project alternatives. (IID Exh. 55: DEIR/DEIS at ES-10 to ES-12.)

[8] IID Exh. 55: DEIR/DEIS at § 3.0, Table 3-1.

[9] IID Exh. 59: United States Bureau of Reclamation, *Biological Assessment for Proposed Interim Surplus Criteria, Secretarial Implementation Agreements for California Water Plan Components and Conservation Measures on the Lower Colorado River (Lake Mead to the Southerly International Boundary)* (Aug. 30, 2000), as amended by an errata sheet distributed by Tom Schrader on October 26, 2000.

[10] It should be noted that standard impact assessments typically focus on the specific environmental changes that could result directly or indirectly from implementation of a specific project. In fact, USBR used this standard method for analyzing the potential environmental impacts of the proposed Project in the SDCWA service area.

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may not be accurate since the assessment does not analyze the proposed Project specifically.

The USBR model of the Colorado River reach from Parker Dam to Imperial Dam (known as the Colorado River Simulation System or CRSS) assumed a maximum instantaneous depletion of 1.574 million acre-feet during months when flow is greatest (April), when backwaters provide cover for juvenile fish (August), and when water surface elevations are lowest (December). Since lesser depletions (such as would occur as a result of the proposed Project) were not modeled directly in this analysis, the USBR simply proportioned 100, 200 and 300 KAFY~~thousand acre-feet~~ flow and water surface elevation reductions as a percentage of the modeling results for the total 1.574 million acre-feet. In other words, in calculating the potential impacts associated with the proposed Project, USBR assumed that potential environmental impacts associated with the transfer of 300 KAFY~~thousand acre-feet per year~~ would be directly proportional to potential environmental impacts associated with a much larger project. This is an extremely conservative assumption which I believe results in an overestimation of the potential impacts associated with the Project.

Additionally, USBR also estimated reductions in elevation for groundwater hydrologically connected to the Colorado River. For hydrologic analysis purposes, reductions in groundwater elevations were assumed to match reductions in river surface water elevations except in agricultural areas under irrigation, in which case the groundwater elevation reductions were assumed to be one-half of the river surface elevation reduction. ~~Since a~~Actual groundwater data from irrigated areas hydrologically~~ulically~~ connected to the LCR was not readily available, and this ~~is a reasonable~~ assumption was used for the purposes of general impact assessment (~~although~~ this approach shares the same conservative proportional analysis as for water surface elevations noted above). USBR estimated the reduction in surface and groundwater elevation at several discrete stations along the Colorado River from Parker Dam to Imperial Dam. At each station, water surface elevations were computed based on projected flow and river cross-sectional surveys performed between 1985 and 1997.[11]

2. Biological Resources

Potential biological impacts resulting from a reduction in surface and groundwater elevation

[11] IID Exh. 55: DEIR/DEIS at § 3.1.4.1.

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(as calculated using the methodology described above) were estimated for riverine aquatic, backwater and riparian habitat.

Riverine aquatic impacts were calculated using river channel cross sectional areas and the projected reduction in monthly~~annual~~ median surface water elevation.

To estimate potential backwater habitat impacts, USBR surveyed a number of existing backwaters and characterized bottom slopes ranging from relatively flat to steep. For the analysis, the worst-case (flattest) slope was applied to all backwater areas and used for subsequent impact assessment of reduced surface water and groundwater elevation. This conservative assumption results in identification of greater potential impacts since, for a given water elevation reduction, more of the backwater bottom would be exposed at a site with a flatter slope than one with a steeper slope. Backwaters were also categorized as open water or emergent marsh depending on the presence of certain vegetation types. The same backwater surveys used to evaluate bottom slope resulted in the USBR determining an overall ratio of open water to marsh habitat.

Impacts to riparian habitat (cottonwood-willow and saltcedar) were determined using the monthly~~annual~~ median reduction in surface and groundwater elevations as compared against a 1997 map of vegetation occupied by the southwestern willow flycatcher (a species listed as endangered by the state of California and federal government). Using topographic maps and vegetation data, USBR determined that 1,570 acres of cottonwood willow and 32,141 acres of saltcedar existed in the Parker Dam to Imperial Dan reach. Of this, about 1,460 acres were known to be utilized by the willow flycatcher. ~~In locations where a~~A reduction in average monthly surface water or groundwater elevations was assumed to~~ould~~ result in loss of saturated surface soil moisture conditions, and although riparian habitat would continue to survive~~; however,~~ its suitability as habitat for the southwestern willow flycatcher was presumed to be permanently lost.[12]

3. Air Quality

Impacts to air quality could result from several aspects of the Project: construction activities (e.g., the operation of mobile construction equipment and the implementation of various habitat conservation measures), operation and maintenance associated with the conservation measures imple-

[12] *See* IID Exh. 55: DEIR/DEIS at § 3.2.4.1.

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mented, and the increased exposure of river shoreline. Emissions resulting from construction activities are dependent upon the particular type and location of conservation measure being constructed, which are not known at this time. Operation and maintenance activities associated with the conservation areas were assumed to be within the range of normal activities for existing uses. Reduction in the median water surface elevation of the river would result in decreases in the surface area of the water and exposure of areas formerly submerged, which in turn could increase the potential for dust suspension. The potential for increases in windblown dust was determined by estimating the amount of newly exposed land as a result of the Project to the total shoreline along the LCR.[13]

4. Public Services (Hydropower)

Impacts to hydropower production were calculated by comparing average annual gross power production without the project to average annual gross power production with reduced river flows.[14]

V. ENVIRONMENTAL ANALYSIS

A. Summary

The following table summarizes the resource areas in which potential impacts are identified and the degree of the impact identified.

Resource Area	LCR	SDCWA Service Area
Hydrology	Less than significant potential impacts	No impacts
Biological Resources	Less than significant potential impacts with implementation of biological conservation measures	No impacts
Air Quality	Less than significant potential impacts	No impacts
Public Services and Utilities	Less than significant potential impacts	No impacts

No potential impacts were identified in any of the following resources areas in either the

[13] *See* IID Exh. 55: DEIR/DEIS at § 3.7.4.1.

[14] *See* IID Exh. 55: DEIR/DEIS at § 3.12.4.2.

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LCR or SDCWA service area subregions: Geology and Soils; Land Use; Agricultural Resources; Recreation; Cultural Resources; Indian Trust Assets; Noise; Aesthetics; Transportation; Socio-economics; Environmental Justice; and Transboundary Effects. As a result, no further discussion of these resource areas is made here.[15]

B. Impact Findings and Mitigation Measures

1. SDCWA Service Area

There will be no impacts, significant or otherwise, in the SDCWA service area as a result of implementation of the Project because SDCWA would receive the same blend of water from MWD that it currently receives under existing agreements with MWD. The Project would not increase the amount of water diverted at the Whitsett intake on Lake Havasu (MWD's point of diversion), nor increase the amount of water imported into San Diego County to meet regionally projected needs. No new facilities, operations, or maintenance practices would be required to convey, receive, or use the water resulting from the transfer. The CRA would continue to operate unchanged. Thus, the SDCWA geographic subregion is not carried forward in the impact analysis.[16]

2. Lower Colorado River

Potential impacts to the LCR were identified in the following issue areas: Hydrology and Water Quality, Biological Resources, Air Quality, and Public Services (Hydropower). In all resource areas except Biological Resources, the identified impacts were found to be less than significant and therefore would not require any mitigation. Biological Resource impacts were found to be less than significant after implementation of certain mitigation measures discussed below.

a. Hydrology and Water Quality

The month of April was determined to be the period having the greatest potential hydrologic impact because it is the period when river flow could be most affected by reduced downstream irrigation demands. Using the proportional flow analysis approach described above, a change in point of diversion of 400 KAFY~~thousand acre-feet~~ from Imperial Dam to Parker Dam would result

[15] *See* IID Exh. 55: DEIR/DEIS at §§ 3.3, 3.4, 3.5, 3.6, 3.8, 3.10, and 3.14. Please note that Table 3-1 in DEIR/DEIS, which summarizes impacts by resource area, incorrectly states that potential impacts were identified in these areas.

[16] IID Exh. 55: DEIR/DEIS at Table 3-1.

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in a maximum reduction of 4.5 inches in median river water surface elevation. The decline in median river stage could result in similar declines in groundwater levels. The maximum median surface water elevation decrease is projected between 4.5 inches below Parker Dam and 0.5 inches at Imperial Dam. This decline results from reduced flows in the river as water currently diverted at Imperial Dam would be diverted at Parker Dam as a result of a change in point of diversion associated with the Project.[17]

USBR modeling for potential changes in salinity for the Implementation Agreement (of which the Project is one element) indicates that salinity at Imperial Dam could increase by as much as 8 mg/l over the 75-year term of the proposed water transfer. This increase is within the currently occurring monthly fluctuation in salinity and therefore would not be a significant impact. It should be noted that salinity in the river, which originates from geologic sources, saline springs, and agricultural return flows, is naturally increasing over time and the Colorado River Basin Salinity Control Act (Public Laws 93-320 and 98-569) was enacted to control these increases. Salinity concentrations are anticipated to meet mandated objectives through this control program.[18]

b. Biological Resources

Using the proportional impact assessment methodology described above, up to 26 acres of riverine aquatic habitat, 132 acres of backwater open water, 21 acres of backwater emergent marsh, and up to 279 acres of occupied willow flycatcher habitat would be permanently lost by the change in point of diversion associated with the Project. In addition, federally designated critical habitat for the razorback sucker may be adversely modified by the change in point of diversion.[19]

As a result of the presumed permanent loss of these habitat acreages, the USBR concluded that one or more individuals of six species (four birds and two fish) protected under state and/or federal endangered species laws may be directly affected, specifically: the southwestern willow fly-

[17] *See* IID Exh. 55: DEIR/DEIS at § 3.1.4.3.

[18] *See* IID Exh. 55: DEIR/DEIS at § 3.1.4.3.

[19] The DEIR/DEIS also concludes that the establishment and persistence of honey mesquite and screwbeam mesquite bosque communities could be affected by the reduction in surface and groundwater elevation between Parker and Imperial Dams. However, because these do not provide primary habitat for special-status species, potential changes in acreage would be less than significant.

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catcher, Yuma clapper rail, California black rail, western yellow billed cuckoo, bonytail chub, and razorback sucker.

However, it is my opinion that an examination of the complex hourly, daily and weekly flow regimes in the LCR shows that USBR's use of median monthly ~~and annual~~ water elevation levels is simplistic and provides an overestimate of actual impacts. Flows in the Colorado River vary significantly from season to season in response to water user demand in the US, treaty obligation deliveries to Mexico, periods of surplus river flow or unanticipated storms, and when delivery requirements are less than 2,000 cubic feet per second (the minimum flow required for fish, wildlife and recreation purposes). In response to these seasonal flows, daily water surface elevations just below Parker Dam vary over a range of 5 feet during the winter and 2.5 feet during the summer. This range of daily fluctuation is reduced downstream due to channel friction, backwaters and diversion dams, but is still varies by up to 0.5 feet at Imperial Dam. Importantly, the water elevation changes projected for the proposed Project fall within the normal daily fluctuations observed on the river. As a result, any changes in the river water surface elevation resulting from the Project would be imperceptible from existing conditions.

Another factor not adequately considered in the USBR impact analysis is the gradual implementation of any proposed transfer. As noted above, the maximum projected median elevation decline would be 4.5 inches and USBR assumed that this depletion in water elevation would be instantaneous. However, in actuality, this decease would occur over a period of 10 years or more (as a result of the gradual and incremental increases in the volume of water to be transferred under the terms of the Transfer Agreement), resulting in a maximum water elevation decrease of less than 0.5 inches per year.[20] When superimposed on the daily hydrographs (with up to a 5 foot variation), it is clear that the magnitude of impacts attributed to these projected elevation reductions simply will not occur. The minimum and maximum flows in the LCR would remain unchanged - only the duration of the peak flows would be reduced slightly and the duration of the projected low flows would increase slightly. The net effect is that all potentially affected habitats would only experience a slight reduction in the period of inundation each day; water would continue to reach all areas as at

[20] *See* IID Exh. 55: DEIR/DEIS at § 3.2.4.3.

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present and no areas would be permanently dewatered. As a result, the existence or persistence of vegetated areas will not be altered by the proposed Project. Since high and low flows would remain unchanged, actual impacts to riverine, backwater and riparian habitats zones will, in reality, be negligible.

In summary, the USBR consistently used the most conservative assumptions at every step of the analyses. This includes the use of the calculated maximum water elevation reduction along the entire reach of river and the most conservative (or flattest) backwater slope as representative of all backwaters. This assumption discounts the attenuation of any elevation reductions downstream of Parker Dam and tends to maximize projected impacts since bottom slope directly affects the amount of shoreline exposure at various surface water elevations. Further, another assumption that all backwaters provide the same optimal functions and values for wildlife does not account for already degraded or marginal areas. The assumption that a maximum 4.5-inch drop in surface water elevation would permanently expose fish spawning beds is also overly conservative. Gravel spawning beds will continue to be inundated on a daily basis with or without the Project. The assumption that riparian vegetation will die because of the drop in water elevation fails to recognize that high and low flows will not change and water will still reach all areas that it does presently. In addition, the gradual lowering of water elevation over 10 years (maximum of 0.5 inch per year) would allow plant roots to grow downward at a rate commensurate with the rate of any water elevation reduction. Furthermore, vegetation existing along the river is already adapted to the widely variable water elevations that currently exist. The water levels projected with implementation of the proposed Project are within historic fluctuations. Thus, it is my opinion that the biological impacts ascribed to the proposed Project by the federal government are significantly overstated and the actual impacts to biological resources resulting from implementation of the proposed Project would be difficult to distinguish from existing conditions.

Notwithstanding these concerns regarding the overestimation of potential impacts, the transfer parties are prepared to accept these potentially significant impact findings and to implement a suite of conservation measures to ensure that any potential impacts to the habitat, and to the species

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reliant on that habitat, are fully offset and mitigated.[21] These measures include:

- stocking 20,000 razorback suckers in the LCR between Parker and Imperial Dams by 2006;
- restoring or creating 44 acres of backwaters between Parker and Imperial Dams within five years of the first transfer of conserved water from IID;
- capturing wild-born bonytail chub from Lake Mojave for genetic broodstock for a period of five years;
- restoring and maintaining 372 acres of new replacement willow flycatcher habitat (defined as cottonwood-willow structural types I to IV per Anderson and Ohmart 1984) along the LCR; and
- identifying and monitoring 372 acres of occupied southwestern willow flycatcher habitat. If monitoring indicates the willow flycatcher habitat is adversely affected, additional habitat would be restored and maintained as follows:
  - If willow flycatcher populations are improving: an additional one acre would be restored and maintained for each acre of monitored habitat adversely affected, up to a maximum of 372 acres of habitat.
  - If willow flycatcher populations are stable or decreasing: an additional two acres of habitat would be restored and maintained for each acre of monitored habitat adversely affected, up to a maximum of 744 acres of habitat.

These measures would ensure that any of the identified potentially significant impacts would be reduced to less than significant levels. Implementation of the above conservation measures would benefit not only the above named species, but all backwater and riparian organisms that utilize these habitats for any aspect of their life history.

c. Air Quality

A reduction in river water surface elevation would expose more shoreline and result in greater potential for fugitive dust. However, since the high and low Colorado River flows would remain unchanged, water will continue to inundate the same areas as at present; only the duration of

[21] IID Exh. 55: DEIR/DEIS at § 3.2.4.3.

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inundation would be reduced. This slight reduction in wetted duration would not result in a significant increase in fugitive dust.[22] Construction and maintenance of the envisioned biological conservation measures could also result in creation of fugitive dust, as well as engine exhaust emissions from equipment. The actual locations for the conservation measures have not yet been identified, so it is difficult to quantify actual emissions. However, it is expected that these activities would not exceed any air quality thresholds and impacts to the local area would not be significant.

d. Hydropower Generation

Water flow is used to produce hydroelectric power at several points along the Colorado River from Parker Dam to Imperial Dam. Annual river flow is highly uncertain and energy production is totally dependent on this flow. Additionally, power production is possible only as a result of water released to meet water orders made by Colorado River water users with rights to that flow.

Reduced flow resulting from a change in point of diversion from Imperial to Parker Dams would result in about a five percent average reduction in opportunity to produce hydroelectric power at Parker and Headgate Rock Dams. Five percent is within the range of normal operations and therefore is less than significant. Moreover, under the Law of the River, power production has the lowest priority in terms of Colorado River operations. Since power production is possible only as a result of water released to meet water orders, a slight reduction in opportunity is not a significant impact. Powerplant capacities would not be affected nor would there be any measurable change in any lake water elevations in the Parker to Imperial river reach.[23]

VI. OTHER CEQA AND NEPA CONSIDERATIONS

A. Cumulative Impacts

Implementation of the proposed Project, with or without the QSA components, would not increase water supplies to the MWD and SDCWA service areas, and no construction activities in these areas would occur. Therefore, no direct or indirect cumulative impacts were identified within the water service areas of these two entities.[24]

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[22] *See also* IID Exh. 55: DEIR/DEIS at § 3.7.4.3.

[23] *See* IID Exh. 55: DEIR/DEIS at § 3.12.4.3.

[24] IID Exh. 55: DEIR.DEIS at § 5.1.2.

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With respect to the LCR, implementation of the proposed Project and other projects considered in the cumulative impacts analysis,[25] would result in changes in the amounts of water diverted at existing points of diversion within California. These changes in diversion points could reduce flow in the LCR between Parker and Imperial Dams. The Interim Surplus Guidelines and Inadvertent Overrun Program would result in minor changes in storage and reservoir levels. The overall hydrologic impacts are considered adverse, but not cumulatively significant since changes in LCR levels would be small when compared to the total volume of water transported annually in the LCR; in addition, the changes in River elevation are within the historic fluctuation of the River's elevation.[26]

Potential cumulative increases in LCR salinity will be controlled by continued implementation of projects pursuant to the Colorado River Salinity Control Act; therefore, salinity standards will continue to be met and water quality impacts are not cumulatively significant.

Implementation of the biological conservation measures would avoid any potential for significant cumulative impacts to biological resources. Should agricultural land be converted to provide habitat required by the conservation measures, the loss of this farmland would be negligible when compared to the total amount of available farmland and would not be considered cumulatively significant.

B. Growth-Inducing Impacts

The proposed Project would not induce growth in the SDCWA service area because it would not provide additional water for the SDCWA service area and would not increase the amount of water delivered to southern California. Further, the Project would not involve any additions or changes to the SDCWA water delivery and storage system (since the conserved and transferred water would be delivered through systems that are already in existence or approved) or any other construction in the San Diego area. Rather, the proposed Project would maintain the reliability of the Colorado River supply that SDCWA has experienced in the past by reallocating the existing water supply to provide greater assurance against drought shortfalls. Overall, the proposed Project

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[25] *See* IID Exh. 55: DEIR/DEIS at § 5.5.1.
[26] IID Exh. 55: DEIR/DEIS at § 5.1.2.1.

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would assist in the reduction of the historic water supply diverted from the Colorado River to southern California.

Currently, SDCWA receives its total imported water supply from MWD. SDCWA imports have varied over the last several years, but have been as high as about 650,000 acre-feet. In fiscal year 2000 and 2001, SDCWA imports from MWD averaged over 600,000 acre-feet, and it is anticipated that fiscal year 2002 deliveries will be even greater. Although MWD obtains its imported water from both the Colorado River and the State Water Project, the large majority of the supply delivered to SDCWA has been Colorado River water.

For many years, MWD has operated its Colorado River Aqueduct (CRA) at or near its full capacity of about 1.25 million acre-feet per year. Despite its relatively junior priority to Colorado River water, MWD has been able to obtain water in excess of California's normal year apportionment of 4.4 million acre feet to fill the CRA because, until 1997, Arizona and Nevada were not using their full entitlements, and that water was available to California. Since 1997, the CRA has remained full due to surplus declarations by the river's watermaster, the Secretary of the Interior. Even during the height of the 1987-1992 drought, when MWD was forced to curtail water deliveries to its member agencies due to insufficient SWP supplies, the CRA operated at essentially full capacity.

While MWD has stated that it will meet all future water requirements of its member agencies,[27] reliability of the MWD supplies in the future is dependent on many factors, including MWD's efforts to ensure that the CRA continues to be operated at full capacity through implementation of various programs and actions contained in the California's Colorado River Water Use Plan (California Plan).[28] Without actions such as the proposed Project, the reliability of Colorado River supplies to the MWD service area, including SDCWA, would diminish. The proposed Project and other California Plan programs would help maintain the past reliability of Colorado River supplies by effecting water transfers from agricultural agencies that hold senior rights to river water.

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[27] MWD Admin. Code, § 4202.

[28] SDCWA Exh. 15: Colorado River Board of California, (Draft) *California's Colorado River Water Use Plan* (May 11, 2000).

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The proposed Project would provide SDCWA a maximum of 200,000 acre-feet per year of Colorado River water from IID. This would replace a like amount of Colorado River water supplies that SDCWA currently receives from MWD. Under the Exchange Agreement between SDCWA and MWD,[29] the water SDCWA purchases from IID will be delivered to MWD at the CRA intake facility at Lake Havasu, and MWD will deliver that same amount of water to SDCWA at its normal "point of delivery" to SDCWA facilities. In other words, under the proposed Project, SDCWA would continue to receive the same quantity of Colorado River water, at the same point of diversion, and through the same facilities as it does presently. The only difference would be that the water delivered to SDCWA would be water of a senior priority, and thus would help to ensure the continued future reliability of that water supply. Any remaining imported water that SDCWA requires over and above the water purchased from IID would continue to come from MWD.

Based on demographic and population forecasts prepared by the San Diego Association of Governments (SANDAG), SDCWA has projected that in 2020 there would be an average total water requirement for its service area of 813,000 acre-feet per year.[30] To meet that need, SDCWA has projected that local supplies would provide only 223,500 acre-feet, with the remaining 589,500 acre-feet consisting of imported water.[31] Measured against the 650,000 acre-feet that SDCWA has purchased from MWD in the past, and the fact that SDCWA imported water purchases are currently in excess of 600,000 acre feet per year, this clearly indicates that the primary source of water to meet increasing demands is not imported water, but local water. To develop and maximize local supplies, SDCWA and its member agencies plan to continue to implement programs that conserve water, and to increase local supplies through the development of groundwater, recycling, and desalination projects. Even in future drought years, it is unlikely that SDCWA would import significantly more water than has been imported in past drought years.

No changes to land use, water supply or population along the LCR would result from imple-

[29] SDCWA Exh. 14: *Agreement Between the Metropolitan Water District of Southern California and the San Diego County Water Authority for the Exchange of Water* (Nov. 10, 1998).

[30] SDCWA Urban Water Management Plan, 2000

[31] IID Exh. 55: DEIR/DEIS at § 5.2.3.4; *see also* SDCWA Exh. 7: San Diego County Water Authority, *2000 Urban Water Management Plan* (Dec., 2000).

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VII. CONCLUSION

In conclusion, no environmental impacts, of any degree, would result from the proposed Project in the SDCWA service area. This is because no construction and no operational changes are anticipated in this area.

In the LCR, based on an extremely conservative methodology employed by USBR, it was concluded that potentially significant impacts would occur to biological resources. Significant impacts were not identified in any other resource areas for the LCR. Nevertheless, assuming these potentially significant impacts might occur, the implementation of the mitigation measures discussed herein (and in the DEIR/DEIS) would reduce these impacts to less than significant levels.

The proposed Project would not induce growth in either the SDCWA service area or along the LCR. No additional water would be made available to the SDCWA and the Project would not involve any additions or changes to the SDCWA water delivery and storage system or any other construction in the San Diego area.

I declare under perjury pursuant to the laws of the State of California that the foregoing is true and correct.

Executed on April 9, 2002, at San Diego, California.

Larry Purcell, Water Resources Manager

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