

PART A. Cover Sheet

A1. Proposal Title: RD 108 Combined Pumping Plant/Fish Screen Project – Phase IV
Construction

A2. Lead Applicant or Organization:

Contact Name: Luther P. Hintz, Executive Director
Address: 975 Wilson Bend Road/P.O. Box 50 Grimes, CA 95950
Phone Number: (530) 437-2221
Fax Number: (530) 437-2248
E-mail: luhintz@direcway.com

A3. Project Manager or Principal Investigator:

Contact Name: Luther P. Hintz, Executive Director
Agency/Organization Affiliation: Reclamation District 108
Address: 975 Wilson Bend Road/P.O. Box 50 Grimes, CA 95950
Phone Number: (530) 437-2221
Fax Number: (530) 437-2248
E-mail: luhintz@direcway.com

A4. Cost of Project: The total Project cost including all of the studies, design, environmental documentation, permitting, construction, professional services during construction, and fish screen performance testing is estimated to be \$21.2 million.

The Project will be funded on a 50/50 cost share of federal funds (Reclamation) and a combination of State funds (CALFED) and local funds (RD108). The funding commitment to date includes the following:

Federal

\$ 190,000 reprogrammed from Tracy Direct Loss Mitigation Program for the Reconnaissance Investigation (FY 2000/2001)

\$ 1,345,000 from Reclamation in Fiscal Year (FY) 2002

\$ 447,705 from Reclamation in FY 2003

\$ 2,955,000 from Reclamation in FY 2005

\$ 5,499,795 from Reclamation in FY 2006 (yet to be obligated)

\$10,437,500 Subtotal Federal

State

\$ 630,000 from the State share of CBDA in FY 2002/2003

\$ 60,000 from the State share of CBDA in FY 2004

\$ 9,747,500 from the State share of CBDA for construction in FY 2005/2006 (The purpose of this proposal)

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\$10,437,500 Subtotal State

Local

\$ 20,000 from RD108 for administration support in FY 2001

\$ 140,000 from RD108 for administration support in FY 2003 through FY 2006

\$ 200,000 from RD108 for permanent right-of-way acquisition

\$ 360,000 Subtotal local

\$10,797,500 Total State and local

The total CBDA funding request in this proposal for construction-related tasks is \$9,747,500.

A5. Cost Share Partners:*

Contact Name: Debbie Coleman

Agency/Organization Affiliation: U.S. Bureau of Reclamation

Address: 2800 Cottage Way, Sacramento, CA 95825

Phone Number: (916) 978-5205

Fax Number:

E-mail: DCOLEMAN@mp.usbr.gov

Type of Cost Share: cash of \$10,437,500

Contact Name: Luther P. Hintz, Executive Director

Agency/Organization Affiliation: Reclamation District 108

Address: 975 Wilson Bend Road/P.O. Box 50 Grimes, CA 95950

Phone Number: (530) 437-2221

Fax Number: (530) 437-2248

E-mail: luhintz@direcway.com

Type of Cost Share: cash of approximately \$200,000

Amount of Cost Share with Estimated Dollar Value for in-kind Services:
approximately \$160,000

A6. List of Subcontractors:*

Contact Name: Peter Rude, P.E., Project Manager

Agency/Organization Affiliation: CH2M HILL

Address: 2525 Airpark Drive, Redding, CA 96001

Phone Number: (530) 229-3396

Fax Number: (530) 339-3396

E-mail: prude@ch2m.com

Contact Name: Charles H. Hanson, Ph.D., Senior Biologist/Principal

Agency/Organization Affiliation: Hanson Environmental, Inc.

Address: 132 Cottage Lane, Walnut Creek, CA 94595

Phone Number: (925) 937-4606

Fax Number: (925) 937-4608

E-mail: chansonenv@aol.com

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Contact Name: Richard G. Jenness, Principal – Civil Engineer
Agency/Organization Affiliation: Laugenour and Meikle Civil Engineers
Address: 608 Court Street, Woodland, CA 95695
Phone Number: (530) 662-1755
Fax Number: (530) 662-4602
E-mail: rjenness@lmce.net

General Contractor Contact information is unknown until construction contract is awarded.

A7. Other Cooperators:*

N/A

A8. Project Topic Area*

Primary: Fish Screens

Secondary: N/A

A9. Project Type*

Primary: Full-scale implementation

Secondary: N/A

PART B. Executive Summary

B1. Proposal Title: RD 108 Combined Pumping Plant and Fish Screen Project

B2. Project Description: Reclamation District No. 108 (RD108) has completed the design of the Project along the Sacramento River approximately 45 miles northwest of Sacramento that combines three of RD108's largest existing unscreened pumping plants into one new pumping plant with a positive barrier fish screen, called the "Combined Pumping Plant and Fish Screen Project." The three existing pumping plants were identified by State and Federal resources agencies as possible sources for take of threatened and endangered fish species and, in August 2000, the agencies directed RD108 to move forward with plans to screen the plants.

A Reconnaissance Investigation completed in September 2001 determined that the best cost/benefit approach would be to build one new screened plant, and remove the three existing older plants rather than attempt to screen them. RD108 finished the design in May 2005 and is processing the environmental documents and permits, which are scheduled to be completed and approved by the resource agencies by October 2005.

The Project is listed as a priority in the CALFED *Ecosystem Restoration Program Draft Stage 1 Implementation Plan*. RD108 is applying to CALFED in this proposal for construction funding of \$9,747,500. This construction funding request along with the already committed CALFED funding of \$690,000 will be the 50 percent matching funding to the U.S. Bureau of Reclamation's (Reclamation) 50 percent share of \$10,437,500. The total estimated Project cost including all of the studies, design, environmental documentation, permitting, construction, and performance testing is \$21,235,000.

The combined pumping plant will have five pumping units and, with elimination of redundant capacity at the three existing plants, will only require a diversion capacity of 300 cubic feet per second, which is approximately 80 percent of the combined capacity of the three individual pumping plants. The fish screen structure will be positioned along the Sacramento River levee in front of the plant and will have vertical flat-plate screens. Concrete-lined canals extending from the discharge of the new combined pumping plant will connect the separate irrigation distribution systems of the existing three plants. The three existing pumping plants date from the 1950's and will be removed when the new plant is operable.

Construction of the Project facilities is scheduled to begin the first quarter of 2006 and be completed during 2008. The Project will be ready for operation at the start of the 2008 irrigation season.

PART C. Work Plan

C1. Project Background and Information: Reclamation District No. 108 (RD108) provides water to approximately 48,000 acres of irrigated farmland on the west side of the Sacramento River, about 45 miles northwest of Sacramento, California (see Figure 1). RD108 has seven pumping plant diversions along the river that supply water to a network of irrigation canals. These diversions have been identified by the resource agencies as a potential threat for entrainment and mortality to fall-, spring-, and winter-run chinook salmon, and Sacramento splittail. The largest of the diversions, Wilkins Slough (830 cubic feet per second [cfs]), was screened in 1999.

In August 2000, the resource agencies informed RD108 that three of its largest remaining unscreened pumping plants would have to be screened. RD108 conducted a reconnaissance investigation (CH2M HILL, 2001) to evaluate the engineering feasibility, costs, and benefits to screen three diversions, to continue to implement the spirit of the Letter of Intent. The reconnaissance investigation determined that the best cost/benefit approach would be to build a new screened pumping plant that would replace the three existing older unscreened pumping plants. This is the project for which this proposal is submitted.

In May 2005, RD108 completed the design of a 300 cfs combined pumping plant and fish screen facility that will replace the three existing unscreened pumping plants: Boyers Bend (116 cfs); Howells Landing (71 cfs); and Tyndall Mound (190 cfs) totaling 377 cfs. These pumping plant facilities are steel-frame structures that protrude into the river channel and house vertical mixed-flow pumps and slant pumps. These three pumping plant locations are presented on Figure 2.

In lieu of constructing three fish screens and one new pumping plant, an alternative was developed that combines the existing Boyers Bend Pumping Plant, Howells Landing Pumping Plant, and Tyndall Mound Pumping Plant into one facility with a maximum capacity of 300 cfs. This pumping plant would be located approximately halfway between the Boyers Bend Pumping Plant and the Howells Landing Pumping Plant on a relatively straight section of the Sacramento River (Figure 2). Approximately 4.3 miles of concrete-lined canal would be installed that would connect the new pumping plant to the Boyers Bend, Howells Landing, and Tyndall Mound canal distribution systems. When the new combined facility is operational, the existing pumping plants will be abandoned and removed.

The screen would be similar to the fish screen at the existing Wilkins Slough Pumping Plant. It would include a vertical plate screen with a brush cleaning system, a blowout panel, an access road to the fish screen facility both upstream and downstream of the screen, a log boom, and a sediment removal system. The fish screen will consist of five bays with a 15-foot-wide by 12-foot-high screen located in each bay. Each of the bays would be connected to a single pump. Solid panels would be located above the screens to an elevation above the high water mark. Figure 3 shows an overall site plan for the new combined pumping plant. The sediment buildup directly behind the screens would be removed by a pressure nozzle jetting system.

The new combined pumping plant would be sized to pump 300 cfs, or approximately 20 percent less than the combined total of the three individual pumping plants. The pumping plant would include five 300-horsepower, 60-cfs vertical turbine pumps (three with variable frequency drive capability) and a control building. The electrical controls for the pumps and the screen cleaning system would be housed in the control building.

The pumps, located on the river side of the levee immediately adjacent to the fish screens, would pump water over the levee to a settling basin. Most of the sediment that would be discharged from the pumps would settle in a settling basin prior to entering the canal. A 0.7-mile-long canal would connect the settling basin to the Boyers Bend irrigation distribution system to the north, and a 3.6-mile-long canal would connect it south to the Howells Landing and Tyndall Mound irrigation distribution systems.

The three existing diversion points give operators flexibility in delivering water to the three separate service areas. The new combined pumping plant has been designed to continue to provide that flexibility so water delivery capability is comparable to the existing systems.

C2. Project Goals and Objectives: This Project will enhance the protected fish passage on the Sacramento River. At the same time, this Project will achieve CALFED and CVPIA objectives by helping to improve the aquatic environment of several fish species, while concurrently providing needed water supply for the applicant. Synergistic Sacramento River system benefits will be achieved by allowing more fish to reach the upstream restoration projects now implemented or planned for the future. There is no conflict with CALFED non-ecosystem objectives, such as water quality for in-stream and delta flows. The Project might also benefit water supply reliability for the applicant as it will reduce fish entrainment at the diversion facility. No impacts to third parties are anticipated.

C3. Approach/Methodology: Design of the Project facilities is completed and has been reviewed and approved by the Anadromous Fish Screen Program Technical Team (AFSPTT). Resource agencies are continuing their reviews of the environmental documents, which is scheduled for completion in September 2005. Also, as part of the environmental effort, necessary construction permits are being sought.

The following permits will be obtained:

1. U. S. Army Corps of Engineers, Section 404/Section 10 Nationwide Permit.
2. California Central Valley Regional Water Quality Control Board, Section 401 Water Quality Certification (or waiver of certification) of Compliance with State Water Quality Standards.
3. California Department of Fish and Game; Section 1603 Stream Bed Alteration Agreement.
4. California Department of Fish and Game 2080.1 Permit with respect to winter-run chinook salmon and giant garter snake incidental take.
5. California State Reclamation Board Permit.
6. California State Lands Commission Waiver.
7. The Action Specific Implementation Plan from the U.S. Bureau of Reclamation.

8. National Environmental Protection Act (NEPA) Environmental Documentation Certification from U.S. Bureau of Reclamation.
9. California Environmental Quality Act (CEQA) Certification from RD108.
10. National Oceanic and Atmospheric Administration (NOAA) Fisheries biological opinion with respect to winter-run chinook salmon, spring-run chinook salmon, Central Valley steelhead, and essential fish habitat for Pacific salmon incidental take.
11. U.S. Fish and Wildlife Service biological opinion with respect to giant garter snake and valley elderberry longhorn beetle incidental take.
12. California Department of Transportation Encroachment Permit (Highway 45 crossing).

The foregoing design work, including environmental documentation under the National Environmental Policy Act and California Environmental Quality Act, was funded under contracts with CALFED and Reclamation.

C4. Tasks and Deliverables: The following tasks describe the work to be performed under this proposal for construction of the Project.

Task 1 – Project Management and Administration (RD108 Funds)

RD108 staff will review the construction contract documents. Administration and management will continue throughout the Project and will include the following:

- Coordinate with Reclamation and CALFED staff on funding and Project matters
- Direct consultant's work
- Review consultant's work products
- Attend resource agency meetings
- Review construction contract documents
- Review construction work

Task 2 – Bid Services (Reclamation Funds)

Bidding services involve the following:

- Update construction contract documents from May 2005 version
- Advertise for bids
- Issue addenda, as necessary
- Conduct pre-bid meeting
- Evaluate lowest qualified bidder(s)
- Award contract

Task 3 – Construction (CBDA and Reclamation Funds)

Construction activities involve the following:

- Construct pumping plant, fish screen, and canal facilities
- Tie the new facility to the three existing irrigation systems
- Decommission the three old pumping plant facilities

Task 4 – Services During Construction (Reclamation Funds)

Services during construction include the following:

- Provide engineering services

Task 5 – Fish Screen Performance Evaluation (Reclamation Funds)

Performance testing involves the following:

- Conduct performance testing on the fish screen
- Prepare report to AFSP Technical Team

The existing three pumping plants would continue to operate until the new facilities are constructed and connected to the existing irrigation system. The three existing pumping plants would then be removed.

C5. Subcontractors: RD108 has an extensive history of successfully implementing large, complex capital improvements with the cooperation and funding support of State and Federal agencies. This has been most recently demonstrated by completion of construction in 1999 of the 830-cfs Wilkins Slough Positive Barrier Fish Screen. RD108 has been working with CDFG, NOAA Fisheries, USFWS, and Reclamation during the past three years in the design of the Combined Pumping Plant and Fish Screen Project.

RD108 District Executive Director, Luther Hintz, will be the Project Manager. He will be assisted by Rich Jenness/Laugenour & Meikle Civil Engineers, a long-time RD108 consulting engineer; Chuck Hanson/Hanson Environmental, the senior fishery biologist and environmental permit coordinator; and fish screen/pumping plant engineer Peter Rude/CH2M HILL. Following are brief biographical sketches of the principal participants.

Richard Jenness, P.E., RD108 Engineer

Mr. Jenness is a Registered Civil Engineer in the State of California, a consulting engineer for RD108, and President of Laugenour & Meikle, Civil Engineers. He has more than 33 years of experience in the planning, design, and construction of water resource projects. Mr. Jenness has been involved in planning and designing fish guidance facilities on the Sacramento River, and he has been responsible for preparing fish screen appraisal studies and assisting in Project management of fish screen projects.

Mr. Jenness continues to work on behalf of RD108 and Sutter Mutual Water Company in reviewing the design, engineering drawings, specifications, and construction for three fish screen projects.

Charles Hanson, Ph.D., Senior Fishery Biologist

Dr. Hanson has more than 28 years of experience in freshwater and marine biology studies and is the Senior Biologist, Principal for Hanson Environmental, Inc. Dr. Hanson has been the senior fishery biologist and environmental permit coordinator for the RD108 Wilkins Slough Positive Barrier Fish Screen Project, the RD108 Combined Pumping Plant/Fish Screen Project, and the Sutter Mutual Water Company Tisdale Positive Barrier Fish Screen Project.

Dr. Hanson has contributed to the study, design, analysis, and interpretation of fisheries, stream habitat, and stream flow (hydraulic) data collected in the evaluation of in-stream flow

requirements and potential fishery impacts on salmonid spawning, production, survival, and migration success associated with water project development and operations. He has conducted site-specific evaluations of the effectiveness of various water diversion screening systems, passage facilities, and operational modifications in reducing organism losses while maintaining operational reliability of the system. Dr. Hanson has been extensively involved in incidental-take monitoring and investigations of endangered species, development of recovery plans, consultations, and preparation of aquatic habitat conservation plans. He also participated in the development of adaptive management programs, including real-time monitoring and management of power plant cooling water and other diversion operations, and the San Joaquin River Vernalis Adaptive Management Plan.

Peter Rude, P.E., Project Manager

Mr. Rude has more than 18 years of experience as an agricultural/civil engineer. He is responsible for managing multidiscipline teams for a variety of fish screen, irrigation, agricultural water supply, water reclamation, and watershed management projects.

Mr. Rude has been the Project Manager for the RD108 Wilkins Slough Positive Barrier Fish Screen Project. The RD108 Combined Pumping Plant/Fish Screen Project and the SMWC Tisdale Positive Barrier Fish Screen Pumping Plants Project. At Tulare Irrigation District, Mr. Rude was the Project Manager for design, environmental documentation and permitting support, contract documents, bid services, and construction management for lining 9.7 miles of the Main Intake Canal.

C6. Work Schedule: The general schedule to construct the Project is provided below, with the assumption that obtaining the required level of funding is not a constraint:

- Obtain required permits – July to October 2005
- Complete environmental documentation – September 2005
- Bidding/award – October to December 2005
- Construction – January 2006 to March 2008
- Fish screen performance evaluation – April to June 2008
- Project online – April 2008

C7. Special Equipment and Supplies Required: All the equipment and supplies necessary for the construction of the project will be obtained by RD108 and or the general contractor as provided in the construction documents.

C8. Project Impacts (beneficial or adverse): The design of the vertical flat-plate fish screen structures for large diversions has proven successful for other major fish screen construction projects on the Sacramento River, including the RD108 Wilkins Slough Positive Barrier Fish Screen, Glenn-Colusa Irrigation District Interim and Long-term Fish Screens, Anderson-Cottonwood Irrigation District Fish Screen and Ladders projects, and City of Sacramento Water Diversion.

The outcome of this Project, with the new screen and consolidated diversion on the Sacramento River, will be a dramatic reduction in fish mortality. Estimates were calculated of the cumulative (hypothetical) entrainment loss of (1) juvenile chinook salmon (all races); (2) Sacramento

splittail; and (3) a composite list of native fish vulnerable to entrainment at unscreened RD108 diversions over a 20-year period (2001 through 2020).

Estimates of the cumulative entrainment losses were calculated assuming construction of a consolidated pumping plant and positive barrier fish screen to be completed by 2005. It was assumed that entrainment losses after completion of a positive barrier fish screen would be reduced by 95 percent from the unscreened baseline condition. On the basis of the resulting cumulative entrainment loss over the 20-year period of operations, a percentage reduction in fish losses was calculated for the two alternative options, including fish screening compared to unscreened baseline conditions.

Results of the entrainment loss and percentage reduction calculations (Table 1) indicate that the cumulative entrainment losses would be reduced by 76 percent over the 20-year period, assuming construction of a consolidated pumping plant and fish screen facility completed by 2005. The magnitude of fishery benefits (i.e., percentage reduction in entrainment losses) depends, to a large extent, on the schedule of implementing positive barrier fish screens.

Results of this analysis indicate that the consolidation of pumping plants and addition of a fish screen offer substantial biological benefit in reducing the mortality of both migratory and resident fish species inhabiting the Sacramento River.

TABLE 1

Summary of Estimated (hypothetical) Fish Losses at the Consolidated Pumping Facility and Fish Screen Diversions over the 20-year Period of 2001 to 2020

Taxon	Baseline	Cumulative Fish Losses	Percent Reduction in Losses from Baseline
Chinook Salmon	18,580	4,459	76
Splittail	1,920	461	76
Composite of Selected Species	45,260	10,862	76

Notes:

Fish densities are based on average monthly entrainment monitoring data observed at the unscreened RD108 Wilkins Slough Pumping Plant during 1996.

Positive barrier fish screens are assumed to reduce fish losses by 95 percent from baseline conditions.

C9. Stakeholders and Interested Parties:

- RD108 Landowners
- NOAA – Fisheries
- California Department of Fish and Game
- U.S. Bureau of Reclamation
- California Department of Water Resources
- U.S. Fish and Wildlife Service

C10. Consistency with CALFED ERP Goals:*

1). Identify Project Applicability to Eco-Elements

Primary: Water Diversions

Secondary: N/A

(*) See Attachment 1 for Instructions.

2). Identify Project Applicability to ERP Goals and Objectives: The proposed project is applicable to ERP goal 1: “Endangered and Other At-risk Species and Native Biotic Communities”. Objective 1 is met by the implementation of the proposed combined pumping plant and fish screen.

3). Identify Project Applicability to Environmental Water Quality Constituents:

Primary: N/A

Secondary: N/A

C11. Related Projects*

1). If this project is related to another restoration project, identify other projects by number and program (e.g. CALFED, CVPIA), and if CALFED, identify that relationship by category:

- **Continued Project/Phased Project:** Project No. ERP-02D-P69, Wilkins Slough Positive Barrier Fish Screen Sediment Removal Project: CALFED/CVPIA
- **Continued Project/Phased Project:** Project No. ERP-02-P10-D, Combined Pumping Plant and Fish Screen Project Design: CALFED/CVPIA

PART D. Budget Summary

D1. Budget

This funding proposal requests CALFED to fund a portion of Task 3 construction only. The remaining tasks will be funded by RD108 or the U.S. Bureau of Reclamation. The following is the Construction Cost Estimate for Task 3.

RECLAMATION DISTRICT NO. 108

Combined Pumping Plant/Fish Screen Project

Item	Description	Estimate
1	Pumping Plant/Fish Screen Approach Roads	\$790,000
2	Pumping Plant & Fish Screen Structure	\$6,110,000
3	Sediment Removal System	\$669,000
4	Prepurchase Sheet Pile	\$1,214,000
5	Prepurchase H-Pile	\$711,000
6	Pumping Plant/Fish Screen Civil & Site Work	\$251,000
7	Pumping Plant/Fish Screen Power to Site	\$112,000
8	Afterbay	\$405,000
9	North Canal	\$1,470,000
10	North Canal Structures	\$307,000
11	North Canal Hwy 45 Siphon	\$278,000
12	North Canal Bridge	\$30,000
13	South Canal	\$2,338,000
14	South Canal Structures	\$854,000
15	South Canal Bridges	\$91,000
16	Boyers Bend Lift Station	\$774,000
17	Tyndall Mound Lift Station	\$70,000
18	Field 66D Lift Station	\$0
19	Tile Drains	\$226,000
20	Demolition of Existing Canal and Structures	\$162,000
21	Demolition of Boyers Bend Pumping Plant	\$120,000
22	Demolition of Howells Landing Pumping Plant	\$164,000
23	Demolition of Tyndall Mound Pumping Plant	\$222,000
	Subtotal	\$17,368,000
24	Permanent Easement 30 acres @ \$5,000/acre	\$150,000
25	Construction Easement 25 acres @\$2,000/acre	\$50,000
	Total	\$17,568,000

Notes:

- 1) The 100 construction cost estimate is based on the 100 percent design, dated May 3, 2005.
- 2) Line items 24 through 25 will be funded by RD108.

PART E. Project Location Information

E1. Project Location: The proposed project is located approximately 45 miles northwest of Sacramento on the west bank of the Sacramento River, approximately 1 mile downstream from RD108's existing Boyers' Bend Pumping plant.

E2. County or Counties Project is Located In: Colusa County and Yolo County

E3. ERP Eco-Region, Eco-Zone, and Eco-Unit Project is Located In:*

ERP Eco-Region: Sacramento Valley

Eco-Zone: 3.4 Colusa to Verona

Eco-Unit Project is Located In: 3.4 Colusa to Verona

E4. Project Centroid:

Latitude/Longitude Coordinates: 38.945/-121.837

E5. Project Map:

See attached.

E6. Digital Geographic File:*

See attached.

E7. Congressional District: CD 03

PART F. Environmental Information

F1. CEQA/NEPA Compliance

1). Will this project require compliance with CEQA, NEPA, both, or neither:*

Both

2). Is your project covered by either a Statutory or Categorical Exemption under CEQA or a Categorical Exclusion under NEPA:* No

3). If your project requires additional CEQA/NEPA analysis, please indicate which type of documents will be prepared:

- Environmental Assessment/FONSI

4). If the project will require CEQA and/or NEPA compliance, identify the lead agency(ies).

- CEQA Lead Agency: Reclamation District 108
- NEPA Lead Agency (Must be a Federal Agency): U.S. Bureau of Reclamation

5). If your project is not covered under items 2 or 3, and you checked no to question 1, please explain why compliance is not required for the actions in this proposal:

6). If the CEQA/NEPA process is not complete, please describe the estimated timelines for the process and the expected date of completion:

The NEPA process should be completed in early October 2005 with Reclamation issuing a FONSI. The CEQA process should be completed in November 2005.

7). If the CEQA/NEPA document has been completed, what is the name of the document:

F2. Environmental Permitting and Approvals

Please indicate what permits or other approvals may be required for the activities contained in your proposal and which have already been obtained. Please indicate all that 1) are needed, and 2) if needed, have been obtained:

1). Local Permits and Approvals

- Conditional use permit
- Variance
- Subdivision Map Act
- Grading permit
- General plan amendment
- Specific plan approval
- Rezone

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- Williamson Act Contract cancellation
- Other:

2) State Permits and Approvals:

- Scientific collecting permit
- CESA compliance: 2081 Required – in process
- CESA compliance: NCCP
- 1601/03 Required – completed
- CWA 401 certification Required – in process
- Coastal development permit
- Reclamation Board approval Required – in process
- Notification of DPC or BCDC
- Caltrans Encroachment Permit Required – in process
- Regional Water Quality Control Board Required – completed

3) Federal Permits and Approvals:

- ESA compliance Section 7 consultation Required – in process
- ESA compliance Section 10 permit Required – in process
- Rivers and Harbors Act
- CWA 404 Required – in process
- Other

PART G. Land Use Questionnaire

G1. Land Use Changes

1). Do the actions in the proposal involve physical changes in the land use, or potential future changes in land use (Yes/No): Yes

- If yes, describe what actions will occur on the land involved in the proposal.

Land use will remain agricultural. Approximately 30 additional acres will be utilized for irrigation water conveyance and delivery facilities.

- If no, explain what type of actions are involved in the proposal (i.e., research only, planning only).

2). How many acres of land will be subject to a land use change under the proposal:

30 acres

3). Is the land subject to a land use change in the proposal currently under a Williamson Act contract (Yes/No):

Yes

4). For all lands subject to a land use change under the proposal, describe what entity or organization will manage the property and provide operations and maintenance services.

The property to be acquired will be the site of the proposed pumping plant and irrigation conveyance facilities that will be owned and operated by Reclamation District No. 108.

5). Does the applicant propose any modifications to the water right or change in the delivery of the water (Yes/No): Yes

- If yes, please describe the modifications or changes:

No changes in water rights. Delivery of water will be consolidated from three diversion points into a single diversion point on the Sacramento River. Therefore, an application for change in point diversion will be required.

G2. Current Land Use and Zoning

1). What is the current land use of the area subject to a land use change under the proposal:

Current Land Use: Agricultural General

2). What is the current zoning and general plan designation(s) for the property:

Current Zoning: EA-Exclusive Agriculture

General Plan Designation: Agriculture

3). How is the land categorized on the Important Farmland Series (IFL) maps (published by the California Department of Conservation):

- Current land use: Agriculture General
- Current zoning: EA-Exclusive Agriculture
- Current general plan designation: Agriculture
- Mapping Category on the IFL Series Map: Irrigated Farmland (I)

G3. Land Acquisition

1). Will the applicant acquire any land under the proposal, either in fee or through a conservation easement (Yes/No): Yes

- If yes, describe the number of acres that will be acquired and whether the acquisition will be of fee title or a conservation easement:
- Total number of acres to be acquired under proposal: 30
- Number of acres to be acquired in fee: 0
- Number of acres to be subject to conservation easement: 0

2). For land acquisitions (fee title or easements), will existing water rights be acquired (Yes/No):

No

G4. Land Access

1). Will the applicant require access across public or private property that the applicant does not own to accomplish the activities in the proposal (Yes/No): No

- If yes, attach written permission for access from the relevant property owner(s).

PART H. Qualifications

H1. Qualifications

Richard Jenness, P.E., RD108 Engineer

Mr. Jenness is a Registered Civil Engineer in the State of California, a consulting engineer for RD108, and President of Laugenour & Meikle, Civil Engineers. He has more than 33 years of experience in the planning, design, and construction of water resource projects. Mr. Jenness has been involved in planning and designing fish guidance facilities on the Sacramento River, and he has been responsible for preparing fish screen appraisal studies and assisting in Project management of fish screen projects.

Mr. Jenness continues to work on behalf of RD108 and Sutter Mutual Water Company in reviewing the design, engineering drawings, and specifications for construction for three fish screen projects.

Charles Hanson, Ph.D., Senior Fishery Biologist

Dr. Hanson has more than 28 years of experience in freshwater and marine biology studies and is the Senior Biologist, Principal for Hanson Environmental, Inc. Dr. Hanson has been the senior fishery biologist and environmental permit coordinator for the RD108 Wilkins Slough Positive Barrier Fish Screen project, the RD108 combined pumping plant/fish screen project, and the Sutter Mutual Water Company Tisdale Positive Barrier Fish screen project.

Dr. Hanson has contributed to the study, design, analysis, and interpretation of fisheries, stream habitat, and stream flow (hydraulic) data collected in the evaluation of in-stream flow requirements and potential fishery impacts on salmonid spawning, production, survival, and migration success associated with water project development and operations. He has conducted site-specific evaluations of the effectiveness of various water diversion screening systems, passage facilities, and operational modifications in reducing organism losses while maintaining operational reliability of the system. Dr. Hanson has been extensively involved in incidental-take monitoring and investigations of endangered species, development of recovery plans, consultations, and preparation of aquatic habitat conservation plans. He also participated in the development of adaptive management programs, including real-time monitoring and management of power plant cooling water and other diversion operations, and the San Joaquin River Vernalis Adaptive Management Plan.

Peter Rude, P.E., Project Manager

Mr. Rude has more than 18 years of experience as an agricultural/civil engineer. He is responsible for managing multidiscipline teams for a variety of fish screen, irrigation, agricultural water supply, water reclamation, and watershed management projects.

Mr. Rude has been the Project Manager for the RD108 Wilkins Slough Positive Barrier Fish Screen. The RD108 combined Pumping Plant/Fish Screen Project and the SMWC Tisdale Positive Barrier Fish Screen Pumping Plants Project. At Tulare Irrigation District, Mr. Rude was the Project Manager for design, environmental documentation and permitting support, contract documents, bid services, and construction management for lining 9.7 miles of the Main Intake Canal.