ERP DIRECTED ACTIONS

Northern Pike Containment System at Lake Davis

Reference
Ecosystem Restoration Program
Prop 50 Bond Funded
Project No. DFG-05####

Prepared by:
Leslie Pierce
Department of Water Resources
Fish Passage Improvement Program
901 P Street, P.O. Box 942836
Sacramento CA 94236
(916) 651-9630

PART A. Cover Sheet

A1. Proposal Title: Northern Pike Containment System at Lake Davis

A2. Lead Applicant or Organization:
Contact Name: Leslie Pierce
Address: Department of Water Resources (DWR), Fish Passage Improvement Program, P.O. Box 942836, Sacramento CA 94236
Phone Number: (916) 651-9630
Fax Number: (916) 651-9607
E-mail: lpierce@water.ca.gov

A3. Project Manager or Principal Investigator
Contact Name: David Panec
Agency/Organization Affiliation: DWR, Operations and Maintenance
Address: P. O. Box 942836, Sacramento, CA 94236
Phone Number: (916) 653-0772
Fax Number: (916) 654-5554
E-mail: dpanec@water.ca.gov

A4. Cost of Project: Request for new ERP Prop 50 funding: $2,000,000. Full project cost is $4.26 million.

A5. Cost Share Partners:

1) Fish Passage Improvement Program
Department of Water Resources
Leslie Pierce, Senior Environmental Scientist
P.O. Box 942836
Sacramento CA 94236-0001
Phone: (916) 651-9630
Fax: (916) 651-9607
lpierce@water.ca.gov

Total Cost Share: $260,000
Type: Cash

2) Division of Operations and Maintenance
Oroville Field Division
Department of Water Resources
Maury Miller
460 Glen Drive
Oroville, CA. 95966
Phone: (530) 534-2425
Fax: (530) 534-2420
maury@water.ca.gov

Total Cost Share: $2.0 million
Type: Cash

A6. List of Subcontractors:*

The following sub-contracts will be written for this project:

- Task 3: Construction of Containment Structure (entity to be identified): $660,000: (Prop. 50 Funds)
- Task 3: Intake diving inspections during bar rack installation (entity to be identified): $15,000: (Prop. 50 Funds)
- Task 5: Waste removal and disposal (entity to be identified): $40,000 (Prop. 50 Funds)

The subcontractor for the construction of the containment structure will construct and install the containment structure at Lake Davis according to DWR final design drawings and environmental permits. The sub-contractor will fabricate the pipes; conduct site demolition including dewatering, clearing, concrete removal, and excavation; install pipes, strainers and concrete pipe-supports; and test the final installed system. Another subcontractor will be selected to conduct diving inspections of the intake during bar rack installation.

DWR will also hire a subcontractor (yet to be identified) to dispose of the debris that collects in the strainers, and for various maintenance activities. The amount of the subcontracts for maintenance of the strainers will be approximately $288,540. DWR seeks funding of $40,000 in Prop. 50 Funds to help fund that subcontract.

A7. Other Cooperators:*

Not applicable

A8. Project Topic Area*

Primary: Non-native Invasive Species
Secondary:

A9. Project Type*

Primary: Full-scale implementation
Secondary:

PART B. Executive Summary

B1. Proposal Title: Northern Pike Containment System at Lake Davis (Plumas County)

B2. Project Description:

Northern pike (*Esox lucius)* are a nonnative invasive fish species that has had a significant impact on the sport trout fishery at Lake Davis and that, if they escape from Lake Davis, could have irreversible negative impacts on California aquatic ecosystems within the San Francisco Bay-Delta, the Sacramento/San Joaquin river systems, and many other waters throughout California. One impact on ecosystems where nonnative northern pike have been introduced has been the decline of salmonid stocks. The proposed project is designed to confine northern pike within Lake Davis and its upstream tributaries, and to minimize, as a result of regulated releases through the dam and into Big Grizzly Creek, the chance of allowing expansion of the northern pike population into the streams and watersheds downstream of Lake Davis. In addition, DWR will continue reservoir operations that minimize the potential of unregulated spill. Both of these measures should decrease the risk of pike escapement until the Department of Fish and Game (DFG) can successfully eradicate pike from the reservoir.

After evaluating several options, DWR selected a northern pike containment system for Lake Davis discharges. Water discharged through the outlet will flow through six to eight mesh-basket "strainers," each containing multiple baskets with 1.0 millimeter (mm) openings (Figure 1). Each basket will be reinforced to prevent bursting. The 1.0 mm openings will catch northern pike eggs, larvae, and juvenile and adult fish. After passing through the strainer system, the pike-free water is released into Big Grizzly Creek. The new containment system, once installed, would operate 24 hours a day, year round. The containment system is designed to operate for 5 years. DWR assumes that the DFG will eradicate the northern pike population from Lake Davis within that time period. If the DFG does not eradicate pike or chooses instead to manage the pike population within the lake, the containment system, with additional modification, could operate indefinitely.

System Components

The existing 30-inch outlet pipe at the outlet works will be extended downstream to the Cipolletti weir. Water will be diverted off this pipe into six to eight strainers (Figure 1 and Drawing 1). Water will exit the strainers and flow through a second pipe and discharge downstream of the Cipolletti weir (Drawing 1). During normal operation, all flow will pass through the pipes leading to the strainers.

The 30-inch grater that is currently on the end of the outlet pipe will be placed on the end of the pipe extension at the Cipolletti weir. During emergency flow releases, water will flow through the pipe extension with the grater. In addition, emergency release water will also flow through

the strainers. Because some emergency release water will only flow through the pipe with the grater, small fish and eggs could still escape from the reservoir during an emergency release. Flow to each strainer and through the pipe extension will be controlled manually by a series of valves (Drawings 1 and 2).

At the start of construction, the existing 10-inch stream-release outlet pipe will be extended from the outlet building to the release point downstream of the Cipolletti Weir. The 10-inch pipe will be used as a temporary release during construction and until the strainers have been tested and are online. The existing 10-inch grater will be fitted on the end of the extended 10-inch pipe, killing any larger fish that may be entrained from the reservoir. Small fish and eggs could still escape from the reservoir during the temporary, construction releases. The temporary 10-inch pipe extension will be supported by 2 ft x 2 ft pipe supports in the streambed. Once the strainers are online, the 10-inch pipe extension will be removed along with the supports.

Each strainer houses multiple mesh-baskets perforated with 1.0 mm openings within a reinforced steel case. The strainers will be 3 feet in diameter and 5 feet tall. The six to eight strainers will be located within the streambed immediately downstream of the existing outlet's energy dissipating wall and upstream of the Cipolletti weir (Photo 1). The strainers will sit upon individual concrete footings constructed on the cleared surface of the existing streambed. The strainers, fed by the 24-inch line, will have a combined maximum discharge of 190 cubic feet per second (cfs). The strainers will have the capability to discharge 10 to 23 cfs, matching the minimum stream-release requirements.

The strainers and emergency release will discharge immediately downstream of the Cipolletti weir onto existing rock (Photo 1). The rock in this area is large enough and in sufficient density to prevent down cutting of the stream and erosion of the bank. We anticipate no significant increase in the siltation of Big Grizzly Creek due to strainer or emergency releases. Existing rock downstream of the Cipolletti weir will stabilize the bank, prevent erosion, and dissipate energy.

Once the strainers are operational, staff will check the strainers daily to determine if the baskets need to be cleaned of debris. If necessary, the debris and waste from the baskets will be removed and taken to the Intermountain Disposal Company's transfer station in Delleker, CA (one mile west of Portola on Highway 70) and trucked to a county landfill in Lockwood, Nevada. Redundant strainers and extra baskets will prevent interruption in desired flow releases. The mesh-baskets will be light enough to allow one person to remove them from the strainer casing during cleaning.

Figure 1. View of typical mesh-basket strainer.

Model 510 Multi-Basket Strainer

Sizes 8" to 36" • Iron or Carbon Steel • Flanged

Compact Design

Features:
- Four Baskets per Strainer
- Bolted cover
- Straight through flow design
- Compact
- Threaded drain
- Standard perforated stainless steel basket

Options:
- Basket perforations from 1/32" to 1/2"
- Basket mesh from 20 to 400
- Monel baskets
- Vent Valves
- Drain Valves
- 1/4" NPT taps
- Basket flange gaskets
- Cover lift davit
- Bronze or stainless steel construction
- Magnetic basket inserts
- Pressure differential gauges and switches

The Model 510 Simplex Strainer is designed for larger piping systems having flow rates up to 40,000 gpm. Unlike other large size simplex strainers the Model 510 has a multi-basket design. Four strainer baskets per unit strain the process media and give the strainer an extremely high dirt removal capability – an important consideration in larger size strainers that, because of their size and design, take longer for basket cleaning or change out. The longer the strainer stays in service between cleaning, the less expensive its operating costs.

To reduce the pressure loss to an absolute minimum the Model 510 has a straight through flow configuration. This is made possible by a unique basket design that incorporates a slanted top to permit straight through flow.

The use of four baskets, rather than one or two, helps to keep operating costs low because the overall size of each basket can be smaller. This means that cleaning is a one person job. Two or more operators, or lifting tackle, are not needed to lift the baskets out of the strainer housing. To make this job even easier and quicker the Model 510 can be ordered with a special cover lifting davit with which the operator can raise the strainer cover and swing it out of the way for access to the strainer baskets. The four basket design of the Model 510 provides an additional benefit as well: the centerline to bottom and centerline to top dimension of the strainer are very short – creating a low-profile design that is ideally suited for installation in cramped quarters.

For large size piping systems with high flow rates the Model 510 offers significant advantages over ordinary large size strainers...advantages that will improve performance and reduce operating costs over the life of the strainer.

Dimensions (in / mm)

Pipe Size	A	B	C	D	E	F	G	Dry Wt lb / kg Iron	Bronze
8	23.35 / 591	11.63 / 295	9.13 / 232	20.13 / 511	38 / 965	18.00 / 457	18.50 / 470	547 / 248	684 / 311
10	26.13 / 664	13.06 / 332	11.38 / 289	23.75 / 603	44 / 1118	20.25 / 514	21.00 / 533	730 / 332	914 / 415
12	29.00 / 737	14.50 / 368	14.63 / 372	28.38 / 721	52 / 1321	22.25 / 565	22.75 / 578	1080 / 491	1353 / 615
14	30.50 / 775	15.25 / 387	16.75 / 425	31.25 / 794	60 / 1524	24.63 / 626	25.13 / 638	1360 / 618	1702 / 774
16	33.50 / 851	16.75 / 425	19.13 / 486	35.50 / 902	68 / 1676	27.13 / 689	27.75 / 705	1750 / 795	2191 / 996
20	44.75 / 1137	22.00 / 559	28.50 / 724	46.25 / 1175	88 / 2235	32.75 / 832	34.75 / 883	3330 / 1514	4169 / 1895
24	44.38 / 1127	22.19 / 564	31.50 / 800	52.25 / 1327	98 / 2489	36.63 / 930	38.50 / 978	4550 / 2068	5697 / 2589
30	61.50 / 1562	30.75 / 781	41.63 / 1057	66.50 / 1689	125 / 3175	47.50 / 1207	47.50 / 1207	8880 / 4036	11117 / 5053
36	62.00 / 1575	31.00 / 787	41.63 / 1057	66.50 / 1689	125 / 3175	47.50 / 1207	47.50 / 1207	9700 / 4409	12144 / 5520

Dimensions and weights are for reference only. Contact Hayward for certified drawings.

Selection Chart

Size	Material	End Connections*	Gasket	Pressure Rating
8" to 36"	Iron	Flanged 125#	Non-Asbestos	125 psi @ 100F
8" to 24"	Carbon Steel	Flanged 150#		150 psi @ 100F
8" to 16"		Flanged 300#		300 psi @ 100F

* DIN flanges available

C_V Factors*

Size	Value	Size	Value	Size	Value
8"	1600	14"	4800	24"	13000
10"	2500	16"	5800	30"	19000
12"	3500	20"	9000	36"	23000

* For water with clean, perforated basket

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There are four existing seepage holes that release 4-15 gallons per minute (gpm) from Grizzly Valley Dam. The holes release seepage that collects in the toe drain of the reservoir and are necessary to maintain the integrity of the dam. During construction, the weep holes will be manifolded into a pipe that will extend downstream to the Cipolletti weir and discharge the seepage water onto the existing rock.

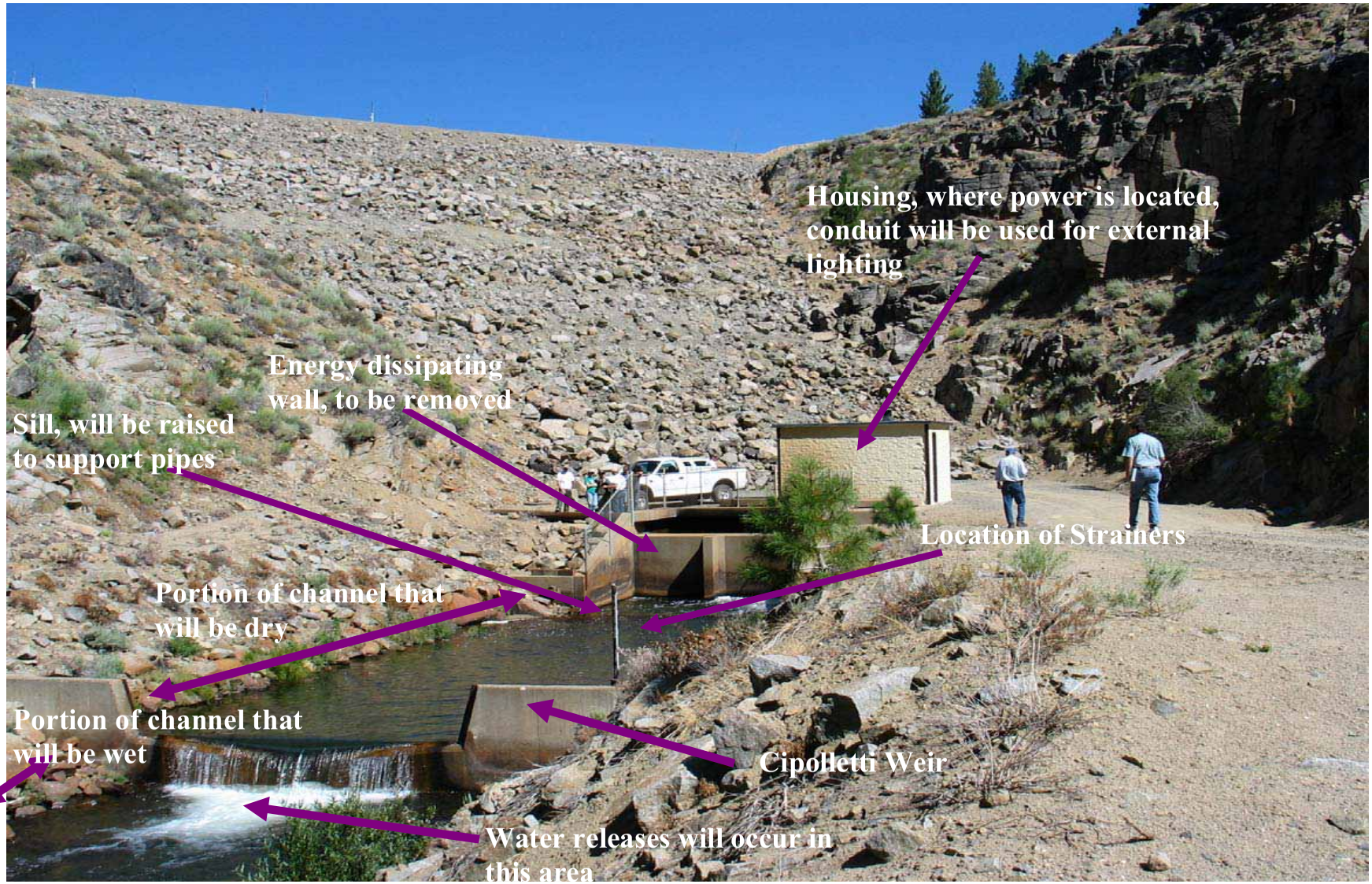
The emergency discharge pipe, the strainers stream release pipe, and the seepage flow pipe will rest on supports anchored in the streambed. The total discharge from the strainers will be measured using either acoustical or ultrasonic flow meters. After installation of the strainer system, all discharges will occur downstream of the Cipolletti weir (Photo 1).

Power currently at the site is enough to run the strainer system. A conduit will be added to the existing circuit in the control building adjacent to the outlet to provide power for external lighting.

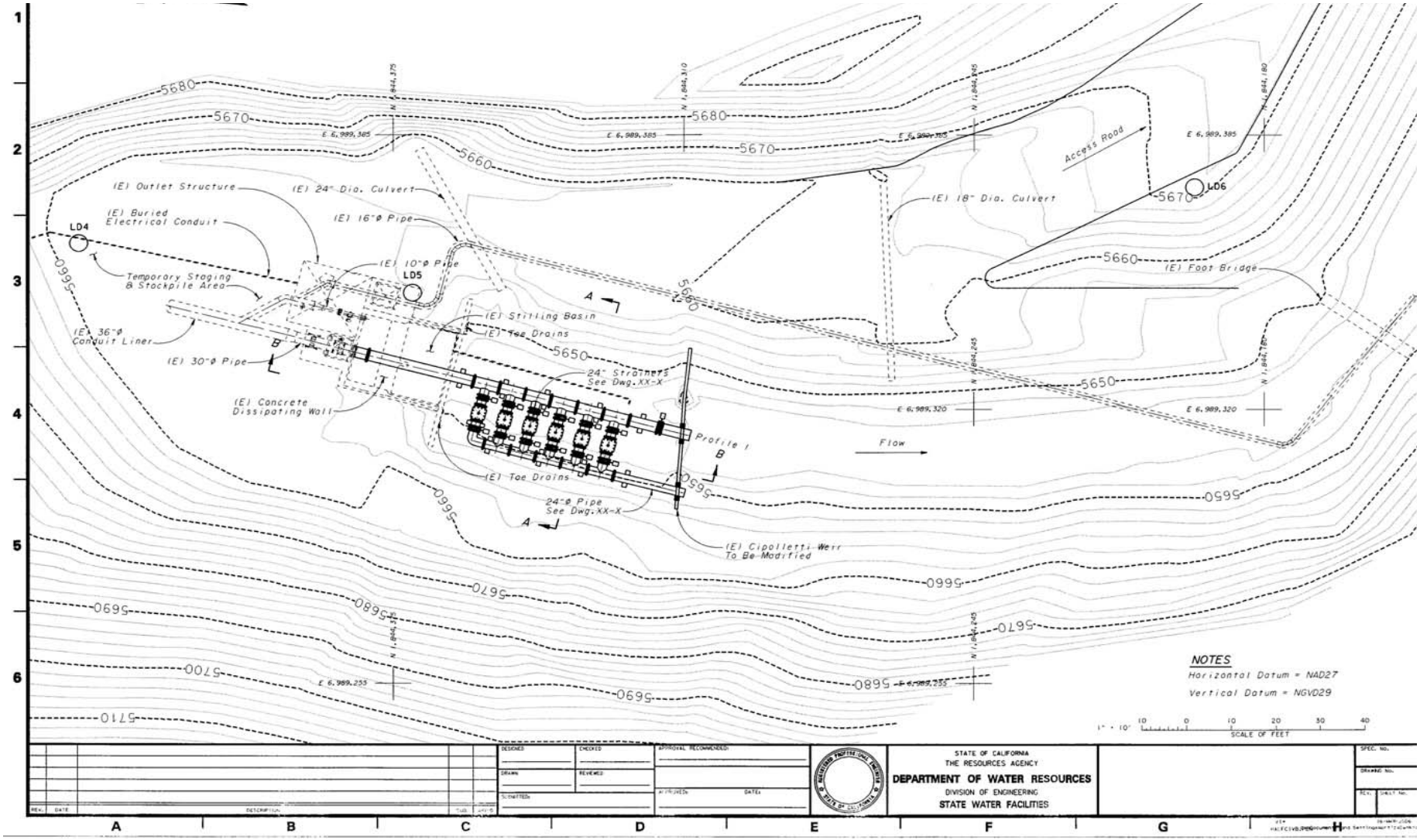
New trash racks will be installed over the existing trash racks on the mid-level and low-level intakes in Lake Davis. The new trash racks will decrease the current openings to 2 inches. The purpose of the trash racks is to prevent large fish and debris from entering the strainers, and to reduce organic loading in the discharge water.

DWR will subcontract with a private contractor to construct the strainer system at the Grizzly Dam outlet in August 2006 through November 2006. The strainers should be operational before the end of 2006.

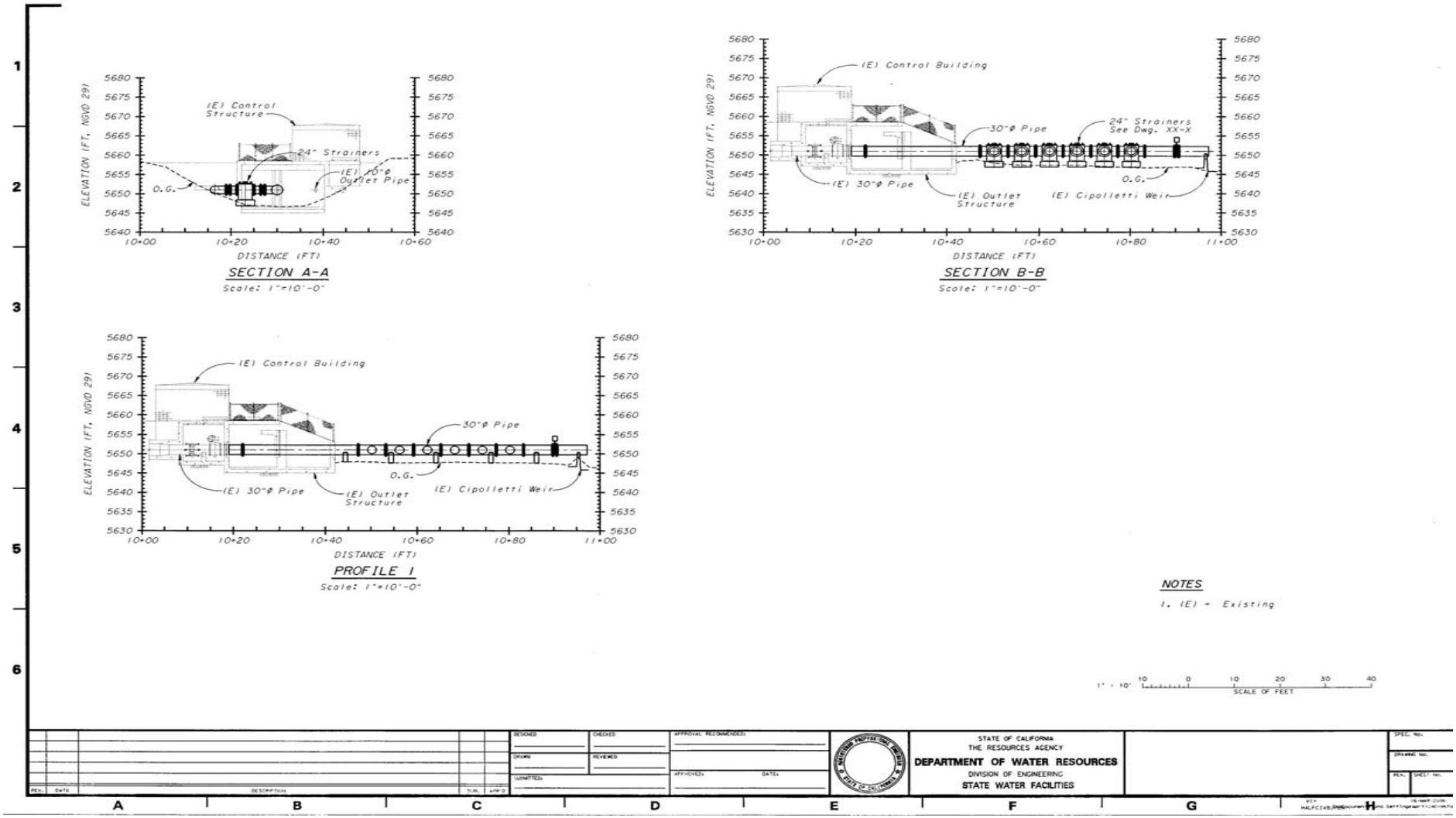
Photo 1. Location of northern pike containment system components.



Drawing 1. Project Plan Overhead View.



Drawing 2. Project Plan Profile View



PART C. Work Plan

C1. Project Background and Information:

Lake Davis is located in Plumas County, California, at approximately elevation 5,775 feet above sea level within the upper reaches of the Middle Fork Feather River watershed of the Sierra Nevada Mountains. Lake Davis is a reservoir of the State Water Project created by the construction in 1966-68 of Grizzly Valley Dam (crest elevation 5785 feet) on Big Grizzly Creek, which is tributary to the Middle Fork Feather River, Lake Oroville and the Feather River, the Sacramento River, and the Sacramento-San Joaquin Delta. Lake Davis impounds 84,371 acre-feet with a surface area of 4,025 acres at its maximum pool elevation of 5,775 feet. The reservoir has an average depth of 21 feet and its greatest depth is 108 feet, just upstream of Big Grizzly Dam. The reservoir is operated by DWR, and lies within the U.S. Forest Service Plumas National Forest.

Lake Davis water is used for recreation, irrigation, and for the benefit of fish and wildlife. The reservoir supports a trout fishery managed by the DFG. In the past, Lake Davis has been a source of domestic water for the City of Portola and the Grizzly Lake Resort Improvement District. Prior to the October 1997 chemical treatment for pike eradication, Lake Davis was taken offline as a source of domestic water, and continues to be offline pending improvements to the water treatment plant. Currently, neither entity currently uses Lake Davis as a water supply, and nearby residences depend on groundwater from private wells.

Northern pike are a nonnative invasive fish species illegally introduced to California. Pike can seriously impact aquatic ecosystems by heavy predation on other fish species. Experience in Alaska (http://www.sf.adfg.state.ak.us/region2/areas/anch/html/pikepage.stm) and elsewhere suggests that where habitat conditions are favorable, introduced pike have the potential to cause irreversible environmental impacts and become the dominant fish species, often to the exclusion of native fish species. Portions of the Feather River, Sacramento River, and the Sacramento-San Joaquin Delta, as well as many aquatic environments in other California watersheds, match the preferred habitat of the northern pike in terms of temperature, aquatic vegetation, current speed and other features. The geographical extent of northern pike in California is thought to be limited to one upstream site, Lake Davis and its tributary streams.

Within the Sacramento-San Joaquin Delta system, several species of fish have life history stages and habitat preferences which make them potentially vulnerable to pike predation. These include the state- and federally-listed out migrating juveniles of winter- and spring-run Chinook salmon, steelhead, and delta smelt. In portions of other watersheds, in both riverine, lake and reservoir environments, a variety of fish species, including stocked trout, are vulnerable to pike predation. This threat is recognized by the state and federal governments, State Water Contractors and the CALFED Bay Delta Program in the Strategic Plan for Ecosystem Restoration.

The DFG applied rotenone (a naturally derived chemical with piscicidal properties) to Lake Davis in 1997 in an attempt to eradicate the northern pike population. Northern pike were rediscovered in Lake Davis in 1999. Since the rediscovery, the DFG has used a variety of

methods to control the growth of the northern pike population in Lake Davis and prevent escapement into other waterbodies. Details on the DFG's efforts to control the pike population can be found at http://www.dfg.ca.gov/northernpike/.

In addition, the DWR has operated Lake Davis to minimize the chance of spill and thus release northern pike or their eggs into downstream waters. Fish "graters" were installed at the Lake Davis outlet in 1996. The graters kill most fish that leave the reservoir through the outlet works, but may allow escapement of juvenile fish and eggs. Since the population of northern pike continues to grow in Lake Davis, the DFG and the DWR need greater assurance that northern pike, including adults, larvae, and eggs, do not have the opportunity to move downstream where all hope and possibility of eradication will be lost.

In July 2005, the DFG requested the DWR's assistance in dealing with northern pike at Lake Davis by developing a containment structure to prevent fish and eggs from escaping into Big Grizzly Creek downstream of Grizzly Valley Dam. This proposal is in response to that request.

C2. Project Goals and Objectives:

The goal of the Containment Project is to plan, prepare, and construct a structure to confine northern pike in Lake Davis and its upstream tributaries thus preventing their downstream spread through the outlet and reducing the chances of northern pike being relocated to other California waters. Reasons to pursue this project include the following:

- If pike enter Lake Oroville, then there will be a potential pike invasion of the Sacramento-San Joaquin Delta that could lead to future listings of threatened and endangered species and increase the possibility of extinctions. Additional listings of threatened and endangered species and the concomitant decrease in those populations, would decrease take limits at the federal and State pumping plants, and hamper all water management within the Delta watersheds with severe impacts to State Water Contractor deliveries.
- The containment structure will be designed to last five years. The structure will have a five year life span because the DWR is assuming that the DFG's proposed Lake Davis Pike Eradication Project will be a success.
- With some modification the structure could be operated for on-going containment if northern pike continue to reside in the reservoir beyond the five-year time period. The current funding request will cover design through construction and 3 years of operation. Additional funding will be needed for operations beyond June 2010 if they are required.
- As owner and operator of the dam and reservoir, administration of design, and construction of the containment structure will be performed by the DWR. The containment structure will be owned by the DWR.

C3. Approach/Methodology:

The proposed project will be divided into five tasks. They include:

1. Planning, Preliminary Design, and Design
2. Permitting

3. Construction (includes contracts and pre- and post work)
4. Environmental Monitoring
5. Operational Monitoring, and Operation and Maintenance of the Structure
6. Project Close Out

C4. Tasks and Deliverables:

Task 1. Project Management and Administration, Planning, and Design. The DWR will evaluate options for containing all life stage of pike. This includes assessing feasibility, comparing costs, preparing preliminary designs and preliminary drawings for the options. Additionally, a technical group will convene to provide project oversight. Oversight will include evaluating the options and making final recommendations on the containment option to pursue. The technical group will meet bi-weekly throughout the project design phase and construction phase. Once a containment option is selected, DWR staff will develop the final design of the option. This task includes project management, a conceptual and final scope of work, design, site visits, scheduling (drawing preparation, revision, review and comments), surveys, mapping, specification writing (review, comment resolution, and revisions), advertising and reproduction of specifications and drawings, job walk, bidding and award process, issuance of notice to begin work, designer's memorandum to project engineer, design engineer's criteria, and final design report.

Task 2. Environmental Compliance and Permitting. As part of the permitting process, the DWR will consult with DFG, NOAA's National Marine Fisheries Service, U.S. Fish and Wildlife Service, Regional Water Quality Control Board, Plumas County, and Army Corps of Engineers to minimize project impacts, and prepare a Mitigated Negative Declaration to fulfill California Environmental Quality Act compliance. The DWR will also submit the following environmental permits:

- Clean Water Act Section 404 Nationwide Permit Preconstruction Notice
- Clean Water Act Section 401 permit application
- Department of Fish and Game Section 1600 Agreement application
- Endangered Species Act Section 7 incidental take statement or letter of concurrence

Task 3. Construction. For the construction task, the DWR will provide project management, contract administration, submittals and re-submittals, surveys, inspection at the site of manufacture, work-site inspection, notices of change, preparation and estimating, final construction report, as-built drawings, contractor payments, and submittal reproduction. The identity of the sub-contractor who will construct the containment structure is unknown at this time.

Task 4. Environmental Monitoring. The DWR will develop a monitoring plan, implement monitoring prior to, during, and following construction, and prepare a final monitoring report, if needed.

Task 5. Operational Monitoring, and Operation and Maintenance of the Structure. The DFG will provide staff to visit the containment structure on a daily basis to monitor the system and ensure proper operation. This will include recording system gage pressures and outflow releases. DWR staff will provide on-going operation and maintenance of the structure, including necessary flow changes, flow shut-offs and emergency maintenance when notified by DFG staff. DWR will retain a sub-contractor who will dispose of the debris that collects in the strainers conduct other maintenance activities. The identity of the sub-contractor who will construct the containment structure is unknown at this time.

Task 6. Project Close Out. The DWR will submit a Project Closure Summary Report to summarize project accomplishments. DWR will also submit a final invoice for payment.

C5. Subcontractors:
The identity of the contractor is unknown at this time. The subcontractor will construct and install the containment structure at Lake Davis according to DWR final design drawings and environmental permits. Tasks include:

- Fabricating the pipes
- Conducting site demolition including dewatering, clearing, concrete removal, and excavation
- Installing pipes, strainers and concrete pipe-supports
- Testing the final installed system.

C6. Work Schedule

Task 1. Project Management and Administration, Planning, and Design. August 2005 – June 2006.
Task 2. Environmental Compliance and Permitting. January – June 2006.
Task 3. Construction. May 2006 – December 2006.
Task 4. Environmental Monitoring. April 2006 – June 2008.
Task 5. Operational Monitoring, and Operation and Maintenance of the Structure. November 2006 – June 2008.
Task 6. Project Close Out. 30 to 60 days after June 30, 2008

C7. Special Equipment and Supplies Required:
One ATV, one snowmobile, and skid will be required to ensure access and transport of supplies and materials for routine inspections and operation and maintenance of the containment structure.

C8. Project Impacts (beneficial or adverse):
Northern pike of all life stages will not escape from Lake Davis through the Grizzly Valley Dam outlet works.

Northern pike, rainbow trout, brown bullhead, pumpkinseed sunfish, golden shiner, largemouth bass, brown trout, and brook trout will be directly affected. All life stages of fish will be killed when exiting Lake Davis.

The amount of discharge material and volume of area excavated below the plane of the ordinary high water mark within Big Grizzly Creek will be less than 25 cubic yards. The discharge and excavated area will cause the loss of 0.06 acre of stream habitat.

C9. Stakeholders and Interested Parties:

Northern pike have the potential to negatively impact various fish species within the California Delta System as well as other bodies of water within the State of California. Because of this threat, many individuals and sport fishing clubs support the containment of pike in Lake Davis. The presence of pike is also a concern to the DFG, U.S. Fish and Wildlife Service, U.S. Forest Service, and NOAA's National Marine Fisheries Service who support implementation of a containment project as soon as possible. Plumas County and City of Portola officials also recognize the danger pike present to their local waters as well as other state waters and support the containment of pike in Lake Davis.

C10. Consistency with CALFED ERP Goals:*

1). Identify Project Applicability to Eco-Elements
Primary: Invasive Aquatic Organisms
Secondary:

2). Identify Project Applicability to ERP Goals and Objectives:
The Northern Pike Containment Project will assist Bay-Delta Program agencies in meeting Goal 5 – Nonnative Invasive Species, Objective 7 – Limit the spread or, when possible and appropriate, eradicate populations of non-native invasive species through focused management efforts. By installing the containment structure at Grizzly Valley Dam, all life stages of northern pike will be prevented from leaving Lake Davis through the Grizzly Valley Dam outlet structure.

3). Identify Project Applicability to Environmental Water Quality Constituents:
Primary: N/A
Secondary:

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:

While the proposed Lake Davis Containment Project is an independent project, currently the DFG is conducting the Lake Davis Pike Eradication Project – Planning Feasibility Phase, a project previously approved through the CALFED Bay-Delta Program's Ecosystem Restoration Program (ERP). The Lake Davis Containment Project also compliments other Non-native Invasive Species Control and Containment projects funded by the ERP.

PART D. Budget Summary

D1. Budget

	FY 05/06 AMOUNT	FY 06/07 AMOUNT	FY 07/08 AMOUNT
Personnel Service			
Task 1: Planning, Preliminary Design, and Design	$35,330	$8,545	$8,545
Task 2: Permitting	$3,418	$0	$0
Task 3: Construction	$21,491	$147,027	$0
Task 4: Environmental Monitoring	$0	$105,033	$153,710
Task 5: Operational Monitoring, and Operation and Maintenance of the Structure	$0	$106,418	$601,197
Sub-Total Personnel Services	**$60,239**	**$367,023**	**$763,452**
Benefits [1/]			
Total Personnel Services	**$60,239**	**$367,023**	**$763,452**
Operating Expenses			
General Expenses	$0	$8,000	$0
Software	$0	$0	$0
Office Supplies	$0	$0	$0
Training	$0	$0	$0
Minor Equipment	$0	$0	$26,000
Travel and Per Diem	$3,380	$11,206	$18,700
Printing/Misc	$0	$0	$0
Equipment	$0	$27,000	$0
Rent/Lease	$0	$0	$0
Sub-Contracts	$0	$685,000	$30,000
Total Operating Expenses	**$3,380**	**$731,206**	**$74,700**
Directed Action Total by FY	**$63,619**	**$1,098,229**	**$838,152**
Directed Action Total		**$2,000,000**	

[1/]- Included in Task totals above

See Exhibit B. Budget Detail for more information presented by the tasks described above.

PART E. Project Location Information

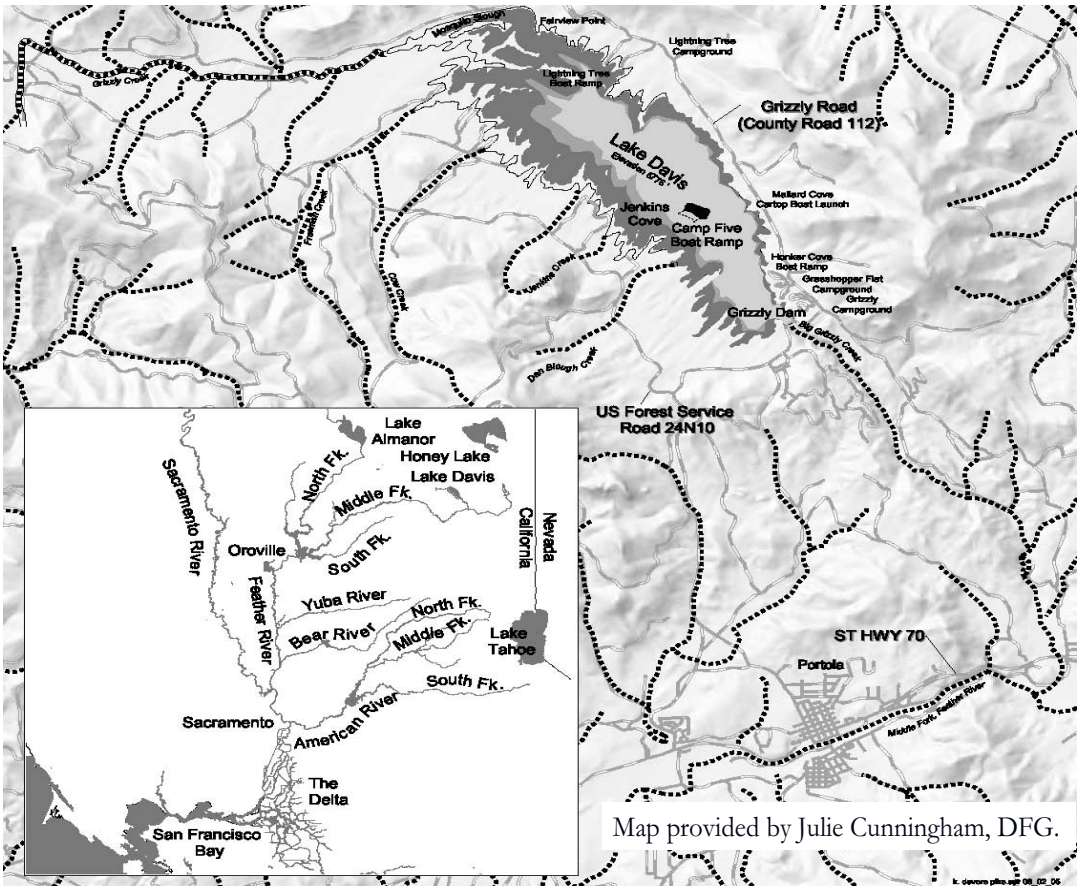
E1. Project Location: Lake Davis, Grizzly Valley Dam Outlet Structure

E2. County or Counties Project is Located In: Plumas County

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

E4. Project Centroid:
Latitude/Longitude Coordinates: Long. -120.05357; Lat. – 40.69336

E5. Project Map:



Map provided by Julie Cunningham, DFG.

E6. Digital Geographic File:*

E7. Congressional District: 4th Congressional District

PART F. Environmental Information

F1. CEQA/NEPA Compliance

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

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:

- Initial Study/Mitigated Negative Declaration

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

- CEQA Lead Agency: Department of Water Resources

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: N/A

6). If the CEQA/NEPA process is not complete, please describe the estimated timelines for the process and the expected date of completion: The Initial Study and Proposed Mitigated Negative Declaration will be prepared January 2006 – March 2006. The thirty day public review period will occur in April 2006. CEQA compliance should be complete in May 2006.

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

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: none
2) State Permits and Approvals:
   - 1601/03 (application being developed)
   - CWA 401 certification (application being developed)
3) Federal Permits and Approvals:
   - ESA compliance Section 7 consultation (in process)
   - CWA 404 (application being developed)

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): No. The project will be constructed at the Grizzly Valley Dam outlet works. The property is owned by the DWR and is being used for reservoir releases from Lake Davis. The land use designation for the property is "Rural Residence – 15 acre plot owned by DWR." The use will not change.

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

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

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 DWR will continue to own and manage the property and provide operation and maintenance services. The DFG will provide operational monitoring once the containment structure is working.

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

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: N/A

2). What is the current zoning and general plan designation(s) for the property:
- Zoning: Lake Zone
- General plan designation: Rural residence – 15 acre plot owned by DWR

3). How is the land categorized on the Important Farmland Series (IFL) maps (published by the California Department of Conservation):
- Current land use: Rural Residence
- Current zoning: Lake Zone
- Current general plan designation: Rural Residence
- Mapping Category on the IFL Series Map: Not included in the area mapped by Department of Conservation for Important Farmland.

G3. Land Acquisition

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

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

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.

PART H. Qualifications

H1. Qualifications

David Panec
Division of Operations and Maintenance
Department of Water Resources

Teresa Sutliff
Division of Operations and Maintenance
Department of Water Resources

Gordon Enas
Division of Engineering
Department of Water Resources

Jimmy Yang
Division of Engineering
Department of Water Resources

T.C. Liu
Division of Engineering
Department of Water Resources

Debbie Carlisle
Division of Planning and Local Assistance
Department of Water Resources

Margie Caisley
Division of Planning and Local Assistance
Department of Water Resources

Tracy Middleton
Division of Planning and Local Assistance
Department of Water Resources

Varda Disho
Division of Planning and Local Assistance
Department of Water Resources

Mike Hendrick
Division of Planning and Local Assistance
Department of Water Resources

Leslie Pierce
Division of Planning and Local Assistance
Department of Water Resources

Ted Frink
Division of Planning and Local Assistance
Department of Water Resources

Gail Kuenster
DPLA - Northern District
Department of Water Resources

Ganesh Panedy
Division of Engineering
Department of Water Resources

Lawrence Janeway
DPLA - Northern District
Department of Water Resources

Kevin Dossey
Oroville Field Division
Division of Operation and Maintenance
Department of Water Resources

Ron Vanscoy
Oroville Field Division
Division of Operation and Maintenance
Department of Water Resources

Doug Rischbieter
Division of Environmental Services
Department of Water Resources

Dave Bogener
DPLA - Northern District
Department of Water Resources

Maury Miller
Oroville Field Division
Division of Operation and Maintenance
Department of Water Resources

Other staff as needed from Department of Water Resources, Division of Operation and Maintenance, Oroville Field Division Civil Maintenance and Plant Maintenance.

EXHIBIT A
SCHEDULE AND LIST OF DELIVERABALES

Northern Pike Containment System at Lake Davis

Task	Task Title	Deliverable	Estimated Completion Dates
1	Project Mgmt & Adm. Planning & Design	• Semi-Annual Progress Report • Monthly/Quarterly Invoice • Subcontract documentation • Final design drawings • Operating criteria • Specifications	Semi-annual report through out the contract term. Due 10th of July, Jan. Drawings, criteria and specifications due December 31, 2006.
2	Environmental Compliance and Permitting	• Mitigated Negative Declaration and Initial Study • CWA Section 401 Water Quality Certification • CWA Section 404 NWP 18 • DFG Streambed Alteration Agreement • ESA Section 7 letter of concurrence	All permits will be provided to DFG 4 months after contract execution.
3	Construction	• Containment structure in place, tested and operational.	• 7 months after contract execution
4	Environmental Monitoring	• Mitigation and Monitoring Plan • Final Monitoring Report	• 2 months after contract execution • 8 months after contract execution
5	Operational Monitoring, and Operation and Maintenance of Structure	• Quarterly system and operation and maintenance documents	• Beginning November 2006 and continuing through June 2008
6	Project Close Out	• Project Close Out Report • Final Invoice	• 30 days prior to end of the contract term • 30 to 60 days after June 30, 2008