From: Pulverman, Joshua@DOT <josh.pulverman@dot.ca.gov>
Sent: Tuesday, July 29, 2014 9:03 AM
To: BDCP.comments@noaa.gov
Cc: Enos, Cassandra@DWR; scott.morgan@opr.ca.gov
Subject: BDCP Comment Letter from Caltrans
Attachments: BDCP DEIR_DEIS Caltrans Comments 7_29_14.pdf; (Attachment 1) District 4 - 2013 Response Letter to Administrative Draft.pdf; (Attachment 2) BDCP Admin DEIR Response to Caltrans Comments.pdf

Good morning,

Please find attached Caltrans comments on the Draft Bay Delta Conservation Plan and associated Draft Environmental Impact Report and Draft Environmental Impact Statement. Please contact this office if there are any questions.

Thank you,

Joshua Pulverman

Statewide LD-IGR Coordinator
Assoc. Trans Planner, Office of Community Planning
Caltrans Div. of Transportation Planning
1120 N Street, MS-32
Sacramento, CA, 95814
Phone: (916) 653-0808

Plans are nothing; planning is everything
Dwight D. Eisenhower

BDCP1606

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION PLANNING
P.O. BOX 942874, MS-32
SACRAMENTO, CA 94274-0001
PHONE (916) 653-1818
FAX (916) 653-4570
TTY 711
www.dot.ca.gov/hq/tpp/

Serious Drought.
Help save water!

July 29, 2014

Mr. Ryan Wulff
National Marine Fisheries Services
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814

Dear Mr. Wulff:

Thank you for the opportunity to review and provide comments on the Draft Bay Delta Conservation Plan (Plan) and associated Draft Environmental Impact Report (DEIR) and Draft Environmental Impact Statement (DEIS) SCH# 2008032062. The Plan is a comprehensive conservation strategy for the Sacramento-San Joaquin Delta designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework. This would occur through new and/or modified State water conveyance facilities (twin tunnel water diversion project) and operation of the State Water Project and the federal Central Valley Project, conservation, protection, restoration, and enhancement of habitats for native fish, wildlife, and plants within the Delta, and through adaptive management of water conveyance facilities operations; the protection, restoration and enhancement of habitats; and measures to reduce other ecological stressors.

This project has a number of effects and impacts on the State Highway System (SHS), especially during the construction phase. We appreciate the continued interagency coordination and cooperation with the Department of Water Resources (DWR) which met with us on May 30, 2014, and June 17, 2014, to discuss various areas of concern. We appreciate the efforts of the DWR staff to make locating specific information within the environmental documents easier, and look forward to reviewing the information table outlining the specific locations of various sections and material.

As referenced in the DEIR Chapter 19 Section 19.1.2 (Roadway Facilities) and table 19-1 (Roadway Study Segments), a total of 114 roadway segments would be impacted by construction-related activities associated with preferred alternative 4 (Dual Conveyance with Modified Pipeline/Tunnel and Intakes 2, 3, and 5). Seven of these segments are State and federal highways which cover portions of three California Department of Transportation (Caltrans)

districts: 3, 4, and 10 including Interstate (I-) 5, I-80, I-205 and State Routes (SR) 4, 12, 84, 113, 160. Below are Caltrans' comments and concerns regarding the DEIR and DEIS:

Memorandum of Agreement (MOA) for Analysis and Mitigation

As discussed at our meeting on June 17, 2014, Caltrans will partner with DWR to develop a Memorandum of Agreement (MOA) which will detail the stipulations for analysis and mitigation for the SHS as it pertains to this project. The MOA will formalize a universal interagency working arrangement with all affected Caltrans districts.

The purpose of the MOA is to allow for the deferment of the traffic analysis and impact mitigation requirements until the construction contract and scope of work have been established. The MOA will be prepared before the certification of the FEIR/FEIS to ensure DWR's good faith effort to mitigate for yet to be identified traffic impacts from construction. The content addressed in this letter will be subject to the terms of the MOA.

The current mitigation measures related to transportation include:

- Mitigation Measure TRANS-1a: Implement site-specific construction traffic management plan
- Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on Congested Roadway Segments
- Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter Into Mitigation Agreements to Enhance Capacity of Congested Roadway Segments
- Mitigation Measures TRANS-2a: Prohibit Construction Activity on Physically Deficient Roadway Segments
- Mitigation Measure TRANS-2b: Limit Construction Activity on Physically Deficient Roadway Segments
- Mitigation Measure TRANS-2c: Improve Condition of Affected Roadway Segments as Stipulated in Mitigation Agreements or Encroachment Permits

Traffic Analysis Commitments

The DEIR/DEIS acknowledges impacts to the SHS in multiple locations within the document. However, some locations provide vague language that requires clarification for contractual enforcement.

- Chapter 19, Page 19-173, line 6, CEQA Conclusion: please clarify the statement "The BDCP proponents cannot ensure that the improvements will be fully funded or constructed prior to the project's contribution to the impact."
- Chapter 19, Page 19-181, lines 14-15, CEQA Conclusion: please clarify the statement "as the BDCP proponents cannot ensure that the agreements or encroachment permits will be obtained from the relevant transportation agencies."

Per our discussions on May 30, 2014, and June 17, 2014, we understand that performing a full traffic analysis for this project is challenging and poses issues, and thus information normally

included was not available. It is understood that such language and analysis will instead be reflected in a Traffic Management and Traffic Monitoring Plan as well as an MOA.

An ongoing concern from Caltrans is that the amount of exported material being hauled off, truck trips (and all trips) generated, is still unclear. Although most of the excavated material would be spread on the project site, we still have comments that should be addressed.

- Because subsidence could affect levee road stability, the document should state where 25 million cubic yards of native excavated material is to remain on the project site, and the height of the piles.
- The document should state how much and the routes where native excavated material is to be hauled on State facilities to offsite locations.
- The document should state how many heavily laden truck-loads of imported material are expected.
- The document should include an analysis of all trips generated by the project. It should also discuss how the analysis was concluded on assumptions of locations, quantities, directions, and proportions of total trips for employee commutes.
- Please clarify the number of workers (construction and operation).
- Please clarify where project trips will access State facilities. Via flagger on shoulder? Via local/county roads?
- The document should identify how much material may be barged elsewhere and how port operations may be affected.

Traffic Management Plan (and Traffic Monitoring Plan)
An amendable (by mutual agreement) Traffic Management Plan (TMP) for construction vehicles should be submitted to Caltrans in order to minimize the impacts to State highway facilities. Coordination of this project with other construction and maintenance activities on State Routes will be needed for the entire (perhaps nine year) duration of project construction. All potential detours must be authorized with a district specific TMP. Probable detour routes for trucks and cars when bridges are not crossable (due to scheduled maintenance) should be specifically identified.

Any hauling of materials should not occur during A.M. and P.M. peak period of travel on State facilities during demolition and construction of the proposed project. All vehicles loads should be covered so that materials do not blow over or onto the State ROW. Prior to starting a phase of work, please coordinate with appropriate district staff to determine if the heavy construction traffic will need to be staged during off peak hours and if the interchanges/intersections within the State ROW can accommodate the heavy construction traffic anticipated for each phase.

The DEIR addresses the fact that given the limited number of workers involved at the large number of sites, it is not anticipated that routine operations and maintenance activities or major inspections would result in substantial increases of traffic volumes or roadway congestion.

Traffic monitoring plans as outlined in Mitigation Measures TRANS-1A will be implemented during construction to determine if and how much traffic is disrupted throughout the BDCP site-specific construction operations and that mitigation measures be implemented if and when required. Please work with appropriate district staff when proposing a Traffic Monitoring Plan and mitigation measures.

Mitigation

During review of the DEIR/DEIS Caltrans notes and appreciates the inclusion of Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation Agreements to Enhance Capacity of Congested Roadway Segments.

Mitigation Measures TRANS 2a, 2b and 2c propose to prohibit activity on deficient roadways, and if feasible, limit activity on physically deficient segments, and improve condition of affected segments as per mitigation or encroachment permit agreements. The following State routes are expected to be operationally impacted due to already congested conditions: SR 4, I-5 (Florin Road to Pocket Road), SR 160, SR 12, SR 84, and I-80 (Suisun Valley Road to SR 12). Please identify specific locations and indicate any specialized accommodations for non-motorized users.

Highway Operations

- As the project entails digging under roadways for the Dual-Bore Tunnels, please contact the affected local transportation agencies to obtain as-built drawings that indicate location of utilities so that no service is interrupted and/or no damage occurs to existing facilities.
- Please ensure that the construction of these tunnels at 150 feet under the surface does not affect the stability of the soil beneath the SHS and the surrounding terrain.
- Indicate locations of the vent/access shafts shown in the Proposed Tunnel System with respect to the State Right of Way (ROW) limits.
- Provide staging plans if the ground surface is going to be affected during construction and notify Caltrans of impacts to traffic flow (if any).
- The realignment of SR 160 due to the proposed pumping stations may trigger Caltrans' direct involvement regarding land acquisition, potential relinquishment, and vacating State ROW. This may create the possibility of excess land disposal by the State. Cooperative and maintenance agreements, or a Memorandum of Understanding, may be needed.
- As mentioned previously, sight distance consideration would be important for the access points needed for the pumping plants. Each plant could be expected to contain two access points. The plant locations along SR 160 are positioned on relatively straight and flat sections with no apparent sight restrictions.

Recreation Access

Bike Routes

Regarding impacted bicycle routes, Plan proponents will need to provide alternate routes around construction zones as well as provide signage and barricades for provision of detours around

construction sites. In addition, as per Chapter 15 of the Plan DEIR, there are project commitments to possibly enhance bicycle access to the Delta and potentially convert an abandoned rail line (between Sacramento and Walnut Grove) into a bicycle path. As these individually proposed projects progress, they will need to be circulated to the appropriate Caltrans district office for review.

Parking
If constructed, 8-foot shoulders would likely be used as parking areas by fishermen and others seeking recreation along the river. Because of safety and operational concerns, Caltrans recommends prohibiting parking if shoulders are less than 11 feet wide. These areas would need to be signed with "No Parking or Stopping Any Time" signs and aggressively enforced.

Fencing
In addition, we recommend requiring that the pumping plant areas be separated from the State highway with secure fencing that prevents access by the public.

Hydrology
Proposed alternatives (1A, 2A, 3, and 4) will require construction of pipe intakes, canals, etc., from the Sacramento River. The construction of these facilities, which will cross under various State highways, is expected to impact existing highway drainage facilities and patterns. Detailed studies and plans need to be prepared to determine the impact of the proposed construction on existing highway drainage systems/patterns. Detailed plans for mitigation measures adopted to account for disruptions to any drainage facilities must be provided to each affected Caltrans district office for review.

Please state how flood stages will be affected at emergency routes if fill is increased on islands.

Concerns exist in regards to the increased turbulence the pumps might make in the river flow at the nearby bridge supports and embankments. This turbulence may cause additional erosion around bridge supports than they were designed for.

Funding must be provided in the proposed project for any highway drainage mitigation measures. Proposed alternatives must be selected with proper allowance for future widening and expansion of the existing SHS. Any future widening or expansion projects would be outlined within the Transportation Concept Reports or Corridor System Mobility Plans written by the districts. Please contact the local district office for information regarding these reports.

Dike and Levee Maintenance, Repair and Upgrade
Activities involving demolition, reinforcement or rehabilitation of dikes or levees on which transportation facilities are built may potentially affect state transportation facilities. Also, built features on top of dikes and levees may contribute additional engineering considerations related to weight loading or compaction. These factors must be addressed through geotechnical and hydrological studies conducted in coordination with Caltrans at the project level.

Mitigation Monitoring
California Public Resources Code (PRC) Section 21081.7 directs CEQA lead agencies to submit transportation reporting or monitoring information to Caltrans for a project of statewide, regional, or areawide significance. Caltrans has prepared guidance to establish clear and consistent procedures for public agencies to submit transportation mitigation reporting or monitoring information to Caltrans.

Please refer to the following link for more information:
http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/Submittal_Guidelines_Mit_and_Mon_CovCkCert_07092004.pdf

Landscape Architecture
Previous comments provided by Caltrans on July 5, 2013 regarding the BDCP Administrative Draft EIR/EIS (attachment 1) were not adequately addressed in the BDCP Administrative Draft Response to Comments (Attachment 2). Please ensure that prior comments regarding Landscape Architecture are considered and incorporated.

The response to Caltrans comment #8 in the BDCP Administrative Draft Response to Comments states that vegetative restoration of disturbed areas would be carried out in accordance with guidance given by DWR Water Resource Engineering Memorandum No. 30a and through coordination with local agencies. However, disturbance caused by the proposed project within a State Right-of-Way (ROW) must be restored according to the following:

- Areas within the State ROW that are disturbed by project alternatives must be restored to a state of good repair consistent with the intent of meeting National Pollutant Discharge Elimination System (NPDES) and State Water Resources Control Board (SWRCB) Construction General Permit standards in terms of slope stabilization and permanent Best Management Practices.
- Existing vegetation including naturally occurring plant material and highway planting installed by Caltrans or others that are damaged or removed by project alternatives must be replaced.
- Any irrigation systems that are damaged or removed by project alternatives must be repaired or replaced.
- Plans for plant and irrigation system replacement within State ROW must be developed in consultation with and approved by the appropriate Caltrans district office.

Transportation Permit
The DEIR and DEIS addresses the fact that an increase in heavy construction traffic on State and local roadways will increase the potential for safety hazards such as conflicts with recreational and commuter traffic with farming operations. It can be inferred that said increase in heavy construction traffic will need to use State facilities to access the work sites. Project work that requires movement of oversized or excessive load vehicles on State roadways requires a transportation permit that is issued by Caltrans.

To apply, a completed transportation permit application with the determined specific route(s) for the shipper to follow from origin to destination must be submitted to:

Caltrans Transportation Permits Office, 1823 14th Street, Sacramento, CA 95811-7119

Please see the following website for more information:
http://www.dot.ca.gov/hq/traffops/permits/.

Encroachment Permit

An encroachment permit must be obtained for work within, under or over the State Highway ROW. In order to maintain the integrity of the pavement, the BDCP will need to monitor and mitigate the roadway segment pavement through an encroachment permit in areas where the alternative results show an impact on a deficient roadway within the State ROW as outlined in the DEIR. Monitoring and mitigation will need to occur throughout the construction life of the project.

If any project work (e.g., storage of materials, street widening, emergency access improvements, sewer connections, sound walls, storm drain construction, street connections, landscaping, etc.) will occur in the vicinity of State ROW, an Encroachment Permit is required prior to commencement of work. Please allow 2 to 4 weeks for a complete submittal to be reviewed and for a permit to be issued. When applying for an Encroachment Permit, please incorporate Environmental Documentation, Storm Water Pollution Prevention Plan/Water Pollution Control Plan (SWPPP/WPCP), Hydraulic Calculations, Traffic Control Plans, Geotechnical Analysis, ROW certification and all relevant design details including design exception approvals. For specific details on the Department's Encroachment Permits procedure, please refer to the Departments' Encroachment Permits Manual. The proposed project area spans three Caltrans districts. If work is proposed within State ROW in three districts, separate permit applications will be required.

To apply, a completed encroachment permit application, certified environmental document for the project, and five sets of plans clearly indicating State ROW must be submitted to the Encroachment Permits office in the appropriate Caltrans district.

Any necessary mitigation measures should be incorporated into the construction plans during the encroachment permit process. Additional permit information can be found online at the following website: http://www.dot.ca.gov/hq/traffops/developserv/permits/.

- Caltrans District 3 Encroachment Permits: 703 B Street, Marysville, CA 95901
- Caltrans District 4 Encroachment Permits: 111 Grand Avenue, 6th Floor, P.O. Box 23660, Oakland, CA 94623-0660
- Caltrans District 10 Encroachment Permits: 1976 E. Charter Way, P.O. Box 2048, Stockton, CA 95201

District Contacts for General Questions
For District 3 (Sacramento and Yolo Counties) questions, please contact Eric Fredericks, Chief, Office of Transportation Planning - South, at (916) 274-0635, or eric.fredericks@dot.ca.gov.

For District 4 (Contra Costa and Solano Counties) questions, please contact Erik Alm, Chief, Local Development-Intergovernmental Review, at (510) 286-6053, or erik.alm@dot.ca.gov.

For District 10 (San Joaquin County) questions, please contact Tom Dumas, Chief, Metropolitan Planning, at (209) 941-1921, or tom.dumas@dot.ca.gov.

As the project progresses, we will continue to be available to work in partnership with DWR. If you have any questions, please feel free to contact Alyssa Begley, Chief, Office of Community Planning, at (916) 651-6882.

Sincerely,

Katie Benouar

KATIE BENOUAR
Chief, Division of Transportation Planning

Attachments:
1. Caltrans BDCP Comment Letter July 5, 2013
2. BDCP EIR/EIS Review Document Comment Form

c: Scott Morgan, State Clearinghouse
Cassandra Enos-Nobriga, Department of Water Resources

BDCP1606

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY
EDMUND G. BROWN JR., Governor

DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-6053
FAX (510) 286-5559
TTY 711

Flex your power!
Be energy efficient!

July 5, 2013

BAG057

Mr. Russell Stein
Department of Water Resources
3500 Industrial Boulevard
West Sacramento, CA 95691

Dear Mr. Stein:

Bay Delta Conservation Plan - Administrative Draft EIR/EIS

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above project. As the lead agency, the Department of Water Resources (DWR) is responsible for all project mitigation, including any needed improvements to the state highway system (SHS). The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures. This information should also be presented in the Mitigation Monitoring and Reporting Plan of the environmental document. Since an encroachment permit is required for work in the state right of way (ROW), and Caltrans will not issue a permit until our concerns are adequately addressed, we strongly recommend that the DWR work with Caltrans to ensure that our concerns are resolved during the environmental process, and in any case prior to submittal of an encroachment permit application. Further comments will be provided during the encroachment permit process; see the end of this letter for more information regarding encroachment permits.

Transportation Management Plan and Construction Mitigation

1. Who will be responsible for implementing the Transportation Management Plan (TMP) and how will its conditions be enforced?
2. Please consider daily sweeping to remove dust and debris from the roadway, thereby, reducing the number of claims for broken windshields and flat tires.

Landscape Architecture

1. What effects will there be to highway planting and irrigation systems during construction and operation of the project?
2. If there are to be any staging areas located within the state ROW, the locations and impacts need to be addressed in the environmental document and plan sets.

ATTACHMENT 1

BDCP1601a

Soil and Geologic and Seismic Impacts
Hazards that require a special design to mitigate the hazard's effects to the public need to be considered as "Less than significant with mitigation." Please make the necessary corrections.

Traffic Impact Study (TIS), Highway Operations, and Trip Generation
1. Provide an analysis of all ingress/egress points to the project on the SHS during construction, operations, and maintenance. Analysis should also include nearby intersections to the SHS sections impacted.
2. Please include an analysis for trip generation and impacts to the SHS for when the project is operational. The analysis needs to include maintenance impacts.
3. Expand the discussion on "concentrated" access during construction to include additional mitigation measures to prevent overloading at access locations contributing to significant impacts.

Mitigation Measure TRANS-1b and TRANS-2a: Limit hours or Amount of Construction Activity on Congested Roadway Segments and Table 16, ID CT 51, Pipeline column, TRANS-2
Please explain how these measures will be enforced?

Transportation Permit
Project work that requires movement of oversized or excessive load vehicles on state roadways, such as US 101, State Route (SR) 29, or SR 121 requires a transportation permit that is issued by Caltrans. To apply, a completed transportation permit application with the determined specific route(s) for the shipper to follow from origin to destination must be submitted to the following address: Transportation Permits Office, 1823 – 14th Street, Sacramento, CA 95811-7119. See the following website link for more information: http://www/hq/traffops/permits/

Encroachment Permit
Please be advised that any work or traffic control that encroaches onto the state ROW requires an encroachment permit that is issued by Caltrans. To apply, a completed encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating the state ROW must be submitted to: Office of Permits, California Department of Transportation, District 4, P.O. Box 23660, Oakland, CA 94623-0660. Traffic-related mitigation measures should be incorporated into the construction plans during the encroachment permit process. See the website link below for more information. http://www.dot.ca.gov/hq/traffops/developserv/permits/

Please forward one hard copy and one CD of the environmental document, Updated Traffic Impact Study, Technical Appendices, and one complete set of full size plans as soon as they are available to Sandra Finegan, Associate Transportation Planner, Community Planning Office, Mail Station 10D, California DOT, District 4, P.O. Box 23660, Oakland, CA 94623-0660.

ATTACHMENT 1

BDCP1606

Please feel free to call or email Sandra Finegan at (510) 622-1644 or sandra_finegan@dot.ca.gov with any questions regarding this letter.

Sincerely,

ERIK ALM, AICP
District Branch Chief
Local Development – Intergovernmental Review

c: State Clearinghouse
Josh Pulverman, Caltrans Headquarters

ATTACHMENT 1

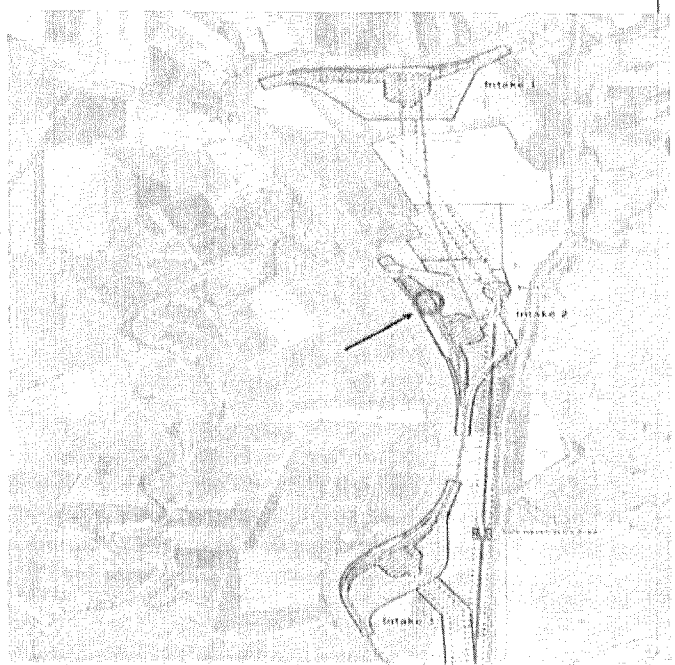
BDCP16006

bc: R Nashed, C Risden, P Lau, H Nikoui, J Gorham, R Tsung, J Finney, E Alm, S Finegan, chron file

BDCP EIR/EIS Review Document Comment Form

Document: ***Administrative Draft***

Comment Source: Caltrans
Submittal Date: 7/5/2013

#	Page #	Line #	Comment	Comment Source	Category	Assigned to	Summary/Direction
			Caltrans				
1.			Figures 17-3a-d: Please provide a visual simulation (from the red circle below) that shows a re-aligned SR 160 within an intake area (see map below). 	District 3	More information	ICF	Please see Figures 17-76a & b and 17-86a & b which include views of the intakes and road realignments near the intakes. The realignment is present in the simulations but may be difficult to distinguish as the road is fairly flat at these locations. The realignments provide access to the intakes. Access is set back in the simulations but both illustrate how the views from 160 would be affected. Figure 3-19 also shows a conceptual aerial view of what

DRAFT RESPONSE

ATTACHMENT 2

BDCP1606

							the realignment of SR 160 would look like.
2.	General		*Soil and Geologic and Seismic Impacts* – Hazards that require a special design to mitigate the hazard's effects to the public need to be considered as "Less than significant with mitigation." Please make the necessary corrections.	District 4	Significance Threshold	ICF	As design-level details will not be fully complete prior to NEPA/CEQA analysis for all potential soil hazards, decisions regarding levels of significance are based on the available information and mitigation available at the time of this review. Please see Section 10.3.1 – Methods for Analysis in Chapter 10 – Soils at page 10-21, lines 5-43 of the BDCP EIR/S Public Draft for a detailed explanation of the thresholds of significance for soil hazards and the analysis methods applied in the Public Draft EIR/S.
3.	General		*Transportation Management Plan and Construction Mitigation* – Who will be responsible for implementing the Transportation Management Plan (TMP) and how will its	District 4	Implementation responsibility	ICF	The BDCP project proponents, including DWR,

			conditions be enforced?				intend to coordinate with specifically Caltrans as well as other relevant agencies in developing and implementing the TMP.
4.	General		*Transportation Management Plan and Construction Mitigation* – Please consider daily sweeping to remove dust and debris from the roadway, thereby, reducing the number of claims for broken windshields and flat tires.	District 4	Add detail	ICF	The BDCP project proponents, including DWR, will direct the relevant contractors to perform these when existing roads are heavily used for construction traffic.
5.	General		*Traffic Impact Study (11S), Highway Operations, and Trip Generation* – Provide an analysis of all ingress/egress points to the project on the SHS during construction, operations, and maintenance. Analysis should also include nearby intersections to the SHS sections impacted.	District 4	Additional analyses	ICF	Roadway segments studied in the public draft EIR/S are inclusive of freeway entrances/exits that are likely to be utilized for construction-related activities and affected or utilized by personnel involved in maintenance and operation of the facilities following construction. The analysis has not

							been specifically broken out into these ingress/egress points, but if there are areas of specific interest, DWR engineers and the technical specialists are available to go over the results from these specific points. An intersection-level analysis was not performed because sufficient information regarding construction traffic patterns is not available for this level of analysis and it would be speculative and potentially misleading to assign construction related traffic by turning movement.
6.	General		*Traffic Impact Study (11S), Highway Operations, and Trip Generation* – Please include an analysis for trip generation and impacts to the SHS for when the project is operational. The analysis needs to include maintenance impacts.	District 4	Additional analyses	ICF	Impact TRANS-8 studies any impacts as a result of increased trip generation from the proposed

							alternative during operation and maintenance activities. Due to the assumptions shown in the chapter, a detailed trip generation study was not included in the Traffic Impact Study.
7.	General		*Traffic Impact Study (11S), Highway Operations, and Trip Generation* – Expand the discussion on "concentrated" access during construction to include additional mitigation measures to prevent overloading at access locations contributing to significant impacts.	District 4	Additional mitigation	ICF	Additional detail regarding measures to prevent overloading at access locations would most likely be included in the Traffic Management Plan and other proposed mitigation measures. This will be developed in greater detail as a part of the Mitigation Monitoring and Reporting Plan.
8.	General		*Landscape Architecture* – What effects will there be to highway planting and irrigation systems during construction and operation of the project?	District 4	impacts	ICF	There may be disruption to portions of highway planting and irrigations systems that lie within the

							construction footprint of the proposed project as described in Chapter 17. However, revegetation of disturbed areas would occur as a part of the project in accordance with guidance given by DWR's WREM No. 30a, Architectural Motif, State Water Project, and through coordination with local agencies through an architectural review process. Please also review Mitigation Measures AES-1a through 1g.
9.	General		*Landscape Architecture* – If there are to be any staging areas located within the state ROW, the locations and impacts need to be addressed in the environmental document and plan sets.	District 4	impacts	ICF	This analysis is broken out into various resource chapters as applicable. Each chapter fully examines the project's construction footprint and the

							areas impacted, including areas within the state ROW.
10.	General		The permanent and temporary realigned SR 160 are discussed within this chapter, but no figures are included to reference showing the location of each proposed permanent and temporary realignment. Either include a figure within this chapter or reference figures in other chapters that show this information.	District 3	Request figures	ICF	Permanent realignments are proposed at Intake locations. For visual simulations of SR160 realignments located near the proposed intake locations please see the Figures in Chapter 17 – Aesthetic and Visual Resources in the BDCP Public Draft EIR/S. Figure 3-19 also shows a conceptual aerial view of the proposed realignment of SR160.
11.	General		Throughout the document there are repeated examples of delayed mitigation because the proper impact studies have not been completed. The use of all mitigation measures referencing "good faith negotiations" need to be rewritten to identify the actual impacts on the facilities and specific remedies proposed. This is proposed as a project level EIR/EIS and lacks specificity in many areas where required. Should this really be a Program Level/Tier 1 document until which time adequate studies and quantifiable impacts can be determined?	District 6	Mitigation	Legal	Specific identification of mitigation measures incorporating this language would aid the responding parties in addressing the concern raised here. Specific mitigation is

							included where feasible. However, design-level details will not be available for all impacts until after completion of the NEPA/CEQA analysis. In those situations the project proponents have committed to mitigation, including consulting with appropriate local, regional and state agencies to determine necessary mitigation based on final design impacts.
12.	General		*Transportation Permit* – Project work that requires movement of oversized or excessive load vehicles on state roadways, such as US 101, State Route (SR) 29, or SR 121 requires a **transportation permit** that is issued by Caltrans. To apply, a completed transportation permit application with the determined specific route(s) for the shipper to follow from origin to destination must be submitted to the following address: Transportation Permits Office, 1823 – 14th Street, Sacramento, CA 95811-7119. See the following website link for more information: http://wwwlhq/traffops/permits/	District 4	Permit	DES	DWR acknowledges that transportation permits will be required and will forward the links and information from this comment to the appropriate BDCP implementation and permitting staff.
13.	General		*Encroachment Permit* – Any work or traffic control that encroaches onto the state ROW requires an **encroachment permit** that is issued by Caltrans. To	District 4	Permit	DES	DWR acknowledges that encroachment permits and

			apply, a completed encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating the state ROW must be submitted to: Office of Permits, California Department of Transportation, District 4, P.O. Box 23660, Oakland, CA 94623-0660. Traffic-related mitigation measures should be incorporated into the construction plans during the encroachment permit process. See the website link below for more information. http://www.dot.ca.gov/hq/traffops/developserv/permits/				encroachment permit applications will be required and will forward the links and information from this comment to the appropriate BDCP implementation and permitting staff.
14.	General		The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures. This information should also be presented in the Mitigation Monitoring and Reporting Plan of the environmental document	District 4	Mitigation	Legal	Please see BDCP Chapter 8 – Implementation Costs and Funding Sources and BDCP Appendix 8.A.6 – EIR/EIS Mitigation Measures for detail regarding contribution and financing responsibilities related to proposed mitigation measures. The Mitigation Monitoring and Report Plan continues to be developed and finalized and will be included in the Final

							BDCP EIR/S. This comment has been forwarded to the appropriate BDCP staff for consideration during finalization of the Plan.
15.	19-53	34	*Mitigation Measures* – Explain how Mitigation Measure Trans-1b will be enforced.	District 4	Explain	ICF	Contractors will be required to submit proposals as part of bid specifications demonstrating a process for determining how the hours of construction can feasibly be limited to avoid operational deficiencies on identified roadway segments as specified in Table 19-9.
16.	19-69	7-10	This is delayed mitigation and not acceptable under CEQA. Mitigation should not be conditional. BDCP proponents must come to an agreement with Caltrans on impacts and must do their best to minimized and mitigate before claiming the impacts to be significant and unavoidable.	District 6	Mitigation	Legal	The BDCP proponents are not relying on these mitigation measures for the purpose of reducing the impact to a less-than-significant level, as such there is no delayed mitigation. The BDCP

							proponents have committed as detailed in Mitigation Measures TRANS 2-a, TRANS 2-b and TRANS 2-c, to minimize and mitigate these impacts to a less than significant level where feasible.
17.	19-69	16-17	How do you exacerbate unacceptable pavement conditions to below acceptable thresholds.	District 6	clarify	ICF	The thresholds referenced here are LOS thresholds (see Table 19-7) which would be impacted should unacceptable pavement conditions be exacerbated by construction activity.
18.	19-69	26	*Mitigation Measures* – Explain how Mitigation Measure Trans-2a will be enforced.	District 4	clarify	ICF	Similar to Mitigation Measure Trans 1a, Contractors will be required to submit proposals as part of bid specifications that include prohibitions against construction traffic

							using roadway segments with pavement conditions below the thresholds identified. Implementation of this measure would prohibit all construction traffic on the physically deficient roadway segments listed in Table 19-10, if feasible.
19.	19-70	12-15	Good faith negotiations are only part of the requirements under CEQA and NEPA to avoid, minimize, and finally mitigate. There is no release of liability for mitigation simply because the proponent "feels" they have negotiated in "good faith" but could not reach an agreement.	District 6	Mitigation	Legal	The BDCP proponents are committed to mitigating impacts to pavement conditions to the extent feasible as stated in Mitigation Measure TRANS 2-c. However, the BDCP proponents recognize some of these measures may not be feasible and as such recognize these impacts as significant for the purposes of this EIR/S.

20.	19-81	6	"Policies" is misspelled as "polices". This misspelling occurs in many other sections of Chapter 19. Please do a global correction.	District 3	E	ICF	We could not locate this word at the location identified. Other references to 'polices' will be corrected prior to the final draft of the EIR/S.
21.	20-45		Impact UT-5: This section does not describe where the existing levee material under SR 160 will be disposed or re- used. It also does not describe where the material from the temporary SR 160 locations will be disposed once the re-aligned SR 160 is open to traffic.	District 3	provide information	ICF	Realigning SR 160 (permanent facility) at the proposed intake sites involves widening of existing levee sections. Therefore, the need for removal and disposal of existing levee materials would be minimal. The current plan for the temporary SR 160 is to leave the detour road in place once the permanent re-aligned facility is opened to traffic.
22.	20-52		Impact UT-7, Public Services: Please describe the impact of the temporary SR 160 on emergency services (law enforcement, fire protection, and emergency responders). Include mitigation measures, if necessary.	District 3	provide information	ICF	Impacts to emergency services resulting from roadway changes are addressed in Chapter 19 of the BDCP EIR/S. See

							Table 19-11 for a list of emergency routes identified within the Plan Area. See Mitigation Measure TRANS 1-C.
23.			Include the information from the October 26 2010 ISA completed for the BDCP, specifically regarding an aerially deposited lead (ADL) site investigation, standard specifications for stripe removal and disposal, the wooden posts of metal beam guard rail, and a Hazardous Materials Disclosure Document. A copy of the ISA is attached to this comment form.	District 3	provide information	ICF	The May 2009 Phase I Initial Site Assessment was incorporated in Chapter 24, Hazards and Hazardous Materials.

From: Farris, Carol@CalSTA <Carol.Farris@CalSTA.ca.gov>
Sent: Monday, July 28, 2014 4:12 PM
To: 'bdcp.comments@noaa.gov'
Subject: BDCP Comment Letter from the CA State Transportation Agency
Attachments: Carol Farris - Ryan Wulff - Draft Bay Delta Conservation Plan and Assoc ....pdf

The attached letter is from the California State Transportation Agency outlining its comments on the BDCP.

Please contact this office if there are questions. Thank you.

Carol Farris
Deputy Secretary for Policy Coordination
916-323-5401

BDCP1607

CaLSTA
CALIFORNIA STATE TRANSPORTATION AGENCY

Edmund G. Brown Jr.
Governor

Brian P. Kelly
Secretary

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July 28, 2014

BDCP Comments
Mr. Ryan Wulff
National Marine Fisheries Service
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814

Dear Mr. Wulff:

I am writing to submit comments from the California State Transportation Agency (CalSTA) on the Draft Bay Delta Conservation Plan (Plan) and associated Draft Environmental Impact Report (DEIR) and Draft Environmental Impact Statement (DEIS) SCH# 2008032062.

The Department of Transportation (Caltrans), one of our constituent departments, is also submitting comments addressing the Plan and certain effects on the state highway system. Overall, sustainability and environmental stewardship are key priorities for CalSTA and its departments, as we address the inter-related issues of transportation, land use, and the environment. In particular, CalSTA is involved in these issues as a member of the Delta Protection Commission. (Pub. Resources Code, § 29735, subd. (g).)

CalSTA supports the Plan, which represents a comprehensive conservation strategy for the Sacramento-San Joaquin Delta to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework. CalSTA looks forward to working with the Department of Water Resources and other agencies as this important project progresses.

Sincerely,

for Brian P. Kelly
Secretary

From: Minto, Brandon <Brandon.Minto@mail.house.gov>
Sent: Monday, July 28, 2014 4:06 PM
To: 'bdcp.comments@noaa.gov'
Subject: BDCP Comment submission from Congressman John Garamendi
Attachments: Congressman Garamendi BDCP Comments.pdf

Attached, please find Congressman Garamendi's BDCP comments for consideration in the EIR/ EIS and decision making process.

Thank you.

Sincerely,

Brandon Minto
Deputy District Director
Congressman John Garamendi, CA-03

BDCP1608

JOHN GARAMENDI
3RD DISTRICT, CALIFORNIA

ARMED SERVICES COMMITTEE
STRATEGIC FORCES SUBCOMMITTEE
TACTICAL AIR AND LAND FORCES SUBCOMMITTEE

TRANSPORTATION AND INFRASTRUCTURE COMMITTEE
RANKING MEMBER
COAST GUARD AND MARITIME TRANSPORTATION SUBCOMMITTEE
WATER RESOURCES AND ENVIRONMENT SUBCOMMITTEE

AGRICULTURE COMMITTEE
GENERAL FARM COMMODITIES AND RISK MANAGEMENT SUBCOMMITTEE

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July 28, 2014

BDCP Comments
Ryan Wulff, National Marine Fisheries Service
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814

Mr. Wulff:

Enclosed, please find my comments for consideration in the Final EIR/EIS and decision making process. Thank you for your consideration.

Sincerely,

JOHN GARAMEDNI
Member of Congress, CA-03

BDCP COMMENTS PREPARED BY CONGRESSMAN JOHN GARAMENDI

The range of alternatives evaluated for the Bay Delta Conservation Plan (BDCP) violate federal and state law and fail to adequately capture the variety of options that exist to meet the co-equal goals of water supply reliability and ecosystem restoration in the Delta. Fifteen different alternatives, all largely similar, are provided through the course of thousands of pages of documents, but none of them consider different solutions to addressing California's water needs. While experts will be able to point out a myriad of other short-comings to the BDCP, I will focus my comments on the need for a more diverse range of alternatives to be considered and what the alternatives should include.

FEDERAL LAW

Under the National Environmental Policy Act (NEPA), a range of alternatives that would meet the project's purpose and need must be evaluated. The Council on Environmental Quality (CEQ) has provided guidance on what this "range of alternatives" means as Environmental Impact Statements (EIS) are developed under NEPA:

> *The phrase "range of alternatives" refers to the alternatives discussed in environmental documents. It includes all reasonable alternatives, which must be rigorously explored and objectively evaluated.... Section 1502.14 requires the EIS to examine all reasonable alternatives to the proposal. In determining the scope of alternatives, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.* Counsel on Environmental Quality, Guidance document "NEPA Forty Most Asked Questions"

This guidance is clear that alternatives must represent a wide range of options that can be rigorously explored and objectively evaluated. The draft EIS fails to meet this requirement in several ways. First, it fails to provide a wide range of options that meet the purpose and need of the proposed action. The stated planning goals for the BDCP are to restore ecological functions of the Sacramento-San Joaquin Delta and improve water supply reliability in the state of California. Alternatives to meet these needs should include not only a conveyance facility, but also other actions and water projects that could be pursued to achieve water reliability. The alternatives in the draft EIS fall drastically short in this regard. Each of the fifteen alternatives includes the same two elements: a conveyance facility and habitat restoration. There is no discussion of water conservation measures or recycling projects or increasing storage capacity, all of which could be used to support water reliability.

Next, the draft EIS fails to rigorously explore the alternatives because the alternatives are inadequate. Building massive tunnels through the Delta is not the only option for creating water reliability, and there are plenty of other ideas out there for how reliability could be achieved. If

the range of alternatives identified do not include all options that could reasonably meet the purpose and need for the BDCP, then a rigorous review is impossible to achieve.

Finally, reasonable alternatives are those that are practical and feasible from a technical and economic standpoint, not just those that are desirable for the applicant. Proponents of the BDCP have one goal in mind – building tunnels to move water from the North to the South. These blinders have limited the scope of this project and the scope of alternatives put forth for analysis. For these reasons, this EIS violates federal law and fails to provide the required components for an EIS under NEPA.

STATE LAW

The current draft EIS/EIR also violates state laws governing the development of the project. First, the California Environmental Quality Act (CEQA) applies to state projects which can be defined as "an activity undertaken by a public agency or a private activity which must receive some discretionary approval from a government agency which may cause either a direct physical change in the environment or a reasonably foreseeable indirect change in the environment." Since building tunnels 40-feet wide and 40-feet long through the Delta will directly cause physical change, the state has prepared a Draft Environmental Impact Report (EIR) to comply with CEQA. However, draft EIRs must provide feasible alternatives or mitigation measures that could substantially lessen the significant environmental effects of the proposed project and this is where the state has failed. As previously mentioned, the alternatives offered in the draft EIR are not actual alternatives to the proposed project, they merely offer different sizes of conveyance systems without looking at alternatives that would actually lessen the environmental impact. Building tunnels, no matter what size, will have a major environmental impact. To comply with CEQA, the project proponents need to offer alternatives that would provide a reliable water supply through a variety of methods that extend beyond building a new conveyance system.

Second, in 2009, the Sacramento-San Joaquin Delta Reform Act became state law and mandated coequal goals for the Sacramento-San Joaquin Delta. These two goals are to provide a more reliable water supply for California and to protect, restore and enhance the Delta ecosystem. The Delta Stewardship Council (DSC) was created through the legislation and charged with the mission of developing and implementing a Delta Plan to achieve these goals. Rather than allowing the Delta Stewardship Council to complete it work in developing a Delta Plan, a group of independent stakeholders rushed ahead with the BDCP in an effort to find an easier way to export water from the Delta to the South under the guise of meeting the coequal goals. However, this narrow focus clearly fails to comply with the state law which states:

> *Providing a more reliable water supply for the state involves implementation of water use efficiency and conservation projects, wastewater reclamation projects, desalination, and new improved infrastructure, including water storage and Delta conveyance facilities.* (CA Water Code, Division 35, Section 85004(b))

A conveyance system is only one element to achieving water reliability, and any plan that is put into place should encompass the entire list above. Some may argue that this is just the first step

to achieving reliability, but that is the wrong approach. The Delta Reform Act goes on to discuss the need to reduce reliance on the Delta:

> *The policy of the State of California is to reduce reliance on the Delta in meeting California's future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency. Each region that depends on water from the Delta watershed shall improve its regional self-reliance for water through investment in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply efforts"*
> (CA Water Code, Division 35, Section 85021)

If we are going to reduce reliance on the Delta, a conveyance facility is not the first place we should start in developing a reliable water system, it is the last.

As a result, the BDCP as it stands does not meet the state's mandated goals and fails to offer any alternatives that even come close to meeting them. The only thing the BDCP does is to provide a conveyance facility that will potentially harm the Delta more than help it while providing no reliable water supply.

If the BDCP were truly committed to achieving the state's coequal goals, it would analyze a variety of options to help meet them. Just as the DSC's *Delta Plan*, the Department of Water Resources' *California Water Action Plan*, Congressman John Garamendi's *Water Plan for All of California*, and the Natural Resources Defense Council's *Portfolio-Based BDCP Conceptual Alternative* consider a wide range of actions that could be taken to provide water reliability, so should the BDCP consider actions beyond a new pumping facility and large underground tunnels. Each of the plans listed above discuss water conservation, recycling or desalination, and the creation of more storage as the means to achieving a reliable water supply. These elements are vital to our water future and by leaving them out of the BDCP's scope and planning, we are failing seek out the most economical and environmental option for our state and the Delta.

CONGRESSMAN JOHN GARAMENDI: A WATER PLAN FOR ALL CALIFORNIA

A Water Plan for All California was drafted to address the two co-equal goals of the Delta Reform Act, water reliability and Delta protection, and to provide an adequate alternative to the Bay Delta Conservation Plan as required under both NEPA and CEQA. Reliability is achieved by creating new water with agricultural, urban, and industrial water conservation; underground and surface storage; better management of Sierra and Siskiyou mountain watersheds; and improved Delta levees paired with a small 3,000 cfs conveyance facility in the Delta.

We need to think in a comprehensive way about water in California. The Bay Delta Conservation Plan (BDCP)[1] is an outdated and destructive plumbing system. It does not create any new water nor does it provide the water and the ecological protection that the Golden State must have. California and the federal government must set aside this big, expensive, destructive plumbing plan and immediately move forward with a comprehensive approach that includes:

1) Conservation,
2) Recycling,
3) The creation of new storage systems,
4) Fix the Delta - right sized conveyance, levee improvements, and habitat restoration,
5) Science driven process,
6) Protection of existing water rights.

This combination of projects constitutes a comprehensive water plan for the state and a viable alternative that should be evaluated. If California does all of these, we will create new water supplies and better use the resources we already have.

CONSERVATION

The quickest and cheapest source of new water is to stretch our current supplies by conserving what we have. Californians have been at this for years in our cities, in our industries, on the farm, and in our homes. We have engaged in serious water conservation, yet more can and should be done everywhere.

There are many conservation strategies. One conservation strategy is to use devices that measure the moisture in the soil to provide real time monitoring of the exact amount of water needed for ideal growing conditions. These devices are connected to a computer that automatically turns on just the right amount of water. These systems are in use and conserve at least ten percent with a financial payback in less than one year. If they were deployed widely perhaps at least 1 percent of the 30 million acre feet of water consumed by agriculture could be saved each year (300,000 acre feet).[ii]

All of us are going to do a lot more water conservation, not just the agriculture community. The water conservation mandate set by the state is a 20 percent reduction per capita by 2020 which equals 1,600,000 acre feet.[iii] In a very real way, conservation can create new water that was not previously available for use. To be on the conservative side, let us assume that just one quarter of the State's goal could be obtained in the next decade, thereby adding 400,000 acre feet of new water to our supplies each year.

RECYCLING

Can you name the fifth biggest river on the west coast of the Western Hemisphere? It's the water that flows out of the sanitation plants in Southern California and is dumped into the Pacific Ocean.

Why would any sane government take water from the Sacramento River, pump it 500 miles south, lift it 5,000 feet in the air, clean it, use it once, clean it to a higher standard than the day it arrives in Southern California, then dump it in the ocean? California does just this as it discharges over 3.5 million acre feet of water to the ocean each year, much of which could be reused.

We need to think seriously about recycling, not just in Southern California, but everywhere. The State of California currently recycles approximately 650,000 acre feet of water each year and has set a water recycling goal of 1.5 million acre feet of new water in California by 2020, and 2.5 million acre feet by 2030.[iv] While achievable, WateReuse California estimates this goal cannot be achieved without State regulatory changes to expand the types of recycling available that rely on existing technologies.[v]

Another option is desalination of the ocean. This is feasible and used extensively throughout the world, however it is not a viable option for all communities. It costs about 40 percent more to desalinate sea water than to recycle water using current technology. However, technological advances are being pursued for both recycling and desalination that could lower the costs of both.

In the next ten years, conservation and recycling in California can create approximately 2.2 million acre feet of new water to use each year, and that can increase to 3.2 million acre feet in twenty years. This is new water that is not available today because it is wasted or pumped out to sea. It can be developed at a reasonable cost when compared to all other alternatives that might be out there. Conservation and recycling are steps one and two in a comprehensive water program for California.

CREATE NEW STORAGE

Water storage south of the Delta is possible and necessary. The capacity of the great Delta pumps near Tracy is 15,000 cubic feet per second. They are designed to meet maximum demand south of the Delta. They do not operate year round, only when there is sufficient water in the Delta, when threatened fish are not near the pumps, and when there is agricultural and urban demand south of the Tracy pumps. There is very limited water storage capacity south of the Delta. We must build more. San Luis and Los Vaqueros reservoirs could be expanded. New dams could be built at Los Banos Grandes, Temperance Flats, and numerous smaller off stream sites throughout the San Joaquin Valley. There are extensive and numerous aquifers throughout the San Joaquin Valley that may prove suitable to store additional water that would be used in a conjunctive water management system. With these water storage facilities in place and a smaller cross Delta facility operating year round, the need for havoc causing, excessive pumping in the Delta could be avoided.

When coupled with recycling, the underground aquifers in Southern California are another key to our water future. The underground aquifers of the Santa Ana River in Orange County, the San Fernando Basin, Chino Basin, San Bernardino, San Gabriel Basin, and others have a combined capacity larger than Shasta Reservoir, the largest man made reservoir in the state. Today, some recycled water is put into the underground water basins to be stored for those inevitably dry years. When needed, it is pumped out, used, cleaned and returned to storage. On a larger scale this recycling system could create as much as 2.5 million acre feet of new water, and thereby reduce the need for shifting Colorado River supplies and imports from the Sacramento River.

Surface and underground storage should be used in a conjunctive water management program. Use the rivers when there is lots of water and use the reservoirs when there is little. Another way

to describe this strategy is "big gulp" and "little sips." When there are low flows in the Delta the system would take a little sip. When there is excessive water in the Delta, the system would take a big gulp, but there must be some place to put that water when the big gulp is taken. Therefore, the surface and sub-surface reservoirs south of the Delta become an essential element in a California water plan.

Water storage north of the Delta is also important, and three proposals are on the books today. An off stream reservoir at Sites, located west of Williams, has great promise for storage and for creating greater flexibility in managing the Sacramento River for salmon runs, water demand, and Delta outflow. This reservoir can deliver 500,000 acre feet of annual yield and the additional flexibility that it offers can under some scenarios save another 500,000 acre feet of water that would otherwise be released into the river systems.[vi] Raising Shasta Dam is also possible, as is better conjunctive management of the many aquifers in the Sacramento Valley. State and federal agencies have already commenced studies for these projects. A quick completion of these studies is essential.

FIX THE SACRAMENTO – SAN JOAQUIN DELTA

The current plan for the BDCP is a dual use facility with the main focus on the twin tunnels with a capacity of 15,000 cubic feet per second, and the continued use of the Delta channels for moving water from the Sacramento and San Joaquin rivers to the Tracy pumps. This dual use system adds another layer of risk to the eco-system and agricultural economy of the Delta with the potential for the massive tunnels to suck the Delta dry from the north and from the south with the thirsty pumps. In scale, the cost and destructive potential of this project will rival the Three Gorges Dam on the Yangtze River in China. The twin tunnel proposal is a large scale, destructive project that does not create one gallon of new water for a thirsty California.

The location of the intakes for the twin tunnels is in the heart of the rich farm lands of the northern Delta, near the small community of Courtland. Thousands of acres of valuable farmland essential to California agriculture production will be destroyed during construction of the project, and, following completion, a vast industrial zone of pumping stations, fish screens, reservoirs, and electrical stations will impede on one of California's great agricultural regions. Along the forty mile route of the twin tunnels the construction process will produce a total of 22 million cubic yards of tunnel muck. This combination of soil and conditioning agents will have to be stored and managed and the latest draft of the plan calls for storage areas along the tunnel ranging in size from 100 to 570 acres. The amount of muck extracted would be enough to cover 100 football fields to a height of roughly 100 feet, and in the end will destroy close to 1600 acres of farm land while disrupting domestic and agricultural water wells.

A SOLUTION FOR THE DELTA

Go forward carefully; start small; use science to evaluate each step; then proceed to the next step. Remember the Delta is a unique and precious environmental asset. We must take care of it. A narrowly focused plumbing system like the BDCP will not achieve progress in creating a water supply sufficient for California's future. We must pursue a holistic, comprehensive approach that will achieve a bigger bang for our buck.

First, reduce demand on the Delta with steps one, two and three: water conservation, recycling, and strategic use of storage facilities. Use the "Big Gulp, Little Sip" pumping strategy. Move forward with the flood plain and fresh and saltwater marsh habitat improvements. Repair and improve the key Delta levees. Evaluate the effect on the Delta as these projects come on line. Then, and only if necessary, proceed with a conveyance system that is much smaller and with a reduced capacity to destroy.

A much smaller facility with a capacity of no more than 3,000 cubic feet per second could be built to deliver water from the Sacramento River to the Tracy pumps. With the normal minimum flows in the Sacramento River above 15,000 cfs, a small 3,000 cfs facility could operate at least 300 days in most years, delivering approximately two million acre feet of water south to the pumps at Tracy where it would be pumped south to the new and expanded storage facilities.

There are several alternative ways to build this smaller system. One alternative is found with a careful look at the Delta map which reveals that two thirds of this Delta friendly system is already built. Two miles from the State Capital is the Port of Sacramento and the shipping channel that ends 25 miles south near Rio Vista. From there it is thirteen miles to existing channels and the Tracy pumps. The Federal Government already owns the land along the river where an intake and fish screen could be built, allowing 3000 cfs of Sacramento River water to enter the channel and flow south to a shipping lock at the southern end of the channel. Then, pumps could deliver the water into a short 12-mile pipe beneath the Sacramento and San Joaquin Rivers and into the existing Delta channels that lead to the Tracy Pumps. The threatened Delta fish could be protected by sealing the channel from the Delta. Such a smaller facility is less costly than two 40-foot diameter, 40-mile long tunnels that devastate large swaths of the Delta and put the entire Delta at risk.

It is correct that this smaller facility like the twin tunnels is insufficient to quench the thirst of the Southern water contractors. This is where the southern reservoirs and the "Little Sip, Big Gulp" strategy comes into play. In normal water years there is sufficient water in the Delta to allow the pumps to take a big gulp of two million acre feet of water. This amount together with the two million acre feet delivered through the 3,000 cfs facility and the new water developed from conservation and recycling efforts could add up to six million acre feet. This plan would create far more new water than will ever be available with the current BDCP plan, which in its current state creates nothing new, except new destruction.

IMPROVE DELTA LEVEES

This small 3,000 cfs proposal and the current twin tunnel BDCP proposal envision the continued use of the existing Delta levee system as water conveyance channels for the delivery of water to the big pumps at Tracy. However, the BDCP has neither a plan nor funding for the maintenance of the levees that are crucial for their proposed water conveyance system. The Delta levees must be upgraded and maintained if water is to be transported through the Delta and if the Delta agriculture, infrastructure, ecology and people are to be protected.

No sane homeowner would go fifty years without maintaining their plumbing system. For more than fifty years, the Bureau of Reclamation and the California Department of Water Resources have used the Delta levees as a plumbing system to deliver water from the Sacramento River to the Tracy pumps. Yet, they have spent virtually no money maintaining these critical levees, the failure of which could shut down water deliveries for an extended period of time. The Federal and State agencies have relied upon the local reclamation agencies to do the repairs, literally giving the exporters a free ride. When a levee does give way and an island is flooded, it is the local agency and federal and state governments that foot the bill to repair the levees, often at a much greater cost than would have been necessary with basic maintenance.

Legislation is necessary to require that the Federal and State water contractors, who have for years and will continue for even more years depended upon the Delta levees for the delivery of water to their fields and cities, pay a part of the levee maintenance cost.

HABITAT RESTORATION

The BDCP envisions restoring flood plains and the salt and freshwater marsh habitat of the Delta in an effort to restore the fisheries. However, a series of questions are raised: where to do it, how much to do, what type, at what cost and who is to pay for the restoration? Those who have created the ecological problem should pay for the restoration of the problem. All this will require careful attention to science, and a careful balance between competing goals. Current science indicates that no amount of habitat restoration can compensate for the damage done to fish from excessive water exports.

LET SCIENCE DRIVE THE PROCESS

The BDCP and any other proposal must be based and driven by quality science that measures and informs decisions. California and federal law require that the Delta aquatic and terrestrial ecosystems be protected. We must do so, not just because the laws demand it, but because our status as human beings on this planet demands that we pay attention and protect precious and rare ecosystems. Also, healthy ecosystems provide a valuable asset to our communities because healthy ecosystems help to ensure we have healthy water. If we let the ecosystems fall by the wayside, our water will get dirtier making it increasingly difficult and costly to clean it up enough to use. For all of these reasons, we must let science govern.

The BDCP anticipates 50-year permits from state and federal agencies to allow incidental takes of endangered fish species. Once granted, the water exporters will have assurances that the project can take covered species and pump Delta water despite changes in the environment. To date, BDCP has not built in flexibility to address the inevitable changes that will occur and the damage that could be done if the plan does not account for climate change.

We must also use science to understand our river basins in the age of climate change. Dams on California Rivers serve multiple purposes of water storage, flood protection, electric power generation, recreation, and environmental river flows. Current dam operations on California Rivers place flood protection as the first priority followed by water storage. The decisions to release water to create greater flood storage are based on the average river flows compiled from

the last 60 years. Climate change and resulting river flow change is certain and one can only imagine how rare it will be for the historic average to actually occur.

We have the technology today to better understand what is happening, in real time, in every river basin in this state. Satellites and unmanned aircraft using infrared and ground sensing radar, together with terrestrial stations collecting soil conditions, snow temperature and moisture content coupled with telemetry will soon be deployed in the American River basin. Collecting this data and using it in real time to predict river flows allows for better operation of the dams so that additional flood storage capacity could be available by lowering the reservoir ahead of the storm or keeping water in the reservoir if a major storm is heading for a different river basin or if it is a cold snow storm. Using the best science can simultaneously deliver increased flood protection and greater water storage.

PROTECT WATER RIGHTS

Soon after gold was discovered in California, the miners discovered that water could be used to separate gold from gravel and soon after, the right to the water flowing in the rivers became as valuable as the gold. Today, water is California's gold. The classic water war in California is usually about one group attempting to take another group's water. It is reasonable to view the current BDCP conflict in this way: southern exporters taking water belonging to northern water right holders and water necessary for the aquatic river environment. Any water plan that ignores the prior and existing water rights is destined to be embroiled in a vicious and contracted water war. If a project is to be built, then existing rights must be honored.

CONCLUSION

California and the federal government must evaluate adequate alternatives to the BDCP which must include a comprehensive water plan for California. The current proposal will fail to create water reliability through its limited scope and I urge the project proponents to consider additional alternatives. Creating new water is the best possible way to ensure California's water needs are met and the adopted project plan should include conservation, recycling, and storage among a variety of other items. This is the only way to expand the dwindling resource we currently have.

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[i] California, Department of Water Resources and Natural Resources Agency, *The Bay Delta Conservation Plan* Draft Chapters, March 2013 <http://baydeltaconservationplan.com/Library/DocumentsLandingPage/BDCPDocuments.aspx>.

[ii] PureSense: Real Time Irrigation Management, *New Technologies to Enhance Agricultural Water* Management, March 2013 <http://www.puresense.com/>.

[iii] California, State Water Resources Control Board, *20X2020 Agency Team Questions and Answers*, 2 June 2008, <http://www.swrcb.ca.gov/water_issues/hot_topics/20x2020/docs/questions_answers.pdf,>.

[iv] California, Department of Water Resources, *California Water Plan Update 2009, Integrated Water Management Bulletin 160-09*, Vol. 2, Chapter 11, 2009 <http://www.waterplan.water.ca.gov/cwpu2009/index.cfm>.
[v] WateReuse Research, *Meeting California's Water Needs and Goals through an Unprecedented Initiative: Advancing Direct Potable Reuse*, Capitol Hill briefing materials, March 2013.
California, Department of Water Resources, *California Water Plan Update 2009, Integrated Water Management Bulletin 160-09*, Vol. 2, Chapter 11, 2009 <http://www.waterplan.water.ca.gov/cwpu2009/index.cfm>.
[vi] Sites Project Joint Powers Authority, *North-of-the-Delta Off Stream Storage Fact Sheet*,<www.sitesjpa.net>.

From: Mike Reagan <mike@solagra.com>
Sent: Monday, July 28, 2014 3:53 PM
To: BDCP.comments@noaa.gov
Cc: Barry Sgarrella
Subject: SolAgra Corporation's Comment Letter to BDCP/EIR-EIS
Attachments: SolAgra BDCP-EIR-EIS Comment 07 25 2014-signed.pdf

Mr. Wulff,

This email transmits **SolAgra's West Delta Intake Plan ("WDIP")** a viable alternative plan that, under both NEPA and CEQA, requires study. We believe this Plan is far superior to the studied Bay Delta Conservation Plan ("BDCP") alternatives.

Our plan employs proven technologies used in innovative ways to create 2.4 Million Acre-Feet of new fresh water per year that will be available **irrespective of drought** conditions in the State. This new fresh water will be produced and conveyed using renewable electrical energy produced by SolAgra's proposed Ryer Island solar power plant.

In contrast to the BDCP, SolAgra's alternative project would allow the San Joaquin and Sacramento River water to flow completely through the Delta to the point immediately before the fresh water naturally blends with the salt water (brackish water) from Suisun Bay. We propose to capture the fresh river water just before it blends with brackish water and move that water from a pumping plant located on publically owned land on Sherman Island to Bethany Reservoir where it will begin its journey via the State Water Project through the California Aqueduct, as it has since 1960. During times of drought conditions, the reduced levels of fresh water that naturally flow toward Sherman Island in the San Joaquin and Sacramento Rivers will be augmented by desalinating the brackish water that naturally occurs near the southern end of Sherman Island. The combination of fresh and desalinated brackish water (that is available in virtually unlimited quantities) will provide larger quantities of cleaner, fresher water to Bethany Reservoir than has ever been historically provided via the State Water Project.

SolAgra has reviewed the BDCP EIR-EIS that is currently proposed The 40,000 page EIR-EIS document lists significant **UNMITIGATABLE CONSEQUENCES**. We believe our SolAgra West Delta Intake Plan would pose an environmentally and economically superior alternative

Please see the attached SolAgra Comment Letter to the BDCP EIR-EIS for additional details of the SolAgra West Delta Intake Plan.

SolAgra will be sponsoring briefings for Legislators and other stakeholders and interested groups in late August and throughout September. If you have questions that are not answered by the attached Comment Letter or other comments, please email either me or Barry Sgarrella, CEO of SolAgra, at the emails above.

Thank you!

Mike Reagan
Vice President, SolAgra
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July 28, 2014

SENT VIA EMAIL (BDCP.comments@noaa.gov)

Mr. Ryan Wulff
National Marine Fisheries Service
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814

RE: Comments on Draft Bay Delta Conservation Plan and Associated Draft Environmental Impact Report/Environmental Impact Statement

Dear Mr. Wulff:

These comments are submitted in relation to the Bay Delta Conservation Plan Alternative 4 ("BDCP") and associated draft Environmental Impact Report/Environmental Impact Statement ("EIR/EIS"). Any project, and particularly a project of the magnitude proposed here, must fully consider alternatives to minimize take of endangered species and means to avoid these and other significant environmental impacts. To better accomplish the tasks for which the BDCP was designed, construction of water intakes in the west Delta should be considered. The SolAgra West Delta Intake Plan (WDIP), could be powered by 100% renewable resources from our locally proposed Ryer Island Solar Power Plant, and augmented by power from the existing nearby Rio Vista wind farms. This alternative would better preserve natural river flows and maintain water quality in the Delta while simultaneously supporting export water supply needs and minimizing or avoiding many of the significant environmental impacts of implementing the BDCP identified in the Draft BDCP and EIR/EIS. As explained below, SolAgra would like to discuss our proposed solution with the BDCP proponents.

Why is SolAgra Interested in the Delta and the BDCP?

SolAgra Corporation is a California Corporation that develops utility-scale renewable energy power plants. SolAgra holds a 40-year lease on 2,422 acres of Ryer Island that SolAgra intends to use for the development of a 720 MW solar energy production facility. This facility will pair sustainable agriculture beneath

the solar arrays, using a patent-pending method of "solar double cropping" technology known as SolAgra Farming. This technology is currently being beta tested and peer reviewed by U.C. Davis, Plant Sciences Department under the auspices of Dr. Heiner Lieth. Dr. Lieth is a leading expert in this field and his team at U.C. Davis has already completed successful testing of this concept.

The SolAgra project will also develop an energy storage system capable of storing up to 640 MW of electrical power that can be used to time-shift the power delivery to a time when normal solar power is not available due to lack of sunlight. SolAgra has secured the use of depleted natural gas wells beneath its leased land to provide necessary subterranean storage for its Compressed Air Energy Storage ("CAES") System and other patent-pending energy storage technologies of its own design. SolAgra also has the right of first offer to purchase up to 6,202 acres on Ryer Island to expand the total electrical power production capability to 1,800 MW.

Since SolAgra's Ryer Island Solar Power Plant will also sustain agriculture beneath the solar arrays, the continued need for good quality irrigation water in sufficient quantities on Ryer Island is essential. The salinity barriers proposed by the Department of Water Resources ("DWR") for Steamboat and Sutter Sloughs, would devastate agricultural operations on Ryer Island. The potential that this high salinity level could continue, and be exacerbated due to the upstream diversions proposed by the new BDCP intakes on the Sacramento River is unacceptable to farming operations on Ryer Island and to many other rich agricultural areas of the Delta that rely on the Sacramento River to successfully produce crops for California and the nation.

SolAgra has studied the EIR/EIS for the BDCP as well as the many comments that have been submitted to date. While we agree that the water problems that have plagued California for more than 100 years require changes, we are convinced that the BDCP is not a solution.

Since the beginning of construction of the State Water Project ("SWP") in the 1950s, California has been guilty of "serial engineering". This means undertaking solutions that are not completely thought-out, reasoning that "the end justifies the means" OR "let's get the water flowing south and we'll worry about the consequences later." "Later" has now arrived and the consequences are dire. Each new engineering solution attempts to improve a disastrous condition created by the previous "solution." This is also the case with the currently proposed BDCP.

Many critics of the BDCP have stated their concerns regarding the currently proposed BDCP and their disbelief at the scope and cost of the proposal — both environmentally and fiscally. These comments allege that the current draft BDCP plan and EIR/EIS are inadequate and will require remedial research, re-coordination and recirculation prior to project approval. However, few alternatives to BDCP have been offered. The SolAgra approach provides an alternative that would better restore Sacramento River flow pathways and volumes, with significant resulting benefits to local residents, farmers, native fish species and other wildlife in the Delta while continuing to meet export water supply needs for the rest of California.

What Exactly is SolAgra Proposing?

The SolAgra proposal calls for the fresh water of the Sacramento River to flow to near its natural endpoint, where it mixes with the brackish water flows between Sherman Island and Chipps Island near the Antioch Bridge. (See Exhibit 1.) This is the perfect location to capture significant quantities of fresh river water before it mixes with the inexhaustible supplies of sea water that arrive by tidal flow from San Francisco, San Pablo and Suisun Bays. By installing a blending/treatment plant that is capable of blending inflows from the Sacramento and San Joaquin rivers, with the brackish waters of Sherman Lake, and filtering/desalinating this "custom blended" brackish water from multiple intakes around Sherman Island; the treatment and desalination (using reverse osmosis and later a far more efficient graphene desalination technology) will easily provide the 2.4 million Acre-Feet/year of fresh water that is currently shipped through the SWP in a "good water year." This new, clean water that is created on Sherman Island will be pumped through a single, smaller tunnel that is 19 miles long (See Exhibit 2), versus the twin tunnels proposed by the BDCP that are each 38 miles long and are proposed to be over 40 feet in diameter! Since this new water will be fish-screened and pre-filtered at Sherman Island, it can completely bypass the Clifton Court Forebay and the Banks Pumping Plant for processing, and be pumped directly to Bethany Reservoir where it will begin its gravity flow into the California Aqueduct.

By modularizing the pumping and desalination plants at Sherman Island, water taken directly from the Sacramento or San Joaquin Rivers that has not yet mixed with the brackish tidal flows, can be filtered (if necessary) and pumped directly into the tunnel for the journey to Bethany Reservoir. To augment the flow of fresh river water in years of limited river flow due to drought or other issues,

the desalination plant adjacent to the pumping / filtration plant can be increased in volume operation to add desalinated water to make up for the limited fresh water that is coming down river. This separation of processing functions allows the efficiency of both processes to be operated at peak efficiency, while still accomplishing the end result of producing 2.4 Million Acre-Feet/year of fresh water for introduction into the SWP. THIS WATER CAN BE ADDED TO WATER FLOWS THAT ARE CURRENTLY BEING PUMPED AT THE BANKS PUMPING PLANT TO EQUAL OR EXCEED THE VOLUME PROPOSED BY THE BDCP.

This new approach to dual-conveyance means that existing operations of the CVP and SWP will continue as they operate today **during normal rain years**. In drought years, rather than continuing to pump 2.4 million acre-feet/year OR MORE (per BDCP) and thereby decreasing the flow down the Sacramento River, thus allowing salinity levels to move up river – as they are doing today – we advocate that Banks Pumping Plant pump less water, thereby allowing more of the limited available fresh water to flow completely through the Sacramento & San Joaquin Rivers to Sherman Island. There it will be picked up filtered and/or desalinated as necessary, combined with the Bay water that arrived from the west on flood tides and then pumped at a rate of 2.4 million acre-feet/year to Bethany Reservoir for introduction into the SWP. The combination of these conveyances and the introduction of 2.4 million Acre-Feet/year from Sherman Island provides as much (or more) than the up to 9,000 cfs (6.5 million acre-feet/year) that is proposed by the BDCP. **The SolAgra WDIP alternative accomplishes that task without the environmental, economic and social impacts of the BDCP.**

During times of high river flow, the "big gulp" advocated by the BDCP can still be accomplished by pumping more through Banks AND by using Sherman as a pumping plant (only), since no desalination will be required during times of high fresh water flows. This will obviously require Central Valley Project ("CVP") water contractors to develop sufficient storage south of the Delta to provide reserves for lower precipitation years.

By modularizing the pumping plant(s) at Sherman, we can pump fresh water directly into the tunnel that goes from Sherman Island to Bethany Reservoir, desalinate the incoming tidal brackish water from Sherman Lake and then pump that water into the tunnel. This selectivity increases the efficiency of the entire system by transferring the fresh water directly and desalinating only the brackish water. Desalinating brackish water is far more efficient than

desalinating sea water, so the entire concept capitalizes on Sherman Island as the perfect location in the State to accomplish this task.

Electrical power needed for the desalination and pumping of water can be provided by the SolAgra Solar Power Plant proposed for Ryer Island, without interrupting or impacting the electrical power balance in the State. The State's power balance is currently impacted by the permanent closing of the San Onofre Nuclear Generating Station. The newly created Ryer Island green solar power can be delivered to the adjacent Grand Island Substation and transmitted directly to Sherman Island via the existing Brighton-Grand Island 115KV power corridor. Unlike the BDCP-proposed project, no new power corridors must be created or power rights-of-way acquired. Additional power may also be obtained from the windfarms west of Rio Vista. That power can be transmitted via the Birds Landing/ Contra Costa 230 KV transmission corridor that runs from the Montezuma Hills wind farms (west of Rio Vista) directly through Sherman Island. There would be no need to create new power corridors, obtain new power rights-of-way or otherwise increase environmental impacts from construction of new transmission corridors.

Why should BDCP Proponents Consider the SolAgra Alternative?

The SolAgra approach solves all of the major problems associated with the creation and transmission of water via the SWP without incurring many of the un-mitigatable consequences and expenses in the North Delta alternative that is enumerated in the EIR/EIS for the BDCP. We believe the SolAgra WDIP alternative could accomplish the task for **less than half the projected cost and in less than half the time of the BDCP**.

Rather than juggling and moving existing water from place-to-place via a bureaucratic scheme, the SolAgra proposal would create 2.4 million acre-feet/ year of new, fresh water for the SWP that California has never had previously. This new water would be created each and every year - IRRESPECTIVE OF DROUGHTS, tidal flows, sea levels or other weather conditions or anomalies. Under the SolAgra proposal, the CVP conveyance through the existing system can remain in place, avoiding unaffordable water rate increases that would make commercial agriculture less fiscally sustainable – creating a true "dual conveyance" solution – with new water supplies while providing reliable and higher quality water to the SWP in accordance with state law. This new water can be produced using green power, with no requirement to build additional fossil fuel power plants, nuclear plants, or to import "brown"

power from other states that typically burn coal to generate electricity. The SolAgra WDIP also better restores the eco-balance in the Bay-Delta than the alternatives studied in the current draft BDCP and associated EIR/EIS while equaling or exceeding the water quantities projected by the BDCP with far less environmental impact.

The SolAgra WDIP alternative is part of a reasonable range of alternatives that should be considered. Critically, the SolAgra alternative would reduce several of the significant and unavoidable impacts on the environment caused by the proposed BDCP project. The requirement to consider a reasonable range of alternatives and the ability of the SolAgra alternative to avoid or reduce significant impacts is discussed in more detail below.

A Reasonable Range of Alternatives Includes Water Supply Intakes in the West Delta

The BDCP review process is required to consider an adequate range of alternatives under CEQA, NEPA and the ESA. Under CEQA, an EIR must "describe a range of reasonable alternatives to the project. . . which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." (14 Cal. Code Regs., § 15126.6(a).) "[T]he discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." § 15126.6(b). In its screening and review of alternatives, the EIR must provide more than "cursory" analysis. (*PCL v. DWR* (2000) 83 Cal. App. 4th 892, 919.) An EIR should not construe project objectives so narrowly that only the proposed project could conceivably be capable of achieving them.

Under NEPA, the alternatives section "is the heart of the environmental impact statement." The alternatives section should "sharply" define the issues and provide a clear basis for choice among options by the decision-maker and the public. (40 C.F.R. § 1502.14.) The EIS alternatives section must "[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated." (40 C.F.R. § 1502.14(a).) If "a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion. The agency shall

make every effort to disclose and discuss at appropriate points in the draft statement all major points of view on the environmental impacts of the alternatives including the proposed action." (40 C.F.R. § § 1502.9(a).)

Under the ESA, a conservation plan submitted in support of an incidental take permit application must include "Alternative actions the applicant considered that would not result in take, and the reasons why such alternatives are not being utilized." (Habitat Conservation Planning and Incidental Take Permit Processing Handbook (1996), p. 3-10, citing 16 U.S. C. § 1539(a)(2)(A)(3), 50 C.F.R. §§ 17.22(b)(1), 17.32(b)(1), and 222.22.) HCPs must also include, among other things, information regarding the applicant's plan to "minimize and mitigate" the impacts likely to result from incidental takes. (16 U.S.C. § 1539(a)(2)(A)(ii).)

We understand that an EIR need not study in detail an alternative that is infeasible or that the lead agency has reasonably determined cannot achieve the project's underlying fundamental purpose. (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 574 ["a project alternative which cannot be feasibly accomplished need not be extensively considered"].) Moreover, a "potentially feasible alternative that might avoid a significant impact must be discussed and analyzed in an EIR so as to provide information to the decision makers about the alternative's potential for reducing environmental impacts." (*Habitat & Watershed Caretakers v. City of Santa Cruz* (2013) 213 Cal. App. 4th 1277, 1304 [striking down EIR for failure to consider any alternative that would reduce the project's effect on the city's water supply].) The SolAgra approach could achieve the fundamental purposes of the BDCP **and** reduce significant environmental impacts, and should therefore be considered.

With the exception of Alternative 9, the BDCP EIR/EIS evaluates only variations on the common theme of adding an isolated conveyance from the North Delta to the existing export facilities in the South Delta, referred to as Conservation Measure ("CM") 1. There is also virtually no variation in CMs 2-21 among the project alternatives, which are the remaining so-called "conservation measures" in the BDCP aimed at species recovery. (EIR/EIS, Table 3-1.)

Three years ago the National Academy of Sciences declared in reviewing the then-current version of the draft BDCP: "Choosing the alternative project before evaluating alternative ways to reach a preferred outcome would be post hoc rationalization – in other words, putting the cart before the horse. Scientific reasons for not considering alternative actions are not presented in the plan." (*National Academy of Sciences* Report in Brief (May 5, 2011), p. 2.) This

problem has still not been corrected. Early in the BDCP planning process, there was a decision to focus on new north Delta diversions on the Sacramento River as the primary means to meet the objectives of the BDCP participants. (BDCP Appendix 3A, pp. 3A9-3A-11.)

Moreover, to achieve the objectives, purpose and need of the BDCP, a frank and detailed study of alternatives is required. The BDCP should include alternatives that actually provide water supply reliability, restore the Delta ecosystem, and improve water quality for both exporters and in-Delta users. Such a goal is included the 2009 Delta Reform Act, which directs the State as a whole to: "Achieve the two coequal goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place." (Wat. Code, § 85054.) The Delta Stewardship Council can only accept the BDCP into the Delta Plan if, and only if, the BDCP has studied a reasonable range of conveyance alternatives (Wat. Code, § 85320, subd. (b)(2)(B)), among other requirements. If the BDCP does not meet these requirements, it cannot be included in the Delta Plan and it will otherwise be non-compliant with State law.

Several alternatives have been proposed publically to date, but not adequately studied as alternatives in the BDCP.[1] The Western Delta Intakes Concept ("WDIC") is the closest alternative given any consideration in the BDCP EIR/EIS to that proposed by SolAgra. (BDCP Appendix 3A, Section 3A.11.4.) The WDIC would relocate the principal point of diversion for exports from the South Delta to the West Delta. Water surplus to upstream and in-Delta needs and the Delta outflow required to sustain fisheries would be extracted through permeable embankments on Sherman Island and then conveyed through large tunnels to Clifton Court Forebay for subsequent export.

The principle objective and benefits of this intake relocation would be:

- To restore more natural flows through the Delta both in pattern and quantity, supporting the retention of X-2 at its historical range, contributing

[1] Another such alternative is the Environmental Water Caucus, which has proposed a "Responsible Exports Plan" that calls for reducing exports from the Delta, implementing stringent conservation measures but no new upstream conveyance. This Plan prioritizes the need for a water availability analysis and protection of public trust resources that would comply with EPA statements indicating that more outflow is needed to protect aquatic resources and fish populations. (http://www.ewccalifornia.org/reports/responsibleexportsplanmay2013.pdf.)

to the recovery of natural breeding and feeding grounds for aquatic species of concern and more capable of coexisting with the increased minimum Delta outflow requirements that EPA, the State of the Estuary Report, the State Water Board and many other analyses have clearly shown would be required to restore the Bay-Delta and its fisheries;

- To improve both in-Delta and export water quality, rather than improving export water quality at the expense of in-Delta water quality; and
- To avoid significant impacts to North Delta communities, water supplies, and flood control facilities.

A western delta intake location thus should be considered. The EIR/EIS describes how a concept similar to what SolAgra proposes, referred to as the "Pyke Proposal", was not carried forward for further analysis. (EIR/EIS, Appendix 3A, pp. 3-89 to 3-92.) A point by point rebuttal to the coverage of the WDIC is provided in Appendix A to the comments of Dr. Pyke on the draft BDCP, dated May 26, 2014, and is not repeated here. The EIR/EIS primarily dismisses the WDIC over concerns of water quality affecting export reliability. (BDCP EIR/EIS, Appendix 3A, p. 3-91.) However, the SolAgra WDIP alternative addresses this issue by proposing to directly pump fresh water when available from the Sacramento River into the tunnel for immediate conveyance, and to only desalinate water from the WDIP as necessary. The SolAgra alternative also avoids the creation of a Sherman Island Forebay that was severely criticized due to the large volume of mass excavation that was required to create it. By processing incoming fresh and brackish water in real time, the need for a forebay on Sherman Island is eliminated.

The BDCP EIS/EIS, however, does not consider the possibility of providing water treatment – desalination – at the WDIP location. Though energy demand can be a limitation on the feasibility of desalination, in this case, solar powered filtration/desalination and pumping into the west delta operational facilities could convey newly created fresh water from Sherman Island to the SWP's Bethany Reservoir. This would be the best destination because the SWP primarily serves urban water users that require higher quality water. In summary, variations of the WDIC proposal, including that proposed by the SolAgra WDIP, meet project objectives and are feasible, and therefore must be considered.

How Would a Western Delta Intake be More Likely to Receive Take Authority <u>and</u> Meet Project Objectives?

One of the many barriers to the proposed BDCP project is the ability to be permitted as both a state and a federal habitat conservation plan. However, the primary objective of the BDCP – obtaining incidental take permits – may not be met in view of the BDCP's failure to produce an effects analysis that can meet minimum requirements of state and federal law.

For instance, the benefits to listed species are uncertain at best for BDCP. For instance, the current public review draft of the BDCP shows that implementation of the BDCP could potentially imperil nine key species including salmon, Delta smelt and greater sandhill cranes.[2] A plan that imperils the very species it seeks to cover is unlikely to receive needed permits under the state and federal endangered species acts. These species are imperiled by factors such as the reduction in freshwater flows in the Sacramento River, entrainment in the new and existing SWP/CVP pumps, and by the major land use changes brought about by the conversion/creation of tidal habitat in presently dry areas.

The ability of the restoration components of the BDCP to function as planned is also severely doubtful. As indicated in the March 2014 Delta Science Program Independent Review Panel Report - BDCP Effects Analysis Review, Phase 3:

> *The net effects analysis tends to overreach conclusions of positive benefits for covered fish species, given the inability to quantify the over-all net effects and the realization of high uncertainty. In particular, it does not adequately defend conclusions regarding the net effects of habitat restoration. Restoration of tidal wetlands (and other communities) is highly uncertain and at least an extremely long process. The Effects Analysis does not adequately justify the critical assumption of the benefit of tidal wetland restoration as a food web subsidy for covered pelagic fish given the uncertainties of tidal wetland restoration itself. A critical issue is the implicit expectation that restoration activities will result in increases in abundance of lower trophic levels, but it is uncertain whether the resulting increased production will result in food web pathways supporting covered species. . . .*

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[2] See article by Matt Weiser, *Fate still unclear for nine species in Delta water tunnel plan* (December 18, 2014), available at: http://www.sacbee.com/2013/12/18/6009767/fate-still-unclear-for-nine-species.html Species include Longfin smelt, Delta smelt, Winter Spring and Fall Chinook salmon, Green sturgeon, White sturgeon, Steelhead and Greater sandhill crane.

(BDCP Effects Analysis Review, Phase 3, p. 7, available at: http://deltacouncil.ca.gov/sites/default/files/documents/files/Delta-Science-Independent-Review-Panel-Report-PHASE-3-FINAL-SUBMISSION-03132014_0.pdf.)

The shoreline lengths along Sherman Island and the difference in water properties that can be obtained by water inflows that are taken along various segments of the Sacramento River, San Joaquin River and the brackish water flows in the Sherman Lake area allow the installation of multiple, low-flow intakes rather than the few high volume intakes proposed by the BDCP's North Delta intake plan. Multiple low-flow intakes, with lower probability of fish take, have a higher probability of approval. By providing water supply in a less environmentally damaging manner that preserves the natural flow of the Sacramento River, the SolAgra WDIP Alternative is more likely to be permitted as a state and federal conservation plan than the BDCP.

What Significant Effects Could be Avoided with the SolAgra Alternative?

TheSolAgra WDIP alternative would reduce or avoid significant impacts identified in the EIR/EIS, as well as reduce or avoid impacts that the EIR/EIS has either failed to address or inaccurately characterized as less than significant. A few of those impacts are discussed below. With proper review and analysis as a project alternative, additional environmental and other benefits of the SolAgra alternative would be determined in greater detail.

Agricultural Resources and Delta Communities

By reducing the freshwater flow through the Delta that is normally provided by the Sacramento River, the BDCP will significantly degrade water quality for more senior - Delta agriculture and municipal/industrial intakes, as well as for species of concern. Removal of fresh water inflows from the Sacramento River is expected to result in several significant and unavoidable water quality exceedances for which only inadequate mitigation is proposed. (BDCP EIR/EIS, Chapter 8.) These water quality impacts will reduce or eliminate agricultural productivity in an area that currently has excellent water quality. Relocation of intakes to Sherman Island would avoid local water supply impacts while also providing higher quality water to the SWP.

Additionally, the BDCP "conservation measures" require up to 150,000 acres of productive, agricultural land to be acquired, converted, restricted or

otherwise impacted. This conversion of productive agricultural land to aquatic habitat can be more generically described as: **"flooding precious farmland"**. (BDCP, Tables 3-4, 6-2, 8-1.) Under the SolAgra WDIP alternative, less than 1,000 acres of grazing land would be used to construct the Pumping & Desalination facilities on Sherman Island. PLUS, the indirect effects on agriculture from changes in salinity and water levels in the north Delta from operation of the BDCP's proposed Sacramento River intakes would be completely avoided. Moreover, the SolAgra alternative would not require any agricultural land conversion to accommodate experimental restoration projects to create mitigation for the **unavoidable environmental consequences** described in the EIR/EIS for the BDCP.

Construction of the BDCP - CM1 tunnels, in particular, would bring about major changes to north Delta communities and landscapes. **With the SolAgra alternative, impacts to the historic communities in the North Delta would also be entirely eliminated.** Sherman Island is already largely in public ownership. Much of the land is grazing land. This makes conversion of a small percentage of its land area for use for water pumping, processing, desalination and limited storage far less disruptive than what is proposed under BDCP Alterative 4.

Greenhouse Gas Emissions

In the SolAgra alternative, construction and operational greenhouse gas ("GHG") emissions would also be significantly reduced and 100% offset by production of green power at Ryer Island.

The EIR/EIS discloses that the BDCP would produce over 1.7 million metric tons of GHG during an estimated 9 year construction period for the Dual Conveyance Tunnels. (EIR/S, Table 22-94.) An additional 161 metric tons of GHG emissions would be emitted every year under operation of the proposed project. (EIR/S, Table 22-96.)

This calculation understates the actual amount however, as the Draft EIR/EIS presents a (global warming potential) GWP for methane ("CH_4"), of 21 over a 100-year time horizon. Yet, the IPCC updated the GWP for methane to 25 over a 100-year time horizon[3] and the EPA updated its GHG reporting rule in

[3] IPCC, Fourth Assessment Report: Climate Change 2007; http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html.

2013.[4] The EIR/EIS should rely on the most recent scientific consensus for GWPs published by the IPCC.

Construction GHG emissions under the SolAgra approach would be significantly reduced primarily due to a single, smaller, pressure tunnel that is less than half the length of that proposed in the BDCP Alternative 4. The SolAgra tunnel from Sherman Island to Bethany Reservoir would be the size of a normal transit (subway) tunnel for which Tunnel Boring Machines ("TBMs") are readily available. The dual tunnels proposed by the BDCP are so large that they would require the invention and creation of TBMs of a size that have never been previously built. GHG emissions during construction of the SolAgra tunnel would be more than offset by the production of Renewable Energy Credits (carbon credits) generated by the operation of the Ryer Island Solar Power Plant that provides power to operate the Sherman Island pumping/ desalination plants. Ultimately, the SolAgra alternative would actually reduce GHG emissions rather than increase them. Continued operation of the pumping/ desalination facilities during the entire life of the project at Sherman Island would be accomplished using 100% green power, making the SolAgra alternative an environmental benefit rather than the environmental deficit created by the BDCP.

The EIR/EIS incredibly assumes reduced GHG emissions under project operations by assuming that DWR will reduce GHG emissions statewide by compliance with its Climate Action Plan ("CAP"), and that no mitigation is necessary, even though operation of the tunnels would add approximately 1,405 GWh of additional net electricity demand each year. (EIR/EIS, pp. 22-43, 22-263.) Direct provision of renewable energy for the SWP would be a superior approach.

The transmission of 2.4 million acre-feet/year from Sherman Island to Los Vaqueros Reservoir at elevation 475 feet for ultimate delivery to Bethany Reservoir at elevation 244 feet would provide the opportunity to install a hydro-electric power plant just above Bethany Reservoir that would produce enough green hydro-electric energy to power many of the pumping plants along the California Aqueduct that currently are powered by "brown" power from local utilities. Using the SolAgra concept at Sherman Island, the California Aqueduct

[4] EPA, 40 CFR Part 98, [EPA-HQ-OAR-2012-0934; FRL-9902-95-OAR], RIN 2060-AR52, 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements, November 15, 2013, Table 2, page 21; http://www.epa.gov/ghgreporting/documents/pdf/2013/documents/2013-data-elements.pdf.

could become "self-powered" using the pumping pressure of the water flow from the pumping/desalination plant that is also powered by green solar power.

Conclusion

Thank you for considering the information in this comment letter. We strongly suggest that the SolAgra WDIP alternative, and any other reasonable variations, be fully analyzed as viable alternatives to the BDCP in the recirculated BDCP Plan and its associated EIR/EIS. The SolAgra WDIP alternative, and other local innovations, can comprise workable, 21st Century solutions that meet water supply objectives without compromising the environmental and economic values of the Delta without burdening our children and future generations with 50 years of unnecessary debt. Let's provide future generations with good water from sustainable resources at a reasonable price.

We welcome the opportunity to discuss the SolAgra WDIP in greater detail.

Sincerely,

Barry Sgarrella
Chief Executive Officer
SolAgra Corporation

Exhibits:

1. Ryer Island to Sherman Island Map – POWER PATH - showing the location of the proposed Ryer Island Solar / CAES project, existing Montezuma Hills Wind Farms and proposed Sherman Island Pumping & Desal
2. Sherman Island to Bethany Reservoir Map – WATER PATH - showing the proposed Sherman Island Pumping & Desal Facility, a potential path of the Conveyance Tunnel from Sherman Island to Bethany Reservoir, including the possibility of creating hydro-electric power from the pressure head created by the flow from Las Vaqueros Reservoir to Bethany Reservoir.
3. Northern California Power Map – showing the 115 KV power corridor from Ryer Island to Sherman Island and Barker Slough desal facilities, plus the 230KV power corridor from the Montezuma Hills Wind Farms to Sherman Island, and a table showing calculations comparing various elements & power required (for the SolAgra WDIP alternative compared to BDCP Alt 4 proposal)

cc:

The Honorable Governor Jerry Brown
State Capitol, Suite 1173
Sacramento, CA 95814

John Laird, Secretary
California Natural Resources Agency
1416 Ninth Street, Suite 1311
Sacramento, CA 95814

Mark Cowin
Director, California Department of Water Resources
P.O. Box 942836, Room 1115-1
Sacramento, CA 94236-0001

Chuck Bonham
Director, California Department of Fish and Wildlife
1416 9th Street, 12th Floor Sacramento, CA 95814

The Honorable Sarah "Sally" Jewell
Secretary, U.S. Department of the Interior
1849 C Street, NW, Room 6156
Washington, DC 20240

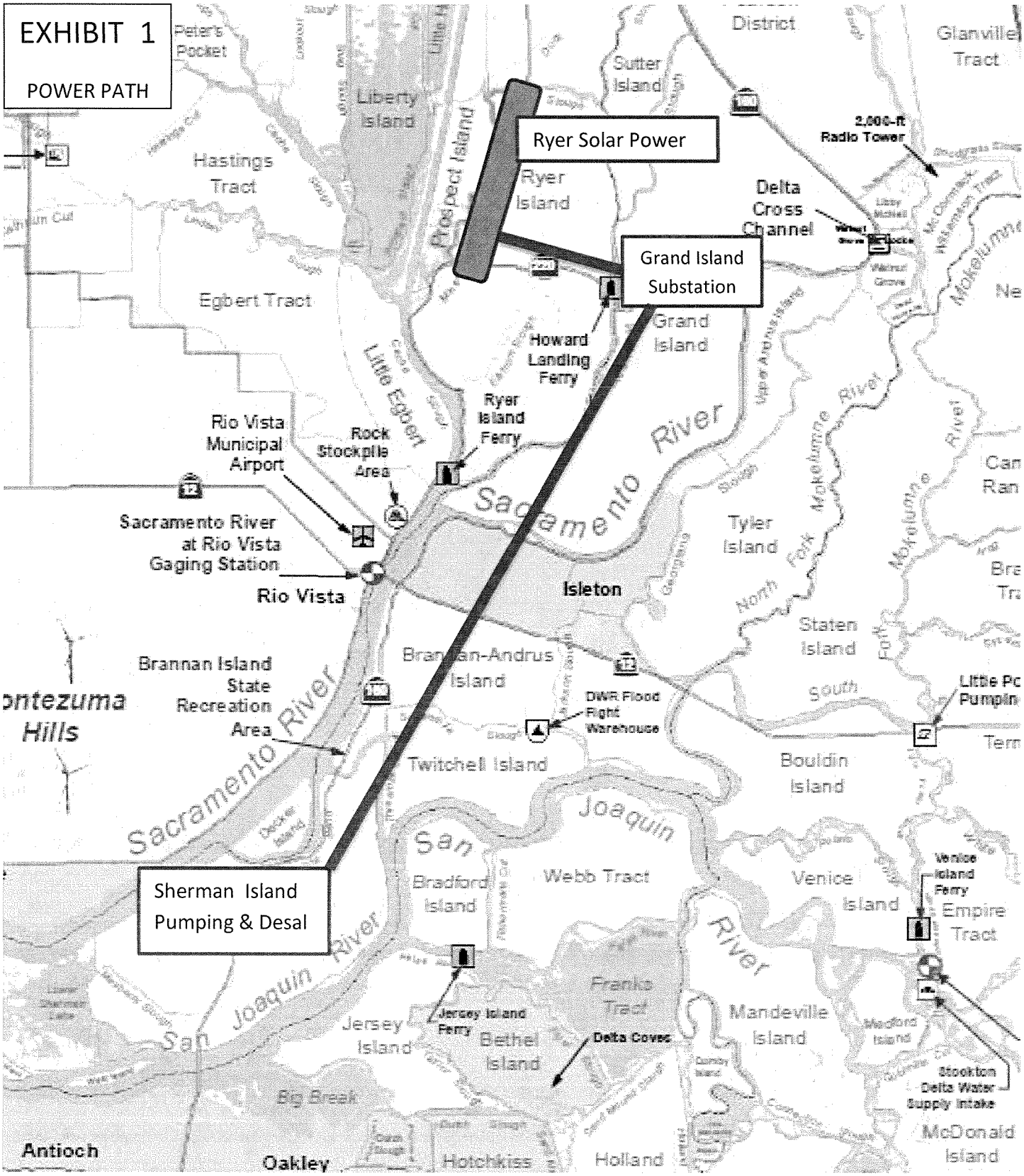
Ren Lohoefener
Regional Director, U.S. Fish and Wildlife Service
2800 Cottage Way
Sacramento, CA 95825

The Honorable Penny S. Pritzker
Secretary, U.S. Department of Commerce
1401 Constitution Avenue, NW
Washington, DC 20230

The Honorable Regina A. "Gina" McCarthy
Administrator, U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW, Room 3000
Washington, DC 20460

Will Stelle
Regional Director, National Marine Fisheries Service
7600 Sand Point Way, NE, Bldg. 1
Seattle, WA 98115-0070

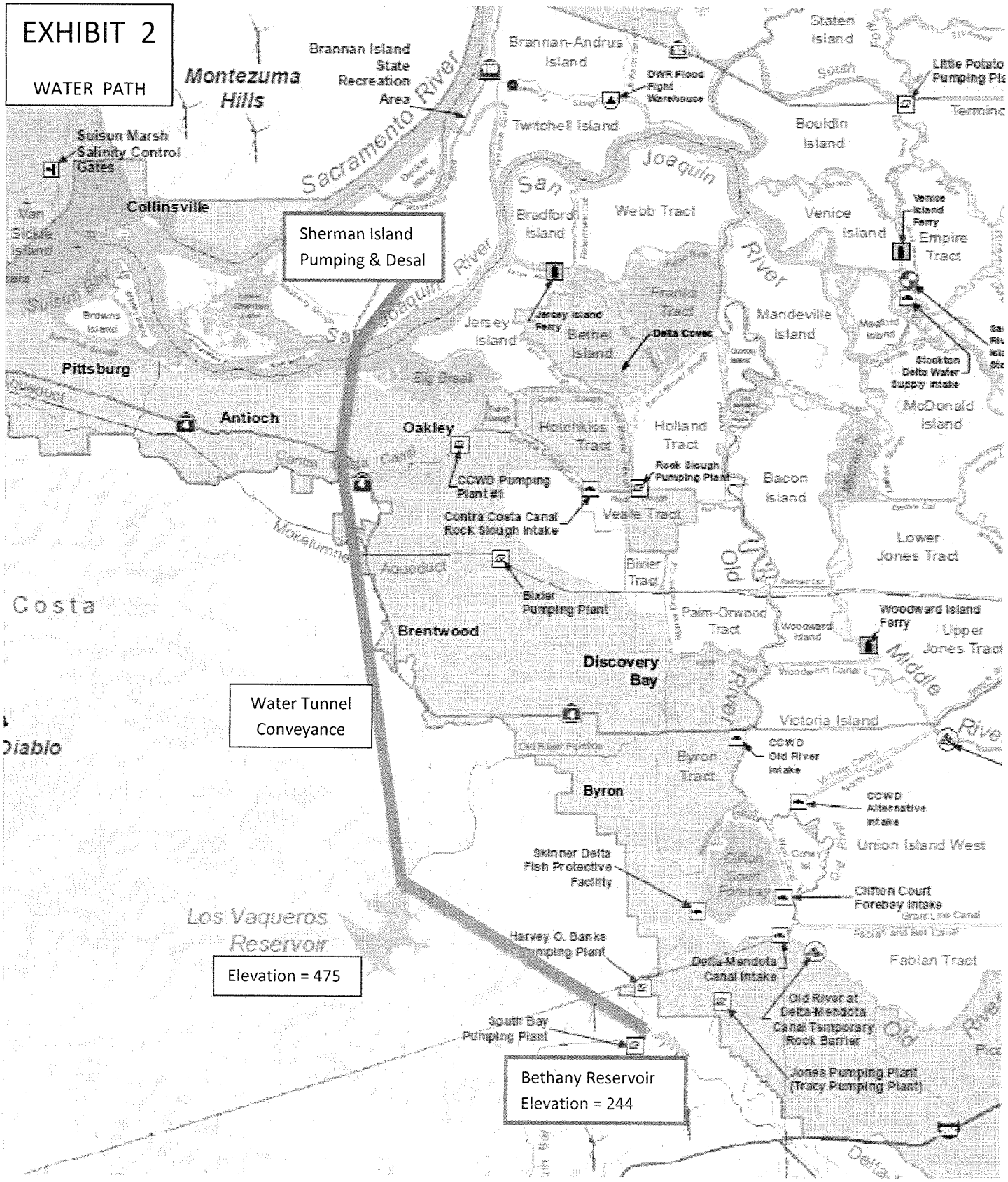
BDCP 1609



RYER ISLAND to SHERMAN ISLAND

Electrical Power Corridor

BDCP1609



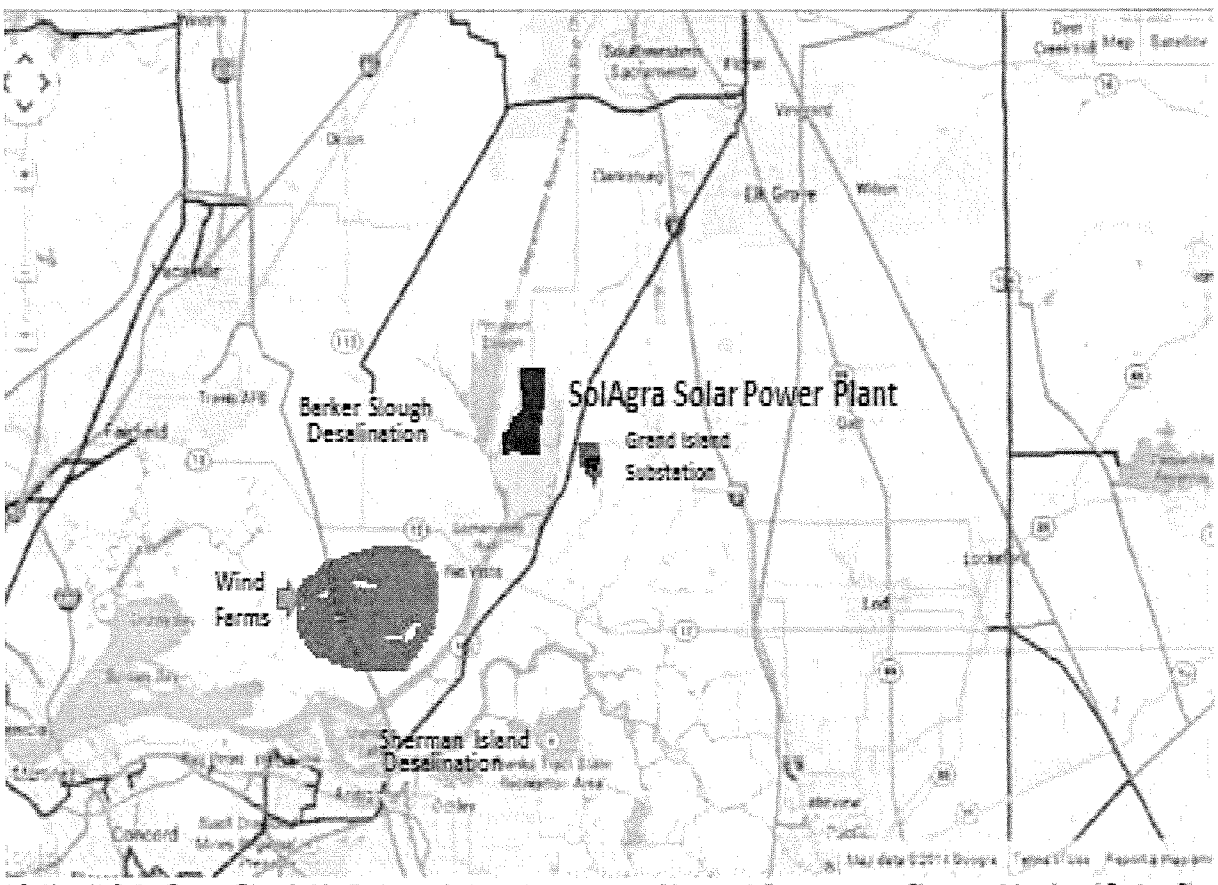
SHERMAN ISLAND to BETHANY RESERVOIR

Water Tunnel Conveyance

BDCP1609

EXHIBIT 3
POWER GRID

Northern California Power Grid:



SolAgra's Solar Power Plant is ideally located along the power corridors to deliver power to Sherman Island and Barker Slough

Purple lines - 115 KV Transmission Corridors from Grand Island to Sherman Island & Barker Slough

Aqua lines - 230 KV Transmission Corridors from Wind Farms thru Sherman Island

Estimated Annual Energy Demand and Annual Energy Production Table

	SolAgra Energy Production Capability	West Delta Intake Plan Pumping & Desalination	BDCP - Alternative 4 Energy Demand
Diversion & Delivery	5,256 GWh	669 GWh	1,405 GWh
Desalination		1,105 GWh	N/A
Unmitigated CO2e Emissions	0	0	161