

Information on Fish Ladder and Screen Costs for Projects Located in California Assembled by Pacific Gas and Electric Company, October 2007

PG&E reviewed California Department of Fish and Game's May 2, 2007 MEMORANDUM regarding the review of PG&E's fish screen and fish ladder cost estimates for the DeSabra-Centerville Project. The table below gives additional cost information for 24 screen/ladder projects in California including PG&E's constructed screen projects (Potter Valley and Philadelphia). Many of the screen projects in the table have been completed and their actual costs demonstrate that PG&E's range of costs estimates are appropriate for the DeSabra-Centerville Project.

Project Name	Structure	Diversion Capacity (cfs)	Total Cost	Cost/cfs	Reference	Notes
PG&E Built Projects						
Potter Valley	Screen	331	\$16,400,000 (1992\$)	\$49,500	PG&E files; approved job	Completed in 1992; replacement of previous screen
Philadelphia	Screen	59	\$1,300,000 (1994\$)	\$22,000	PG&E files; approved job	Completed in 1994/1995; replacement of previous screen
PG&E Planned Projects						
Stanislaus Power Tunnel	Screen	530	\$9.4 M (2004\$) 2/1/05 estimate Current estimate \$14 - \$20M	\$17,700 \$26,400-\$37,700	PG&E 2/1/05 letter to FERC	Planned construction in 2010-2014
Others/PG&E Planned Projects ¹						
Inskip Diversion Dam (Battle Creek)	Screen and Ladder	220	\$7,204,000	\$32,800	September 2005 Battle Creek Salmon and Steelhead Restoration Project Cost Estimate Summary, USBR	Planned
Eagle Canyon Diversion Dam (Battle Creek)	Screen and Ladder	70	\$6,347,000	\$90,700	September 2005 Battle Creek Salmon and Steelhead Restoration Project Cost Estimate Summary, USBR	Planned
North Battle Creek Feeder (Battle Creek)	Screen and Ladder	55	\$4,508,000	\$82,000	September 2005 Battle Creek Salmon and Steelhead Restoration Project Cost Estimate Summary, USBR	Planned
Others Planned/Built Projects ²						
Durham Mutual Water Company (Butte Creek)	Screen and Ladder	60	\$930,000	\$15,500	Implementation of the Central Valley Project Improvement Act – 10 Years of Progress, May 2004, USBR/USFWS	Complete
Gorrill Land Company (Butte Creek)	Screen and Ladder	120	\$1,551,897	\$12,900	Implementation of the Central Valley Project Improvement Act – 10 Years of Progress, May 2004, USBR/USFWS	Complete in 1999
Rancho Esquon Partners (Butte Creek)	Screen and Ladder	110	\$1,090,000	\$9,900	Implementation of the Central Valley Project Improvement Act – 10 Years of Progress, May 2004, USBR/USFWS	Complete in 1999

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Others Planned/Built Projects ²						
Butte Creek Weir #5 (Butte Creek)	Ladder	70	\$480,000	\$6,860	Implementation of the Central Valley Project Improvement Act – 10 Years of Progress, May 2004, USBR/USFWS	Complete
Maxwell Irrigation District (Sac River)	Screen	80	\$1,545,000	\$19,300	Implementation of the Central Valley Project Improvement Act – 10 Years of Progress, May 2004, USBR/USFWS	Complete in 1997
Meridian Farms (Sac River)	Screen	190	\$2,300,000	\$12,100	Implementation of the Central Valley Project Improvement Act – 10 Years of Progress, May 2004, USBR/USFWS	Final Design
Natomas Mutual Water Company (Sac River)	Screen	630	\$22.8M	\$36,200	Implementation of the Central Valley Project Improvement Act – 10 Years of Progress, May 2004, USBR/USFWS	Final Design
Parrot-Phelan ID/M&T Ranch (Sac River)	Screen	150	\$4,585,000	\$30,600	Implementation of the Central Valley Project Improvement Act – 10 Years of Progress, May 2004, USBR/USFWS	Complete in 1998
Pelger Mutual Water Company	Screen	40	\$278,000	\$6,900	Implementation of the Central Valley Project Improvement Act – 10 Years of Progress, May 2004, USBR/USFWS	Complete in 1996
Pleasant Grove-Verona (Sac River)	Screen	160	\$6,600,000	\$42,200	Implementation of the Central Valley Project Improvement Act – 10 Years of Progress, May 2004, USBR/USFWS	
Princeton-Cordova-Glenn/Provident ID (Sac River)	Screen	605	\$10,958,000	\$18,100	Implementation of the Central Valley Project Improvement Act – 10 Years of Progress, May 2004, USBR/USFWS	Complete in 1999
Reclamation District 108 (Sac River)	Screen	832	\$12,051,000	\$14,400	Implementation of the Central Valley Project Improvement Act – 10 Years of Progress, May 2004, USBR/USFWS	Complete in 2000

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Reclamation District 108 (Sac River)	Screen	377	\$15,000,000	\$44,500	Implementation of the Central Valley Project Improvement Act – 10 Years of Progress, May 2004, USBR/USFWS	Under Construction
Reclamation District 1004 (Sac River)	Screen	290	\$7,250,000	\$25,000	Implementation of the Central Valley Project Improvement Act – 10 Years of Progress, May 2004, USBR/USFWS	Complete in 1999
Sutter Mutual Water District (Sac River)	Screen	1000	\$17.4M	\$17,400	Implementation of the Central Valley Project Improvement Act – 10 Years of Progress, May 2004, USBR/USFWS	Complete in 2007
Wilson Ranch (Sac River)	Screen	30	\$231,000	\$7,700	Implementation of the Central Valley Project Improvement Act – 10 Years of Progress, May 2004, USBR/USFWS	Complete in 1996
Others Planned/Build Projects ³						
Lytle Creek Project	Screen	25	\$750,000	\$30,000	Southern California Edison	Completed in 2006
Santa Ana River #3 Intake	Screen	40	\$1.5M	\$37,500	Southern California Edison	Under Construction

¹ www.battle-creek.net

² www.usbr.gov/mp/cvpia/docs_reports/docs/cvpia_10yr_progress_final.pdf

³ Personal communication with John Irwin, SCE