Browns Valley Irrigation District

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September 1, 2011

Mr. Chad Dibble
Department of Fish and Game
830 S Street
Sacramento, California 95811

VIA U.S. MAIL AND E-MAIL
cdibble@dfg.ca.gov

Re: Browns Valley Irrigation District Comments on July 2011 Draft of *Ecosystem Restoration Program Conservation Strategy for Restoration of the Sacramento-San Joaquin Delta Ecological Management Zone and the Sacramento and San Joaquin Valley Regions (Draft Conservation Strategy)*

Dear Mr. Dibble:

Browns Valley Irrigation District (BVID) appreciates the opportunity to comment on the *Draft Conservation Strategy*. BVID's comment is that, while the *Draft Conservation Strategy* states that BVID's diversion requires a fish screen. BVID has been operating a state-of-the-art fish screen at its diversion for 12 years. Accordingly, all references to a need to construct a fish screen at BVID's diversion should be deleted from the *Draft Conservation Strategy.*

Draft Conservation Strategy's Statements About BVID Diversion

The *Draft Conservation Strategy* makes numerous statements about BVID's Yuba River diversion. On page 100, the *Draft Conservation Strategy* states, as part of Action 2 among Stage 2 Actions for Water Diversions:

> Action 2: . . . construct screens at Brown's [*sic*] Valley water diversion and other unscreened diversions.

The *Draft Conservation Strategy* states, on page 136, the following as part of Action 2 among actions for Water Diversions:

> Action 2: . . . construct screens at Brown's [*sic*] Valley water diversion and other unscreened diversions.

The *Draft Conservation Strategy* states, on page 255, the following as part of Action 2 among actions for Water Diversions:

> Action 2: . . . construct screens at Brown's [*sic*] Valley water diversion and other unscreened diversions.

Because, as described in more detail below, BVID has been operating a state-of-the-art fish screen at its Yuba River diversion for 12 years, all of the above statements about any need to install a screen at BVID's diversion – and any other statements concerning any such need – should be deleted from the *Draft Conservation Strategy.*

BVID's 1999 Installation of Fish Screen

With assistance from DFG and with substantial state and federal financial support, BVID installed its Yuba River fish screen in 1999. BVID dedicated that screen on October 28, 1999. Because John Nelson of DFG assisted BVID significantly with its fish-screen project, BVID named the screen after Mr. Nelson. I have enclosed a picture of the dedication plaque on the fish screen that shows how BVID's named that screen for Mr. Nelson.

BVID's Presentation of Testimony About Its Fish Screen at 2000 SWRCB Hearing

As you may know, in 2000, the State Water Resources Control Board (SWRCB) held a 13-day water-right hearing concerning the lower Yuba River. DFG participated extensively in that hearing. During that hearing, BVID presented testimony and exhibits that documented BVID's installation of its fish screen. I have enclosed a copy of those exhibits, which also should be in DFG's files for the SWRCB's 2000 Yuba River hearing.

SWRCB's 2003 Lower Yuba River Decision's Discussion of BVID Fish Screen

In 2003, following another water-right hearing concerning the Yuba River, the SWRCB issued Revised Water Right Decision 1644 (RD-1644). That decision states, on page 91, the following about BVID's fish screen:

> Browns Valley Irrigation District presented testimony in 2000 that a state-of-the-art fish screen has been installed at the Browns Valley Pumpline [Yuba River] Diversion that meets the current NMFS and DFG screening criteria for protection of chinook salmon and steelhead. [Citations omitted.] Funding for design and construction of the screen was obtained from DWR, the U.S. Bureau of Reclamation's CVPIA Anadromous Fish Screen Program, the California Urban Water Agencies Category III Account, PG&E, and YCWA. BVID contributed manpower and equipment to the construction and assumed the obligation to operate and maintain the fish screen. [Citation omitted.] The screen became operational in April of 1999 and has operated for a full year to design

> specifications. [Citation omitted.] USFWS witnesses testified that the screen was built to DFG and NMFS criteria and that such screens are generally very effective. [Citation omitted.]
>
> The SWRCB concludes that the new fish screen at the Browns Valley Pumpline Diversion Facility provides adequate protection for juvenile salmonids. Browns Valley Irrigation District should continue to operate and maintain the new fish screen in compliance with NMFS and DFG criteria.
>
> I have enclosed copies of the relevant pages of RD-1644.

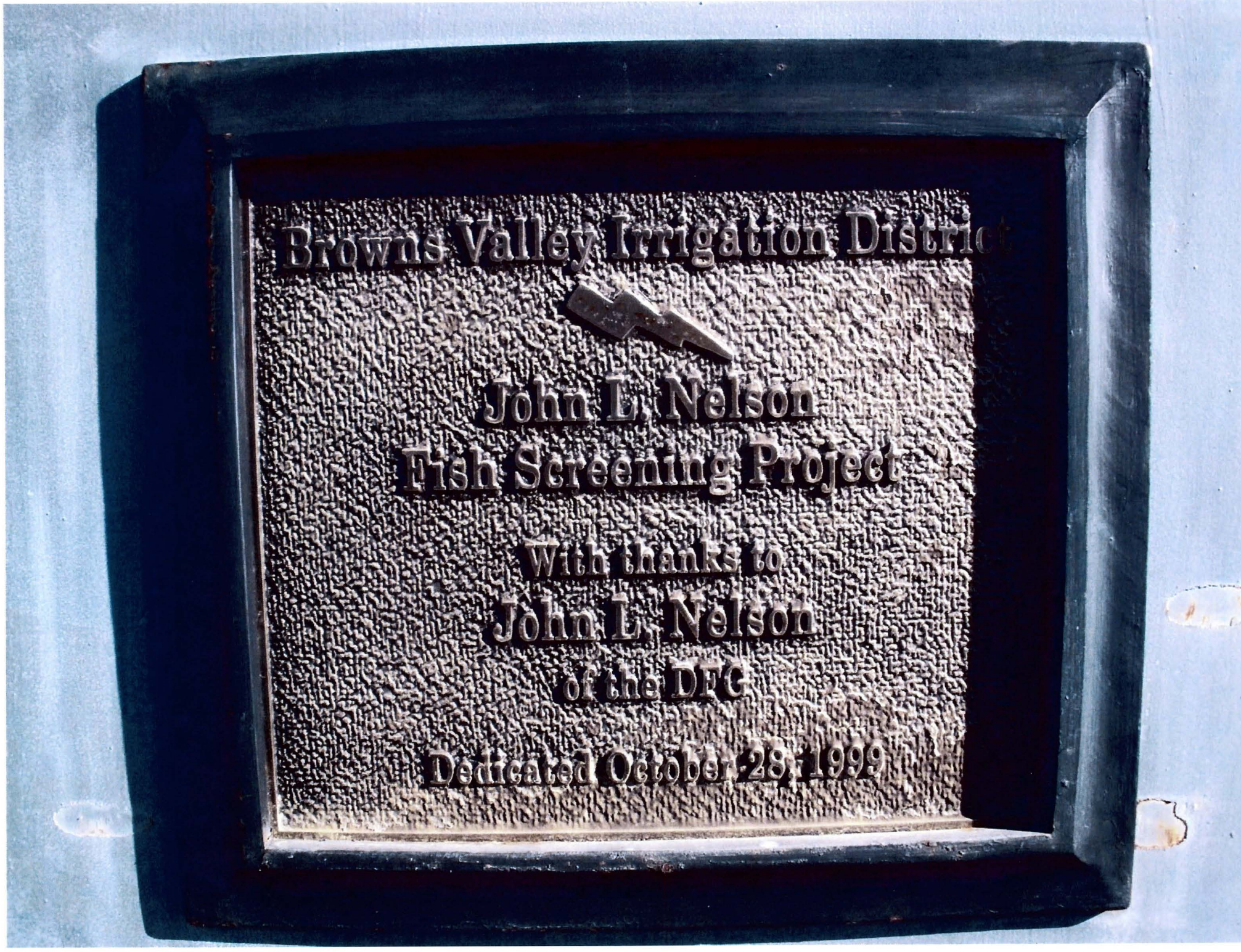
Conclusion

BVID has operated a state-of-the-art fish screen at its Yuba River diversion for 12 years. DFG should delete any statements in the *Draft Conservation Strategy* that indicate that there is a need to screen BVID's diversion.

Very truly yours,

Walter Cotter
General Manager

Cc: Board of Directors


Browns Valley Irrigation Distric
John L. Nelson
Fish Screening Project
With thanks to
John L. Nelson
of the DFG
Dedicated October 28, 1999

TESTIMONY OF ROBERT V. WINCHESTER

SUPPLEMENTAL HEARING OF STATE WATER RESOURCES CONTROL BOARD REGARDING THE CALIFORNIA DEPARTMENT OF FISH AND GAME'S LOWER YUBA RIVER FISHERIES MANAGEMENT PLAN AND A COMPLAINT BY THE UNITED GROUP AGAINST YUBA COUNTY WATER AGENCY AND OTHER DIVERTERS OF WATER FROM THE LOWER YUBA RIVER IN YUBA COUNTY

February 22, 2000

INTRODUCTION

1. I am the General Manager of the Browns Valley Irrigation District ("BVID"). BVID is governed by five-member Board of Directors elected by the voters. As BVID's General Manager, I am responsible for the day-to-day operations of BVID as well as the maintenance and improvement of its facilities.

2. My testimony primarily responds to Key Issue No. 3(1) of the State Water Resources Control Board's December 21, 1999 Notice of Public Hearing for the lower Yuba River, which reads in pertinent part: "What relevant new information is available regarding the water diversion facilities, fish screens, fish ladders and fish losses at: (1) the Browns Valley Pumpline Diversion facility...." In particular, my testimony describes BVID's construction and maintenance of a state-of-the-art fish screen at BVID's Pumpline Diversion facility. That facility is located on the north bank of the Yuba River about three-quarters of a mile upstream from Daguerre Point Dam.

QUALIFICATIONS

3. I have more than 15 years experience in the management of water agencies and districts. I have been the General Manager of BVID since 1990. A copy of my résumé is submitted with my testimony as Exhibit S-BVID-2.

BRIEF DESCRIPTION OF BVID

4. BVID is the second-oldest irrigation district in the state of California. It was organized on September 19, 1888. BVID currently serves approximately 50,000 acres of land north of the Yuba River. BVID's water service supports rice crops, orchards, homestead irrigation and irrigated pastures, among other things, with rice representing the largest crop grown in BVID's service area.

EXHIBIT S-BVID-1

BVID'S WATER SUPPLIES

5. BVID owns a pre-1914 right to divert up to 47.2 cubic feet per second ("c.f.s.") from the North Fork of the Yuba River. As reflected in an April 14, 1921 Certificate Prescribing Time to Complete Application of Water to Proposed Use issued by the State Water Commission, BVID recorded a notice of this appropriation with the County Recorder of Yuba County on March 26, 1890. A copy of this Certificate was attached as Exhibit A to the Testimony of Marc E. Van Camp in the 1992 lower Yuba River hearing. (Mr. Van Camp's testimony was BVID's Exhibit 1 in the 1992 hearing.)

6. In addition to its pre-1914 right, BVID holds appropriative rights pursuant to licenses and permits issued by the State Water Resources Control Board[1] and its predecessors. These rights include: (1) an appropriative right on Tennessee Creek (license 2182); (2) permits for direct diversion and storage at BVID's Virginia Ranch Dam and Reservoir (Collins Lake) (permits 8649, 9703 and 16792); and (3) a permit for hydroelectric generation at the Virginia Ranch Dam (permit 18861).

7. Beginning in 1894, BVID diverted water from the North Fork Yuba River through its Browns Valley Ditch. Since 1964, however, the District has diverted most of its water through its Pumpline Diversion facility. BVID has moved the point of diversion for a portion of its pre-1914 water right to the Pumpline Diversion facility under Water Code section 1706. Water diverted at that facility is distributed within BVID's service area through its Pumpline Canal and also through pipelines.

8. In 1990, BVID adopted Resolution No. 3-7-90-1, declaring its intention to (1) provide water service by means of a pipeline from Collins Lake; (2) undertake a water conservation project that would take the Browns Valley Ditch out of service;[2] and (3) retain control of conserved water from that project for transfer and other purposes pursuant to Water Code sections 1011 and 1706. A copy of BVID's Resolution No. 3-7-90-1 is submitted with my testimony as Exhibit No. S-BVID-3. Also in 1990, BVID began building the pipeline project to deliver water from Collins Lake to serve the areas that continued to be served by the Browns Valley Ditch after the Pumpline Diversion facility began operation. The Browns Valley Ditch was then taken out of service.

9. Following the closure of the Browns Valley Ditch, BVID transferred portions of its pre-1914 right representing the water it conserved to the California Department of Water Resources, the U.S. Bureau of Reclamation and others, and reported those transfers to the State Board in accordance with Water Code section 1011.

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[1]The State Water Resources Control Board shall be referred to hereinafter as the "State Board."

[2]The Browns Valley Ditch was also referred to as the "Upper Main Canal." It is called the Upper Main Canal in Resolution No. 3-7-90-1.

EXHIBIT S-BVID-1

10. In about the last ten years, BVID has spent over $2,000,000 to conserve water that was previous lost in carriage through canals. BVID has replaced many miles of those open canals with closed pipelines.

11. In 1981, BVID entered into a contract with the Yuba County Water Agency ("YCWA") under which YCWA agreed to supply BVID with up to 9,500 acre-feet of water under YCWA's water rights during the months of April through August. The parties' contemplated point of diversion of this water was BVID's Pumpline Diversion facility. In 1988, the State Board issued orders adding that facility to YCWA's water right permits as an authorized point of diversion and rediversion (permits 15026, 15027 and 15030). BVID also has the right to and does use the Pumpline Diversion facility to recapture return flows from BVID's service area that flow into the Yuba River.

12. Under BVID's current water rights and the water rights it exercises pursuant to its 1981 contract with YCWA, BVID's current maximum diversion at its Pumpline Diversion facility is approximately 65 c.f.s.

BVID'S PAST EFFORTS TO SCREEN FISH FROM ITS PUMPLINE DIVERSION FACILITY

13. On April 27, 1982, BVID entered into an agreement with the California Department of Fish & Game[3] to install a fish barrier at the Pumpline Diversion facility. A copy of this contract was BVID's Exhibit 4 in the 1992 hearing.[4]

14. The 1982 BVID-CDFG Contract required BVID to install a rock barrier in front of the Pumpline Diversion facility by April 20, 1982 and to keep that barrier in place through the 1984 irrigation season or until BVID established a new diversion point, whichever occurred first. That Contract also required CDFG to monitor the rock barrier's effectiveness while it was in place.

15. BVID's rock barrier almost immediately began to accumulate silt to an extent that interfered unacceptably with BVID's diversions at the Pumpline Diversion facility. BVID breached the gabion associated with the rock barrier in order to resolve the problem.

16. In 1986, CDFG elected not to require BVID to install a fish screen in addition to the rock barrier at the Pumpline Diversion facility under the 1982 BVID-CDFG Contract so long as BVID's diversion at that facility did not exceed the District's pre-1914 water right of 47 c.f.s. A copy of a November 19, 1986 letter from CDFG to BVID to this effect was BVID's Exhibit 3 to the 1992 hearing. CDFG monitored the Pumpline Diversion facility in 1987 to determine whether the

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[3]The California Department of Fish & Game shall be referred to hereinafter as "CDFG."

[4]This contract shall be referred to hereinafter as the "1982 BVID-CDFG Contract."

breach of the gabion led to any losses of fish. CDFG's estimates of resulting fish losses are summarized on pages 72 and 73 of the State Board's April 28, 1996 draft of a Decision in the Matter of Fishery Resources and Water Right Issues of the Lower Yuba River.[5]

17. By letter dated August 30, 1996, Banky E. Curtis, CDFG's Regional Manager, confirmed that BVID was under no legal obligation to erect a fish screen at its Pumpline Diversion facility. A copy of Mr. Curtis's August 30, 1996 letter is submitted with my testimony as Exhibit S-BVID-4.

BVID'S EFFORTS TO OBTAIN RESOURCES TO BUILD NEW FISH SCREEN

18. BVID sought grant support from a variety of sources to fund the construction of a new screen. BVID budgeted the project at $346,000.

19. In 1996, BVID applied for and received approximately $ 40,000 in grant funds from the California Department of Water Resources from its Tracy Mitigation Fund to prepare a preliminary engineering report for a new fish screen at the Pumpline Diversion facility.

20. In voluntarily seeking funds to construct a fish screen for the Pumpline Diversion facility, BVID participated in the cooperative processes set up by a variety of entities to mitigate the environmental effects of California's water supply system. BVID applied for and received a grant of $114,750 from the U.S. Bureau of Reclamation through the federal Central Valley Project Improvement Act Anadromous Fish Screen Program. Under the December 15, 1994 Principles for Agreement on Bay-Delta Standards Between the State of California and the Federal Government, BVID applied for and received a grant from the California Urban Water Agencies Category III Account. BVID received approximately $114,750 under that grant. PG&E gave BVID a $20,000 grant from its Yuba River PG&E Mitigation Fund for the construction of a fish screen at the Pumpline Diversion facility. Finally, YCWA gave BVID a $37,000 grant from the Yuba County Water Agency Yuba River Mitigation Fund that YCWA established with proceeds of its water transfers in the early 1990's.

21. BVID contributed manpower and equipment to the construction of a fish screen at the Pumpline Diversion facility. In addition, BVID assumed the obligation to administer, operate and maintain the fish screen that eventually was built.

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[5]This draft decision shall be referred to hereinafter as the "Draft Decision."

BVID'S EFFORTS TO OBTAIN REGULATORY APPROVAL FOR THE INSTALLATION OF A FISH SCREEN

22. Because any fish screen erected by BVID for the Pumpline Diversion facility would affect the streambed of the lower Yuba River, would fill a small portion of a navigable water and would affect certain fish species of concern, BVID was required to obtain multiple regulatory approvals before constructing such a screen.

23. In August 1997, CDFG and BVID entered into an Agreement Regarding Proposed Stream or Lake Alteration allowing BVID to do work adjacent to the lower Yuba River's north bank and in the River's channel while installing a fish screen at the Pumpline Diversion facility.

24. In September 1997, in response to a request by BVID's consulting engineers, the U.S. Army Corps of Engineers, Sacramento District, confirmed that BVID's plan to install a fish screen at the Pumpline Diversion facility was authorized by Nationwide Permit Number NW04 as a fish enhancement activity.

25. In November 1997, the U.S. Fish & Wildlife Service concurred in the conclusion of the U.S. Bureau of Reclamation that BVID's proposed construction of a fish screen at the Pumpline Diversion facility was not likely to adversely affect species listed under the federal Endangered Species Act.

SUMMARY OF BVID'S DIVERSION FACILITY

26. BVID's Pumpline Diversion facility consists of four primary components: (1) a diversion channel; (2) a fish screen structure; (3) a diversion lagoon; and (4) a pumping station.

27. The diversion channel branches from the main channel of the Yuba River upstream of the point of diversion, runs parallel to the River's main channel for approximately 4,000 feet and then rejoins the main channel downstream of the point of diversion. The streamflow in the diversion channel fluctuates according to the flow fluctuations in the main channel of the Yuba River. The diversion channel itself consists entirely of channel deposits and gravel, with the exception of a concrete footing at the base of the fish screen structure. Copies of photographs looking upstream and downstream along BVID's diversion channel from the current fish screen structure are submitted with my testimony as Exhibit S-BVID-5.

28. Both the rock barrier BVID constructed pursuant to the 1982 BVID-CDFG Contract and the state-of-the-art fish screen now in place have run parallel and face perpendicular to BVID's diversion channel. A copy of a photograph taken from in front of BVID's current fish screen structure is submitted with my testimony as Exhibit S-BVID-6. BVID's current fish screen structure is described in more detail below.

29. On the opposite side of BVID's fish screen structure from its diversion channel is a diversion lagoon measuring roughly 250 feet long by 70 feet wide during normal Yuba River flow conditions. Copies of two photographs that depict the diversion lagoon are submitted with my testimony as Exhibit S-BVID-7.

30. BVID's pumping facility is located on the northern bank of the diversion lagoon. The pumping facility is depicted in Exhibit S-BVID-7. The pumping facility lifts water from the diversion lagoon and into nearby conveyance facilities for distribution by canal and pipeline to water users. The facility has a maximum pumping capacity of 65 c.f.s.

DESCRIPTION OF BVID'S STATE-OF-THE-ART FISH SCREEN

31. As noted above, BVID's fish screen structure is located on the northern bank of BVID's diversion channel. A gabion and steel structure supports the actual fish screens. The structure is anchored by 12 concrete-filled steel posts drilled into bedrock with steel members welded to those posts. The structure's abutments are rock-filled gabions, with three rows at the base of the abutment tapering up to one row at the top. The abutments are keyed into the gravel banks adjacent to the structure. The surface of the gabion abutments facing the diversion channel is coated with gunite. Copies of photographs depicting this structure during its construction are submitted with my testimony as Exhibit S-BVID-8.

32. The fish screen apparatus itself consists of three main components: (1) fish screen frames and panels; (2) flow control baffles; and (3) a screen sweep system.

33. The fish screen frames consist of two parts: (1) a 1/8" thick stainless steel plate that occupies approximately the top half of the frame; and (2) a profile bar screen panel made of stainless steel wedge wire that measures about 81" by 51" and occupies approximately the bottom half of the frame. The fish screen panels have slotted openings approximately 1.75 millimeters wide. The openings in each screen panel comprise approximately 43 percent of each screen's surface. The fish screen frames slide into guide rails on the diversion-channel side of the fish screen structure and are held in place by gravity. A rubber seal maintains a water-tight seal between the fish screen frames and the guide rails. There are 10 fish screen frames on the diversion-channel side of the fish screen structure. BVID keeps two fish screen frames on-site for use in situations of immediate need.

34. Immediately on the diversion-lagoon side of each fish screen frame is a set of six vertical flow control baffles. The baffles behind three of the fish screen frames are pictured during construction prior to the installation of the fish screen frames in Exhibit S-BVID-9, which is submitted with my testimony. Each baffle can be rotated around a central vertical axis to control the velocity at which water passes through the fish screen panels, commonly known as the approach velocity.

35. The fish screen panels are continuously cleaned by a motorized sweep system. The system consists of two screen brushes, two brush trolleys mounted on a track system and a motor

to drive the trolleys. The track is affixed to the fish screen structure just above the fish screen frames. The trolleys ride on the track. The brushes rest on the fish screen panels and are connected to the trolleys by hinged arms; because the brush arms are hinged, the brushes can be lifted out of the water for cleaning or replacement. The trolleys are pulled back and forth on their track, and thus the brushes pulled back and forth across the fish screen panels, by a chain drive powered by a single motor. A trip switch located near the center of the track is triggered by each trolley to reverse the motor and send the trolleys back in the opposite direction. The 1,000 rpm motor that drives the trolleys is located on top of the fish screen structure and a drive chain extends vertically down the face of that structure from the motor to a clutch and gear box that drive the chain that pulls the trolleys. All mechanical and moving parts of the sweep system can be removed after BVID's diversion season to prevent damage by high winter flows in the Yuba River. Copies of photographs of components of the sweep system are displayed on Exhibit S-BVID-10, which is submitted with my testimony.

36. A schematic drawing of the fish screen panels, the baffles, the sweep system track and motor and the related structural components of the fish screen structure is submitted with my testimony as Exhibit S-BVID-11. The whole fish screen structure is dedicated to John Nelson, an Associate Fishery Biologist with CDFG.

BVID'S NEW FISH SCREEN COMPLIES WITH FEDERAL AND STATE GUIDELINES

37. CDFG and the Southwest Region of the National Marine Fisheries Service[6] have issued guidelines explaining the characteristics each agency deems necessary in the construction of a fish screen. The Fish Screening Criteria for Anadromous Salmonids issued by the Southwest Region of NMFS, dated January 1997, are submitted with my testimony as Exhibit S-BVID-12. CDFG's Fish Screening Criteria, dated April 14, 1997, are submitted with my testimony as Exhibit S-BVID-13.

38. Both CDFG and NMFS have established guidelines for the approach velocity at a fish screen placed in a stream or river where fry-sized salmonids may be present. See Exhibit S-BVID-12, p. 4; Exhibit S-BVID-13, p. 2.

39. On July 29, 1999, a team of engineers from the National Marine Fisheries Service, the U.S Bureau of Reclamation and the California Department of Water Resources adjusted the baffles in BVID's fish screen structure to determine what was the angle relative to streamflow that was required for each set of baffles in order to achieve an acceptable approach velocity. This interagency team of engineers was able to achieve an acceptable and relatively uniform approach velocity across the face of BVID's fish screen panels. A copy of the abstract of the interagency team's report is submitted with my testimony as Exhibit S-BVID-14.

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[6]The National Marine Fisheries Service shall be referred to hereinafter as "NMFS."

40. On August 16, 1999, a dive team from NMFS inspected BVID's fish screen structure. Following that inspection, Steven Thomas with NMFS's Habitat Conservation Division sent me a letter dated September 10, 1999, that stated that BVID's fish screen structure was a "fine structure that promises to provide fish protection for many years." A copy of Mr. Thomas's September 10, 1999 letter to me, along with the brief report of NMFS's dive team Mr. Thomas sent with his letter, is submitted with my testimony as Exhibit S-BVID-15.

41. The guidelines of both NMFS and CDFG state that a fish screen should have a submerged screen area that is at least equal to the quotient of the allowed diversion associated with the screen divided by the allowed approach velocity of water entering the screen. See Exhibit S-BVID-12, p. 5; Exhibit S-BVID-13, p. 2. BVID's allowed diversion at the Pumpline Diversion facility is 65 c.f.s. and the general allowed approach velocity is 0.33 feet per second. The quotient of 65 c.f.s divided by 0.33 feet per second is 196.97 square feet, which would be the minimum submerged fish screen area stated by the guidelines of NMFS and CDFG.

42. As noted in paragraph 33 above, BVID's facility contains 10 fish screen frames, each of which contains a fish screen panel whose dimensions are 81" (6.75') by 51" (4.25'). Each fish screen panel thus has a fish screen panel of 28.69 square feet and the entire facility contains 286.9 square feet of fish screen panel surface. The entirety of each fish screen panel is submerged when the flow in the Yuba River at the mouth of BVID's diversion canal is 500 c.f.s., the minimum flow required for BVID to make its maximum diversion of 65 c.f.s.

43. The guidelines of both NMFS and CDFG state that a fish screen panel's surface area should be at least 27 percent open space, although CDFG's guidelines state that 40 percent open space is preferred. See Exhibit S-BVID-12, p. 5; Exhibit S-BVID-13, p. 3.

44. As noted in paragraph 33 above, the fish screen panels used in BVID's facility are 43 percent open space.

45. As noted by the NMFS dive team in its report, Exhibit S-BVID-15, BVID's fish screen panels have openings of 1.75 millimeters, which complies with the criteria published by NMFS and CDFG. *See* Exhibits S-BVID-12, p. 5; and S-BVID-13, p. 3.

46. CDFG participated in the design process of BVID's new fish screen structure through the multi-agency Anadromous Fish Screen Program Technical Team and approved the structure's design. CDFG assisted BVID in obtaining grant funding for the structure.

THE STATE BOARD SHOULD TAKE NO ACTION IN RELATION TO BVID

47. The primary order contemplated by the Draft Decision in relation to BVID would have required BVID to take steps to reduce fish losses at its Pumpline Diversion facility. See Draft Decision, pp. 168-171. As I have described above, BVID voluntarily has taken dramatic steps to reduce fish losses. Using resources made available through cooperative efforts of federal, state and local agencies, BVID has constructed a state-of-the-art fish screen structure at the Pumpline

EXHIBIT S-BVID-1

Diversion facility. Accordingly, there is no need for the State Board to make any order applicable to BVID.

EXHIBIT S-BVID-1

ROBERT V. WINCHESTER
11895 Ramirez Road, Marysville, CA 95901

Education:

	AA Degree-	Mt. San Antonio Junior College
	BS Degree-	Fresno State College

Work Experience:

1990 to Present

General Manager of Browns Valley Irrigation District. Responsibilities include day to day operation and maintenance of the District. Design and construction of ditch replacement with pipelines. Fish screen construction on the Yuba River.

1983 to 1990

General Manager and Agricultural Engineer to the Natomas Central Mutual Water Company. Responsibilities include day to day operation and maintenance of the water company's canal and pumping facilities. Construction of a 55,000 acre closed irrigation system.

Prior to 1983

Irrigation engineering and agricultural construction in such capacities as consultant, design and construction principal. General farming and land development.

EXHIBIT S-BVID-2

RESOLUTION NO. 3-7-90-1

OF THE BOARD OF DIRECTORS OF
BROWNS VALLEY IRRIGATION DISTRICT
CURTAILING WATER DIVERSIONS AT NY10
AND WATER DELIVERIES FROM THE UPPER MAIN CANAL

WHEREAS, the Upper Main Canal consists of many miles of flumes, ditches and other facilities for delivering water from the NY10 diversion to lands within the District;

WHEREAS, the District plans to construct a water conservation project known as the Upper Main Pipeline Project by the 1991 irrigation season to deliver irrigation water to the lands presently served by the Upper Main Canal, after which diversions at NY10 and use of the Upper Main Canal would be terminated. This project will eliminate the ditch losses experienced on the Upper Main Canal;

WHEREAS, the 5,500 acre-feet of water previously diverted for use at the Upper Main Canal will be available for use, sale, lease, exchange or transfer inside or outside of the District, downstream of the Yuba River Development Project, as a result of this water conservation project;

WHEREAS, in light of the District's plan to terminate water deliveries from the Upper Main Canal in 1991, it would not be cost effective to perform maintenance work necessary to use the Upper Main Canal in 1990 to provide reliable water service.

NOW, THEREFORE, be it resolved by the Board of Directors as follows:

1. The foregoing recitals are true and are incorporated by this reference.

2. The Board hereby finds and determines (a) it is not cost effective to provide water service from the Upper Main during 1990, and (b) the District plans to implement the Upper Main Pipeline Water Conservation Project to have an alternative means of providing water service to the lands served by the Upper Main, commencing during the 1991 irrigation season.

3. The Board hereby orders water diversions from NY10 and water deliveries from the Upper Main Canal be terminated, during 1990 and thereafter, unless and until the Board directs that such diversions and water service be resumed.

4. The Board hereby declares that it abandons no right, title or interest in any District water rights, easements, rights

of way or facilities as a result of this Resolution, including but not limited to the NY10 diversion or the Upper Main Canal.

5. The Manager is hereby authorized and directed to notify affected landowners of such actions, and to cooperate with such landowners in providing interim water supplies during 1990, to the extent reasonably feasible.

6. Pursuant to California Water Code sections 1011 and 1706, the District intends to sell, lease, exchange or otherwise transfer for use within or outside the boundaries of the District the 5,500 acre-feet of water previously diverted for use from the Upper Main Canal, the use of which from the Upper Main Canal will henceforth cease as a result of its water conservataion project.

The foregoing Resolution was duly passed and adopted by the Board of Directors at a meeting thereof held on March 7, 1990, by the following roll call vote:

AYES: La Mantia, Smith, Bordsen, Cote, Misler
NOES: None
ABSENT: None

Signed by me after its passage this 7th day of March 1990.

By: Ted La Mantia
Ted La Mantia, President

ATTEST:

By: Helen M. Tittel
Secretary

20\R030790

20-95

STATE OF CALIFORNIA—THE RESOURCES AGENCY PETE WILSON, Governor

DEPARTMENT OF FISH AND GAME
REGION 2
1701 NIMBUS ROAD, SUITE A
RANCHO CORDOVA, CA 95670
(916) 358-2900

August 30, 1996

Mr. Robert V. Winchester, General Manager
Browns Valley Irrigation District
P.O. Box 6
Browns Valley, California 95918

Dear Mr. Winchester:

This a follow-up to your conservation with my staff regarding the possible legal obligations of Browns Valley Irrigation District (BVID) to screen your diversion on the Yuba River. This comes as a result of the Department securing funding to undertake preliminary engineering and environmental evaluation for potential construction of a screen at the Division. At this time there is no obligation for BVID to screen, commit to any activity, or bind you to any financial responsibility to screen the diversion. However, we would appreciate your permission and cooperation to access the diversion facility and to undertake the engineering and biological surveys necessary to complete the preliminary evaluations.

Once the preliminary engineering and environmental evaluations are completed, the Department, in cooperation with BVID, will determine the direction in which we need to proceed. Again, there will not be any obligation for BVID to proceed with construction of a fish screen or financial obligation.

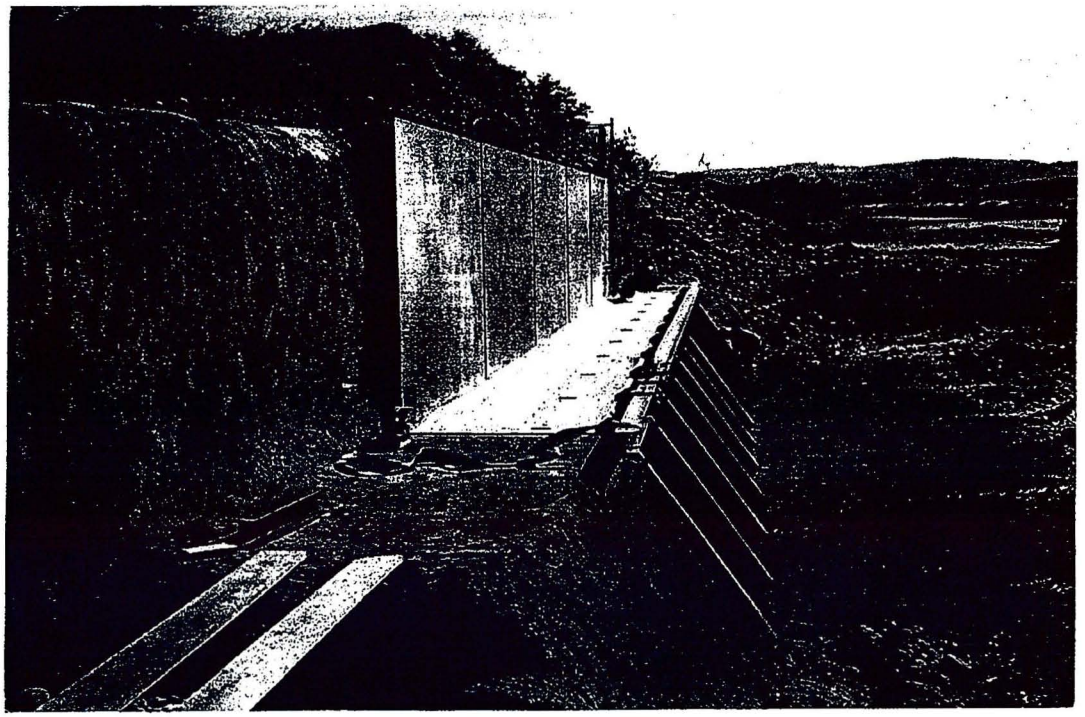
Thank you for your consideration. We look forward to working with you and your Board members on this project. If you have any questions, or need further assistance, please contact Mr. John Nelson, Associate Fishery Biologist, or Mr. Nick Villa, Senior Biologist, telephone (916) 358-2939.

Sincerely,

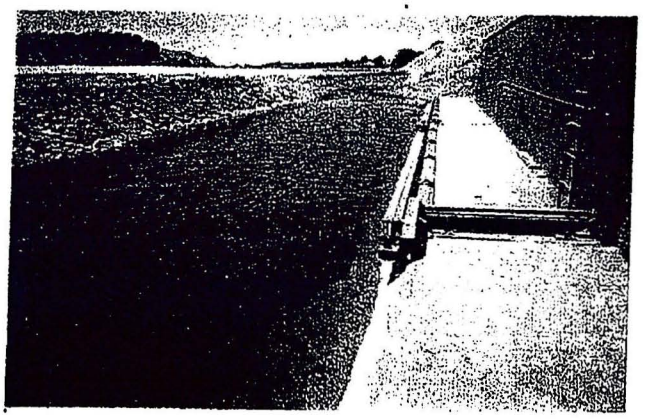
Banky E. Curtis
Regional Manager

cc: Mr. John Nelson
Mr. Nick Villa
Department of fish and Game
Rancho Cordova, California

EXHIBIT S-BVID-4



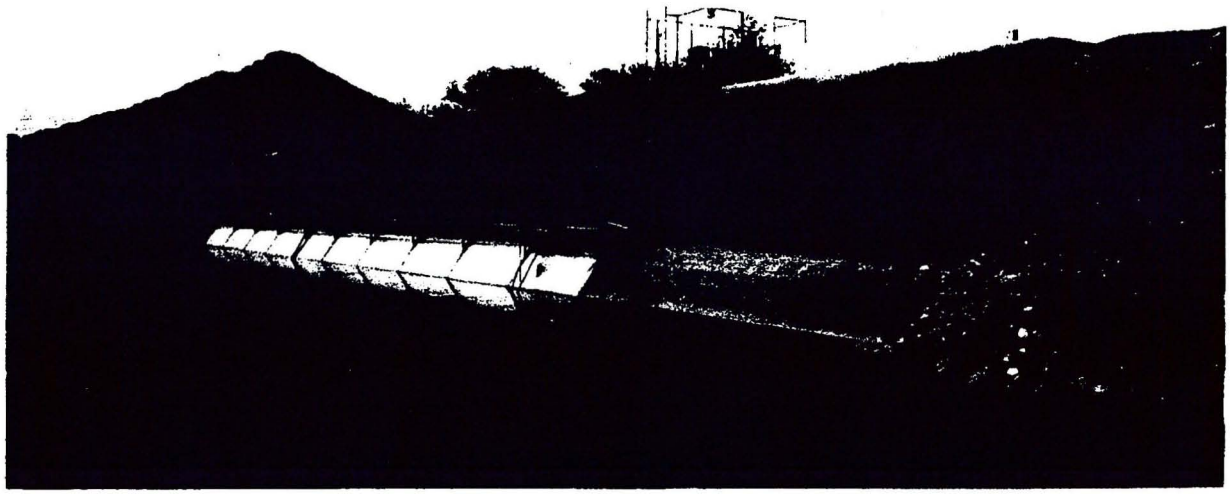
DIVERSION CHANNEL - *Looking upstream at diversion channel entrance during construction. Earthen barrier at entrance was removed after construction.*



DIVERSION CHANNEL - *Looking downstream at diversion channel exit. Fish screens are just visible below the waterline.*

COLOR OR OVERSIZED ORIGINAL IS IN COLOR/OVERSIZED FILE

EXHIBIT S-BVID-5

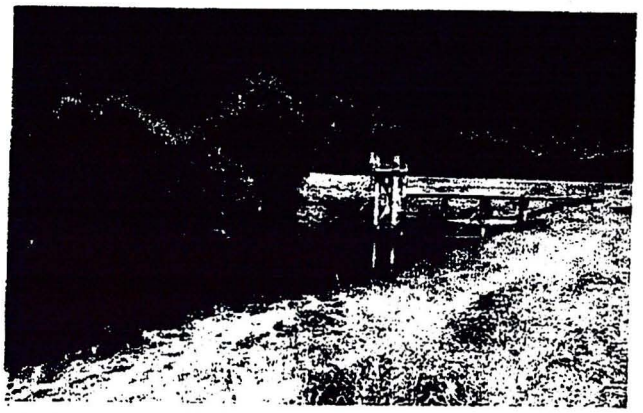


FRONT VIEW - *BVID's new fish screen structure after completion*

COLOR OR OVERSIZED ORIGINAL IS IN COLOR/OVERSIZED FILE

EXHIBIT S-BVID-6

STRUCTURAL DETAILS - *View through the partially constructed facility looking toward the lagoon and pump station.*



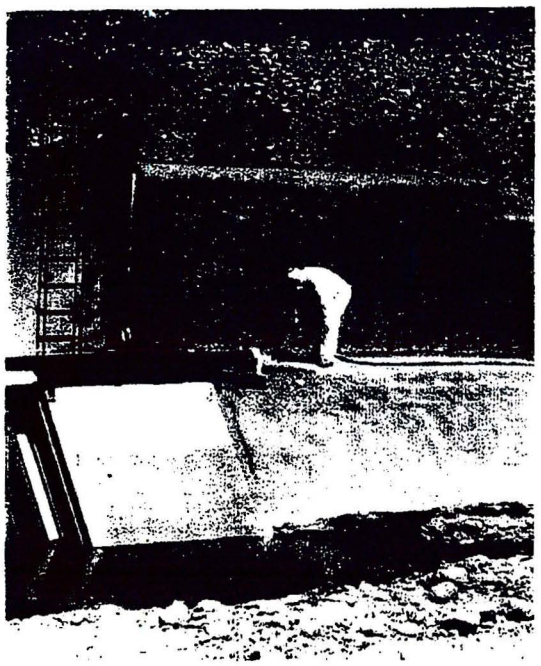
LAGOON AND PUMP STATION - *View of pump station and lagoon, taken from the fish screen facility.*

COLOR OR OVERSIZED ORIGINAL IS IN COLOR/OVERSIZED FILE

EXHIBIT S-BVID-7

GABION FINISH

The gabions were coated with gunite and finished with an elastic polyethylene spray to provide a positive flow barrier.

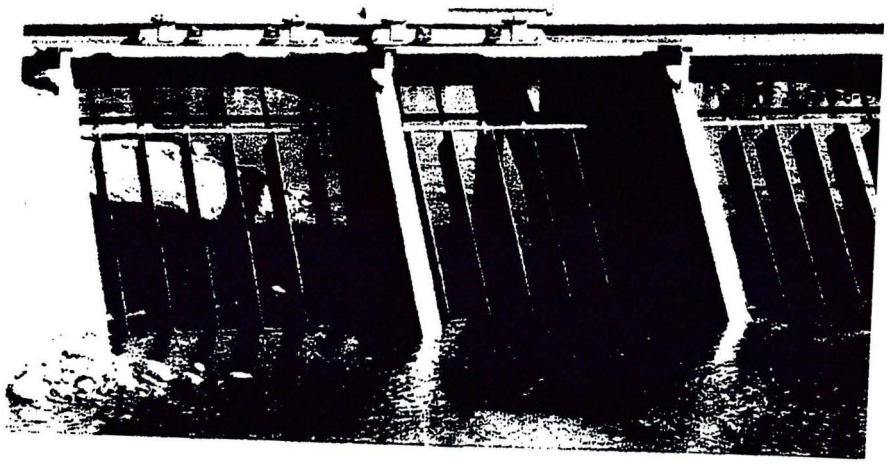


CONSTRUCTION OF GABION ABUTMENTS

Facility abutments are constructed of stacked gabions

COLOR OR OVERSIZED ORIGINAL
IS IN COLOR/OVERSIZED FILE

EXHIBIT S-BVID-8

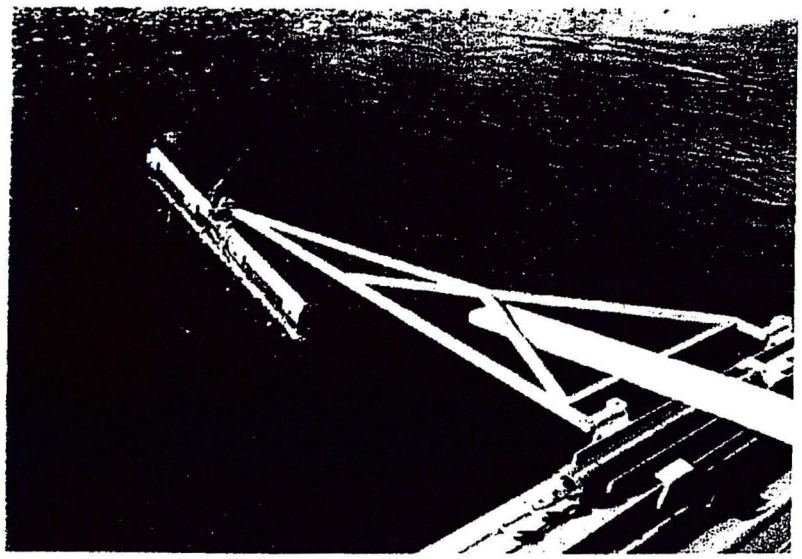


FLOW CONTROL BAFFLES

Flow control baffles visible during construction before fish screen panels were installed.

COLOR OR OVERSIZED ORIGINAL
IS IN COLOR/OVERSIZED FILE

EXHIBIT S-BVID-9

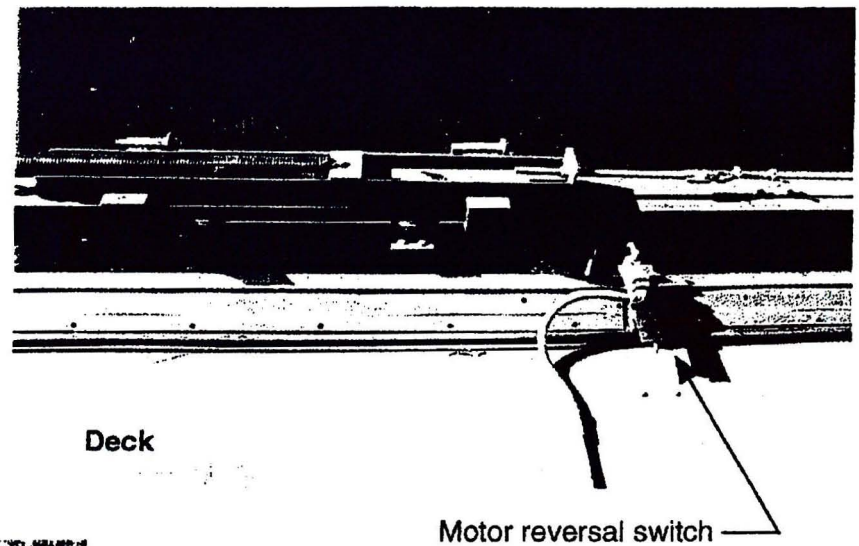


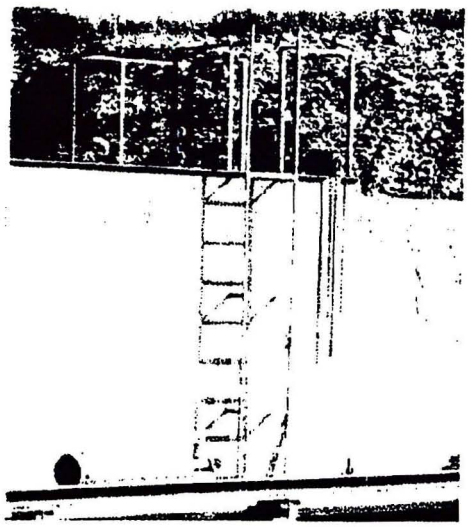
FISH SCREEN BRUSH

The fish screen brush arm is hinged, allowing it to be lifted out of the water for inspection and maintenance.

SWEEP SYSTEM TROLLEY

The sweep system trolley moves along the track until it triggers the motor reversal switch.





SWEEP SYSTEM MOTOR

The sweep system motor is located on top of the facility (shown in blue at left). This picture, taken during construction,shows the chain drive being assembled down the face of the facility.

EXHIBIT S-BVID-10

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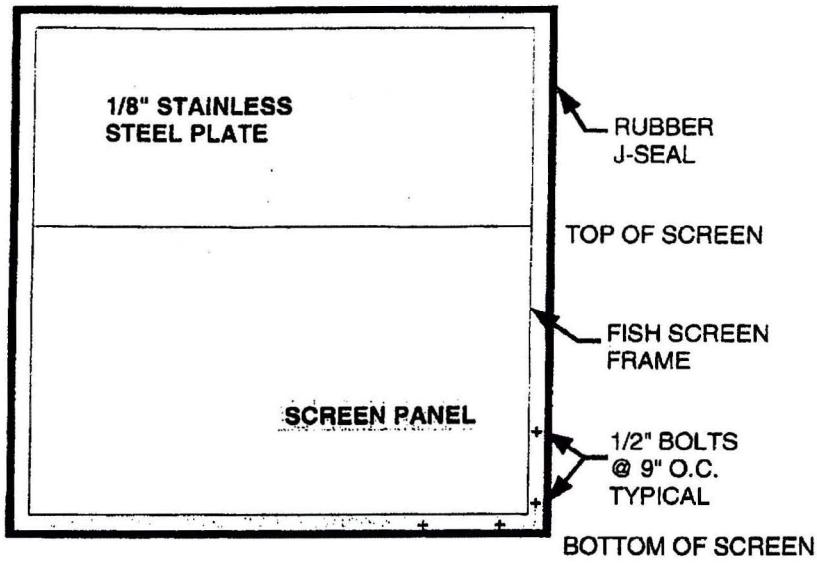
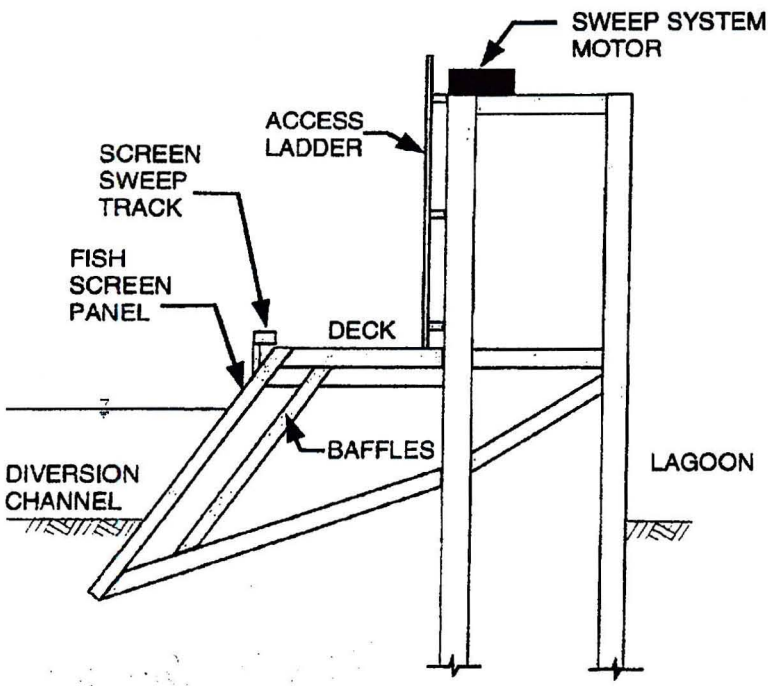


FRONT ELEVATION -
FISH SCREEN FRAME ASSEMBLY

NOT TO SCALE



COLOR OR OVERSIZED ORIGINAL
IS IN COLOR/OVERSIZED FILE

SECTION -
FISH SCREEN FACILITY SCHEMATIC

NOT TO SCALE

EXHIBIT S-BVID-11