

NOTICE OF PREPARATION
ENVIRONMENTAL IMPACT REPORT FOR THE NORTH BAY
AQUEDUCT ALTERNATIVE INTAKE PROJECT
CALIFORNIA DEPARTMENT OF WATER RESOURCES

To: Responsible Agencies and Interested Parties

The California Department of Water Resources (DWR) proposes to implement the North Bay Aqueduct Alternative Intake Project (NBA AIP or proposed project) to improve water quality and reliability of State Water Project (SWP) deliveries to its contractors, the Solano County Water Agency (SCWA) and the Napa County Flood Control and Water Conservation District (Napa County FC&WCD).

To satisfy California Environmental Quality Act (CEQA) requirements (California Public Resources Code Section 21000 et seq.), DWR, the “Lead Agency” under CEQA, has determined that the proposed project may have significant impacts on the environment and that an Environmental Impact Report (EIR) will be required. This Notice of Preparation (NOP) for the proposed NBA Alternative Intake Project EIR is issued pursuant to Section 15082 of the State CEQA Guidelines.

DWR is soliciting the views of interested persons, organizations, and agencies regarding the scope and content of the environmental information in connection with the proposed project. In addition, each responsible agency shall provide DWR with specific detail about the scope, significant environmental issues, reasonable alternatives, and mitigation measures related to each responsible agency’s area of statutory responsibility that must be explored in the EIR. In accordance with CEQA Guidelines Section 15082(b)(1)(B), responsible and trustee agencies should indicate their respective level of responsibility for the project in their response.

Responsible and trustee agencies under CEQA may include: The U.S. Army Corps of Engineers (Corps); U.S. Fish and Wildlife Service (USFWS); National Marine Fisheries Service (NMFS); California Department of Fish and Game (CDFG); Central Valley Flood Protection Board; Central Valley Regional Water Quality Control Board (CVRWQCB); State Water Resources Control Board (SWRCB); State Lands Commission; California Department of Boating and Waterways; and the California Department of Conservation.

All comments received will be made available for public review in their entirety, including the names and addresses of the respondents. Individual respondents may request that their name and/or address be withheld from public disclosure, which DWR will honor to the extent allowable by law. If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment.

This NOP will be circulated for a public response period beginning November 24, 2009 and ending January 8, 2010. At the end of the public response period, DWR will consider all comments received from interested persons, organizations, and agencies in preparing the environmental analysis to be included in the EIR.

Three scoping meetings will be held to receive agency and public comments at the following times and locations:

Monday, December 7, 2009

2 to 4 pm
Bonderson Building
Hearing Room
901 P Street
Sacramento, CA 95814

Wednesday, December 9, 2009

6 to 8 pm
Fairfield Senior Center
1200 Civic Center Drive
Fairfield, CA 94533

Monday, December 14, 2009

6 to 8 pm
Bartley Cavanaugh Golf Course
8301 Freeport Boulevard
Freeport, CA 95832

Please submit your comments at the earliest possible date, but no later than 5 p.m. on January 8, 2010. Written comments on the scope of the EIR should be sent to:

Department of Water Resources
Attention: Rashid Ahmad, Room 538-6
1416 Ninth Street
P.O. Box 942836,
Sacramento, CA 95814
rahmad@water.ca.gov

The following information includes project background, project objectives, a preliminary project description and a summary of possible environmental effects anticipated to be evaluated in the EIR. Comments received on the NOP, received in writing or provided at the scoping meetings could identify additional potential environmental impacts to be evaluated in the EIR.

NORTH BAY AQUEDUCT ALTERNATIVE INTAKE PROJECT

Summary

The California Department of Water Resources (DWR) proposes to construct and operate an alternative intake on the Sacramento River, generally upstream of the Sacramento Regional Wastewater Treatment Plant, and connect it to the existing North Bay Aqueduct (NBA) system by a new segment of pipe. The proposed alternative intake would be operated in conjunction with the existing NBA intake at Barker Slough. The proposed project would be designed to improve water quality and to provide reliable deliveries of State Water Project (SWP) supplies to its contractors, the Solano County Water Agency (SCWA) and the Napa County Flood Control and Water Conservation District (Napa County FC&WCD).

The following provides information on the project background, proposed project objectives and description, the proposed project's relationship to the Bay-Delta Conservation Plan (BDCP), and potential environmental effects proposed to be evaluated in the Environmental Impact Report (EIR).

Project Background

Existing Facilities

The NBA is operated by DWR as part of the SWP, delivering wholesale water to the SCWA and Napa County FC&WCD. The 27.6 mile NBA extends from Barker Slough (a tributary slough) in the Sacramento-San Joaquin Delta (Delta) to the end of the Napa Turnout Reservoir. Water is pumped from the Delta at the Barker Slough Pumping Plant (BSPP), which is located seven river miles upstream from the confluence of Barker Slough with the Sacramento River in southeast Solano County (see Figure 1). Water is then diverted to the Travis Surge Tank where it flows by gravity through the NBA to the Cordelia Pumping Plant. Deliveries are made to Travis Air Force Base and the cities of Fairfield and Vacaville through turnouts between the Travis Surge Tank and the Cordelia Pumping Plant. The North Bay Regional Water Treatment Plant (NBRTP) treats water delivered to the cities of Fairfield and Vacaville. Two of the Cordelia Pumping Plant's three discharge pipelines serve the cities of Benicia and Vallejo, with the third carrying water to the Napa Turnout Reservoir. At the Napa Turnout Reservoir, three turnouts deliver water to the City of American Canyon and the City of Napa, which in turn uses its facilities to deliver water to the City of Calistoga in Napa County. Together, SCWA and Napa County FC&WCD have an existing water supply entitlement through the NBA of 131,181 acre-feet per year (AFY) based on existing contracts and water right settlements.

Facility Limitations

Water Quality

As identified above, water is currently pumped from the Delta at the BSPP in Barker Slough. Water quality in Barker Slough becomes degraded during and after rainfall events; therefore, water quality can be reduced through the entire winter and spring (during the rainy season). The Barker Slough drainage basin is characterized by grazing lands, erodible soils and urban uses. Rainfall runoff can include elevated levels of coliform bacteria and organic matter (grazing and agricultural uses), turbidity (soil erosion), and a range of pollutants associated with runoff from urban areas. These constituents have proven difficult to remove through typical watershed best management practices. The generally poor water quality from the drainage basin drains to Barker Slough and then is pumped from the BSPP to the service areas. The water is difficult and costly to treat in order to meet drinking water standards.

In addition to water quality limitations, Barker Slough provides habitat to both State and federally listed species (including delta smelt and longfin smelt). In 2000, the CALFED Record of Decision (ROD) concluded that relocation of the NBA intake out of Barker Slough was part of a comprehensive solution to improve the Delta because it would alleviate impacts to critical habitat, including that of the delta smelt and longfin smelt in the Cache Slough Complex.

Pumping Restrictions

In 2008, the USFWS issued a biological opinion (BO) for preservation of delta smelt populations that reduced the total SWP annual diversion at the BSPP to 71,000 AFY (USFWS, 2008). In 2009, an Incidental Take Permit (ITP) issued by CDFG for the preservation of longfin smelt populations imposed further pumping restrictions at the BSPP of a maximum of 50 cfs (7-day average flows) during dry and critical dry years from January 15 to March 31 (CDFG, 2009). In addition to pumping restrictions imposed by the 2008 USFWS delta smelt BO and the 2009 CDFG longfin smelt ITP, in June 2009, NMFS issued a BO that included determinations for winter and spring-run Chinook salmon, Central Valley steelhead and North American green sturgeon of the southern distinct population segment (DPS) (NMFS, 2009).

State and federal agencies working on ways to improve the Delta ecosystem and water supply conveyance, including work under the BDCP, have identified the Yolo Bypass and Cache Slough Complex as important wetlands restoration opportunity areas. In September 2009, the BDCP released an Aquatic Habitat Restoration Map and Draft Conservation Strategy that shows tidal marsh restoration targets within the Yolo Bypass/Cache Slough Area (BDCP, 2009a and 2009b). Specific restoration and enhancement sites may not be identified until plan implementation. Implementation of these developing strategies will likely support increases in delta smelt, longfin smelt and salmonid populations in the Barker Slough area. The increased presence of these listed species could result in further pumping restrictions at the BSPP as resource agencies work to balance ecosystem restoration and water supply delivery goals.

As noted above, pumping at the BSPP is limited due to restrictions included in the BOs and the ITP to protect fisheries in Barker Slough. Increasing diversions to meet future water supply delivery amounts based on existing contracts and water right settlement at the BSPP would face additional significant limitations.

Water Supply Delivery Limitations

The NBA pipeline section from the BSPP to the NBRTP has a design capacity of 175 cubic feet per second (cfs). However, the system can only deliver a maximum of about 140 cfs due to thick bio-film growth on the interior of the NBA pipeline which has resulted in reducing the effective diameter of the pipe.

SCWA and Napa County FC&WCD project that by 2030 they will need the NBA to deliver their total water supply of 131,181 AFY (compared to current withdrawal of 71,000 AFY). To meet projected future demand, required peak flow through the NBA is estimated at 240 cfs (compared to current capacity of 140 cfs due to hydraulic limitations).

To address water quality concerns in Barker Slough, reduced capacity and reliability of the BSPP and the NBA pipeline, and endangered species concerns in the Delta, DWR proposes to construct an alternative intake for the NBA system at the Sacramento River and a new segment of NBA pipeline that would be operated in conjunction with the BSPP as described below.

Project Objectives

The purpose of the proposed project is to provide long-term water quality improvements and water supply reliability for deliveries to SCWA and Napa County FC&WCD through the NBA. The proposed project would also provide operational flexibility to reduce effects on listed species and critical habitat in Barker Slough and at the location of the proposed alternative intake.

Project objectives are:

- Improve water quality of deliveries to SCWA and Napa County FC&WCD;
- Increase water supply reliability for SCWA and Napa County FC&WCD to meet future water supply demands (up to existing contracts and water rights settlements);
- Provide system flexibility in the event of a planned or unplanned operational interruption; and
- Reduce effects on sensitive species located in the project area.

Project Description

DWR proposes to construct and operate an alternative intake on the Sacramento River and a new segment of NBA pipeline that would be operated in conjunction with the BSPP. The proposed project would include the following facilities:

- A new alternative intake structure and pump station on the Sacramento River with state-of-the-art, positive barrier fish screens;

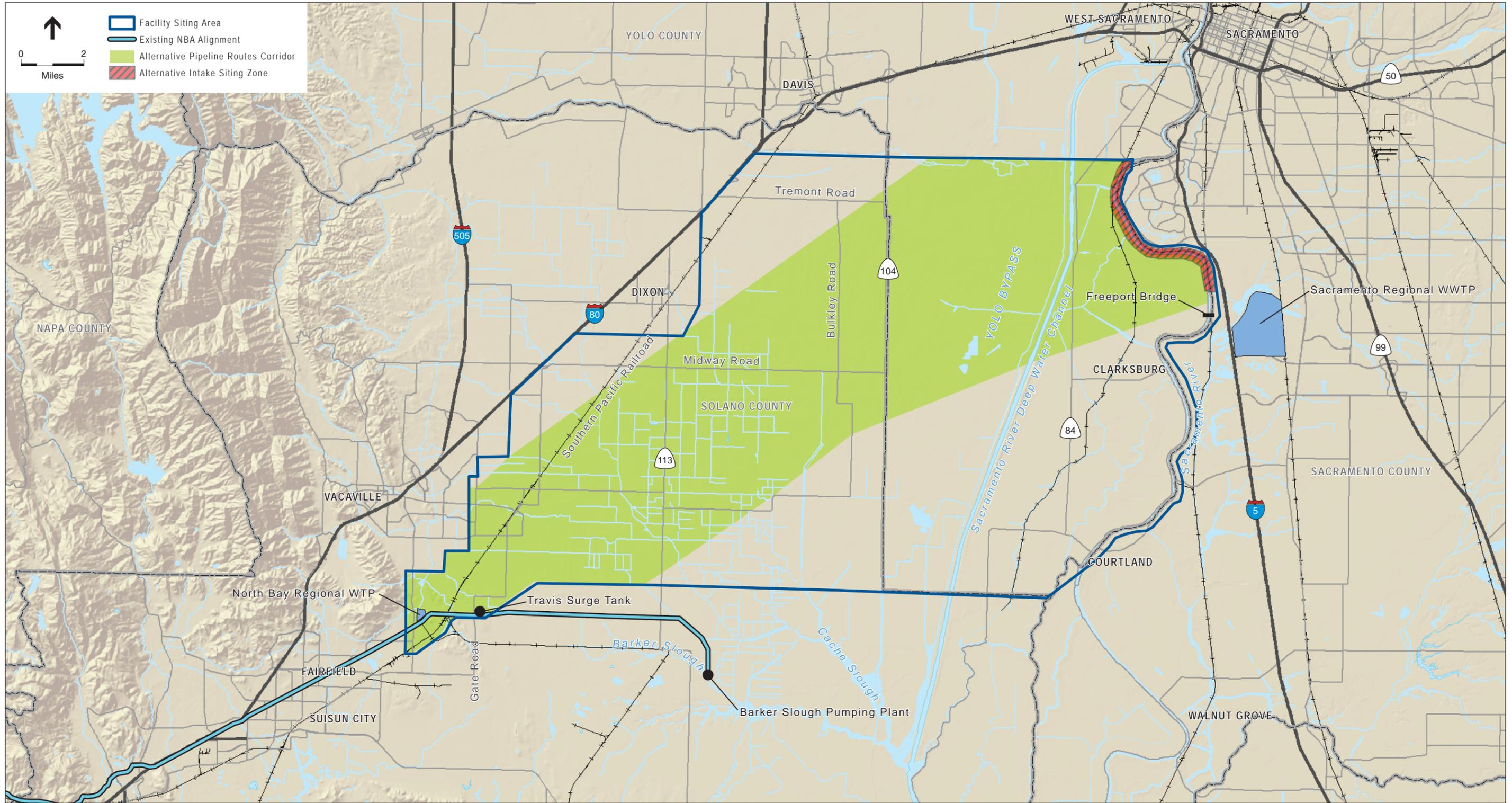
- A new pipeline segment to convey the water from the alternative intake to a point of connection with the existing NBA near the NBRTP; and
- Other project-related support facilities including, but not limited to, surge tanks, etc.

Proposed project facilities would be located in predominately rural portions of Solano and Yolo Counties southeast of Interstate 80 (I-80), west of the Sacramento River, north of Barker Slough and south of the City of West Sacramento (see Figure 1).

The proposed alternative intake structure and pump station would be designed to accommodate the projected future peak demand for SCWA and Napa County FC&WCD of up to 240 cfs in order to move existing water supplies more efficiently during periods of high demand or to optimize use of water supplies. The flow rate of 240 cfs represents peak flow needs of the NBA water users, the total annual amount of water delivered will be limited by existing contracts and water rights. The North Bay contractors have requested that the new intake be located above the Sacramento Regional Wastewater Treatment Plant in order to be upstream of the wastewater discharge point. No specific intake site has been selected yet. DWR will evaluate sites along the west bank of the Sacramento River. See the Alternative Intake Siting Zone in Figure 1.

The proposed alternative intake would be operated in conjunction with the existing NBA intake at Barker Slough. The BSPP would be operated to divert and deliver water through the NBA up to its current pumping capacity of approximately 140 cfs, when acceptable water quality is available at Barker Slough and environmental concerns are not in effect. During the periods when the BSPP cannot meet the water demand and/or the water quality in Barker Slough is not acceptable, or when Endangered Species Act issues are present the alternative intake would be operated to help meet total SCWA and Napa County FC&WCD water demands within the scopes of their respective existing contracts and water right settlements. No modifications to the BSPP are proposed as part of the proposed project. Combined operations would be designed to minimize aquatic impacts in real time at both intake locations, minimize overall energy demands by maximizing efficiency, and provide system redundancy in the event of a planned or unplanned shutdown.

A new segment of underground pipeline, estimated at 84 inches in diameter, will be installed that will connect the proposed alternative intake with the existing NBA pipeline near the NBRTP. Potential routes for the new segment of pipeline would be located within the Alternative Pipeline Routes Corridor shown in Figure 1. Alignments for alternative routes will be developed based on various factors, including preliminary review of environmental data, design constraints, and comments and information received during the NOP scoping period. It is anticipated that directional drilling or similar method of installation will be used for the reach of the pipeline that crosses the Sacramento River Deep Water Ship Channel. A key criterion for selecting an alignment for the pipeline will be avoiding or minimizing impacts on threatened or endangered species.



SOURCE: ESRI, 2008; CDM, 2009; and ESA, 2009

DWR North Bay Aqueduct Alternative Intake Project NOP . 209081

Figure 1
Facility Siting and Operations Area

Relationship to Bay-Delta Conservation Plan

The BDCP is being prepared through a collaboration of State, federal, and local water agencies, State and federal fish agencies, environmental organizations, and other interested parties. The plan will identify a set of water flow and habitat restoration actions to contribute to the recovery of endangered and sensitive species and their habitats in the Delta. The goal of the BDCP is to provide for both species/habitat protection and improved reliability of water supplies. According to the BDCP website (accessed on October 1, 2009 at <http://BayDeltaConservationPlan.com>), The BDCP is:

- Identifying conservation strategies to improve the overall ecological health of the Delta;
- Identifying ecologically friendly ways to move fresh water through and/or around the Delta;
- Addressing toxic pollutants, invasive species, and impairments to water quality; and
- Establishing a framework and funding to implement the Plan over time.

BDCP alternatives will be evaluated in an EIR/EIS being prepared by State and federal agencies.

The BDCP is evaluating a range of conveyance options including improvement and reinforcement of existing Delta channels and/or construction of new conveyance facilities that may consist of a pipeline, tunnel and/or canal facility. Among these conveyance alternatives are proposals to construct new intakes on the Sacramento River connected to a new pipeline, tunnel or canal that would extend south to connect back into the existing State and/or federal water export systems. Therefore, there is the potential for the proposed BDCP and NBA AIP facilities to be integrated. However, since there is uncertainty about the location, timing and ultimate implementation of BDCP facilities, the EIR for the NBA AIP will evaluate an alternative to the proposed stand-alone NBA AIP that considers possible integration with BDCP facilities.

Potential Environmental Effects

The EIR will evaluate potential project-specific and cumulative environmental effects associated with the construction and/or operation of the proposed project. Potential environmental effects could include, but may not be limited to, the following:

- Water resources and water quality – potential impacts associated with construction and operation of proposed facilities including modified operations, and installation and operation of a new intake on water quality and flows in the Sacramento River and Delta. In addition, it is anticipated that review of water quality impacts for the proposed project will take into account projected operations of the BDCP to quantify potential long-term cumulative effects to water quality and fisheries.
- Delta fisheries and aquatic resources – potential impacts associated with changes in water quality, modified operations, and installation and operation of a new intake on the movement and habitat of listed threatened or endangered fish species (delta smelt, longfin smelt, salmonids and green sturgeon).
- Terrestrial biological resources (including wetlands) – impacts associated with the potential for the proposed pipeline installation to result in the loss of special status species' habitat including, but not limited to, vernal pool species (vernal pool tadpole shrimp, vernal pool fairy shrimp, Contra Costa goldfields), California tiger salamander, giant garter snake,

- burrowing owls, and Swainson's hawks. Installation of the intake will be evaluated for potential impacts to nesting birds, valley elderberry longhorn beetle, and riparian habitat.
- Agricultural land uses – potential short-term disruption or permanent loss of prime farmland and disruption of crop production associated with the installation of the proposed pipeline.
 - Climate change – potential short-term and long-term impacts attributed to greenhouse gas emissions and how climate change could affect proposed project operation.
 - Growth-inducement – the potential for the proposed project to support additional growth in the NBA contractor's service areas will be evaluated.

Other resource areas and issue areas that will be addressed in the EIR include:

- Aesthetics
- Air Quality
- Cultural Resources
- Energy
- Geology and Soils
- Hazardous Materials / Public Health
- Land Use and Planning
- Noise
- Public Services and Utilities
- Recreation
- Transportation and Circulation

References

- Bay Delta Conservation Plan (BDCP), 2009a. *Aquatic Habitat Restoration Map*. September 2, 2009. Retrieved on September 23, 2009 from < <http://baydeltaconservationplan.com/BDCPPages/BDCPInfoFactSheets.aspx>>.
- Bay Delta Conservation Plan (BDCP), 2009b. *Draft Conservation Strategy*. September 2, 2009. Retrieved on September 23, 2009 from < <http://baydeltaconservationplan.com/BDCPPages/BDCPInfoFactSheets.aspx> >.
- California Department of Fish and Game (CDFG), 2009. *California Endangered Species Act, Longfin Smelt Incidental Take Permit No. 2081-2009-001-03*. California Department of Fish and Game, Bay Delta Region. February 2009.
- National Marine Fisheries Service (NMFS), 2009. *Biological Opinion and Conference Opinion of the Long-Term Operations of the Central Valley Project and State Water Project*. National Marine Fisheries Service, Southwest Region. June 4, 2009.
- U.S. Fish and Wildlife Service (USFWS), 2008. *Formal Endangered Species Act Consultation and Biological Opinion on the Proposed Coordinated Operations of the Central Valley Project (CVP) and State Water Project (SWP)*. December 15, 2008.