

**Grant Line Canal**

Year	Installation			Flashboards Adjusted	Notched	Removal		
	Started	Closed	Completed			Started	Breached	Completed
1996	17-Jun	No Data	10-Jul	No Data	N/A	2-Oct	No Data	15-Oct
1997	21-May	No Data	4-Jun	No Data	N/A	26-Sep	No Data	15-Oct
1998	(ii)	(ii)	(ii)	N/A	N/A	N/A	N/A	N/A
1999	15-May	No Data	3-Jun	No Data	N/A	23-Sep	No Data	5-Oct
2000	19-May	No Data	1-Jun	No Data	N/A	1-Oct	No Data	7-Oct
2001	2-May	No Data	6-May	No Data	N/A	11-Nov	12-Nov	18-Nov
2002	1-Apr	No Data	12-Jun	No Data	N/A	14-Nov	16-Nov	25-Nov
2003	1-Apr (xvii) 9-Jun (xviii)	No Data (xvii) 11-Jun (xviii)	23-Apr (xvii) 17-Jun (xviii)	16-Sep	N/A	10-Nov	13-Nov	25-Nov
2004	1-Apr (xvii) 2-Jun (xviii)	9-Apr (xvii) 5-Jun (xviii)	28-Apr (xvii) 9-Jun (xviii)	9-Sep	N/A	11-Nov	12-Nov	6-Dec
2005	2-May (xi)	14-Jul	18-Jul	14-Jul 14-Sep	N/A	7-Nov	15-Nov	30-Nov
2006	7-Jul (xi)	20-Jul	26-Jul	20-Jul 1-Oct	N/A	14-Nov	21-Nov	6-Dec
2007	9-Apr (xvii) 27-Apr (xviii)	17-Apr (xvii) 10-May (xviii)	17-Apr (xvii) 1-May (xviii)	17-Apr (xvii) 10-May (xviii)	21-Sep	6-Nov	8-Nov	29-Nov
2008	19-May (xvii) 23-May (xviii)	2-Jun (xvii) 26-Jun (xviii)	2-Jun (xvii) 27-Jun (xviii)	10-Sep	10-Sep	8-Nov	11-Nov	24-Nov
2009	29-May	24-Jun (xvii) 1-Jul (xviii)	3-Jul	7-Jul	12-Sep	28-Oct	30-Oct	13-Nov
2010	16-May	7-Jul	9-Jul	7-Jul	15-Sep	11-Oct	14-Oct	19-Nov
2011	10-Jun (viii)	14-July (xii)	2-Aug (xiv)	(xiii)	(xiii)	17-Oct	19-Oct	4-Nov
2012	5-Apr	19-Apr (xvii) 5-May (xviii)	7-May	14-Sep	N/A	16-Oct	18-Oct	6-Nov
2013	20-May	6-Jun (xvii) 19-Jun (xviii)	19-Jun	13-Sep	N/A	29-Oct	1-Nov	8-Nov
2014	18-Mar	28-Mar (xvii) 3-Jun (xviii)	5-Jun	(xix)	N/A	30-Oct	4-Nov	26-Nov
2015	30-Mar (xvii) 9-Jun (xviii)	17-Apr (xvii) 18-Jun (xviii)	19-Jun	(xix)	N/A	29-Oct	4-Nov	30-Nov
2016	30-Mar (xvii) 25-May (xviii)	14-Apr (xvii) 8-Jun (xviii)	8-Jun	12-Sep	N/A	25-Oct	28-Oct	17-Nov
2017	(ii)	(ii)	(ii)	N/A	N/A	N/A	N/A	N/A
2018	5-Apr	13-Apr (xvii) 4-Jun (xviii)	24-May	19-Sep	N/A	5-Nov	6-Nov	24-Nov
2019	10-Jul	26-Jul (xviii)	31-Jul	15-Sep	N/A	11-Nov	11-Nov	22-Nov
2020	9-May	1-Jun (xviii)	5-Jun	15-Sep	N/A	11-Nov	11-Nov	24-Nov
2021	3-May	27-May (xviii)	27-May	13-Sep	N/A	13-Nov	13-Nov	30-Nov
2022	20-May	6-Jun (xviii)	7-Jun	13-Sep	N/A	7-Nov	7-Nov	30-Nov
2023	(ii)	(ii)	(ii)	N/A	N/A	N/A	N/A	N/A

- i. Not installed upon DFG's request.
- ii. Not installed due to high San Joaquin River flows.
- iii. Not installed because existing flows and dissolved oxygen levels in the San Joaquin River were sufficient for Chinook Salmon.
- iv. Not installed in accordance with Wanger decision to protect Delta Smelt.
- v. Not installed due to uncertainty about the benefits of installing the barrier to salmonid survival through the Delta.
- vi. Installation delayed due to high flows.
- vii. Completion delayed due to high flows.
- viii. Started south abutment construction to replace culverts, using barge and crane from shoreline.
- ix. Installed non-physical "Bubble Barrier" as a pilot test to prevent salmon from entering Old River.
- x. Not installed non-physical "Bubble Barrier" as planned due to high velocity currents in the San Joaquin River that posed excessively dangerous conditions for divers and ruled out the possibility of installing the necessary equipment on the channel bottom.
- xi. Only above water portion of boat ramps constructed due to high flows. North abutment not installed until full closure of barrier.
- xii. The flashboard structure washed out due to high flows and will be re-constructed at a later date. The weir section elevation had to be reduced to accommodate the high flow. All 6 culverts were in tidal position (closed).
- xiii. The flashboard structure was washed out earlier in the year and the California Department of Fish and Game did not required a notch this year due to high flows.
- xiv. All 6 culvert flap-gates were tied open.
- xv. The weir was raised by one foot.
- xvi. Barrier was breached on an emergency basis, but complete remove wasn't done until providing permit compliance of complete removal to the Corps.
- xvii. Partial barrier closed
- xviii. Fully barrier closed
- xix. Open all year
- xx. Not installed as it is not required in the NMFS BiOp on Long-term Operations of the CVP and SWP.