

Middle River							
Year	Installation			Notched	Removal		
	Started	Closed	Completed		Started	Breached	Completed
1987	No Data	No Data	15-May	No Data	End of Sep	No Data	End of Sep
1988	26-May	No Data	28-May	No Data	23-Sep	No Data	23-Sep
1989	No Data	No Data	12-Apr	No Data	26-Sep	No Data	26-Sep
1990	No Data	No Data	16-Apr	No Data	29-Sep	No Data	29-Sep
1991	4-Apr	No Data	5-Apr	No Data	27-Sep	No Data	27-Sep
1992	8-Apr	No Data	10-Apr	No Data	28-Sep	No Data	29-Sep
1993	14-Jun	No Data	17-Jun	No Data	23-Sep	No Data	24-Sep
1994	23-Apr	No Data	25-Apr	No Data	29-Sep	No Data	5-Oct
1995	8-Aug	No Data	11-Aug	No Data	10-Oct	No Data	10-Oct
1996	18-May	No Data	20-May	No Data	29-Sep	No Data	29-Sep
1997	3-Apr	No Data	7-Apr	No Data	27-Sep	No Data	28-Sep
1998	(ii)	(ii)	(ii)	N/A	N/A	N/A	N/A
1999	15-May	No Data	18-May	No Data	29-Sep	No Data	2-Oct
2000	4-Apr	No Data	6-Apr	No Data	1-Oct	No Data	7-Oct
2001	20-Apr	No Data	23-Apr	No Data	12-Nov	18-Nov	17-Nov
2002	10-Apr	No Data	15-Apr	No Data	20-Nov	20-Nov	23-Nov
2003	12-Apr	15-Apr	23-Apr	17-Sep	7-Nov	8-Nov	10-Nov
2004	9-Apr	12-Apr	13-Apr	23-Sep	9-Nov	10-Nov	12-Nov
2005	10-May	12-May	17-May	15-Sep	7-Nov	8-Nov	9-Nov
2006	5-Jul	7-Jul	8-Jul	1-Oct	17-Nov	18-Nov	20-Nov
2007	7-Apr	10-Apr	10-Apr	21-Sep	19-Nov	20-Nov	29-Nov
2008	19-May	21-May	23-May	10-Sep	5-Nov	5-Nov	9-Nov
2009	19-May	19-Jun	14-Jul	12-Sep	16-Nov	17-Nov	19-Nov
2010	18-May	24-May	24-May	15-Sep	28-Oct	28-Oct	2-Nov
2011	1-Jun	6-Jun	6-Jun	15-Sep	10-Oct	11-Oct	18-Oct
2012	12-Mar	16-Mar	17-Mar	14-Sep	23-Oct	24-Oct	29-Oct
2013	8-May	14-May	15-May	13-Sep	28-Oct	29-Oct	1-Nov
2014	11-Mar	17-Mar	17-Mar	8-Sep	17-Nov	18-Nov	20-Nov
2015	27-Mar	31-Mar	2-Apr	8-Sep	19-Nov	20-Nov	24-Nov
2016	2-Mar	9-Mar	11-Mar (xv)	12-Sep	18-Nov	18-Nov	30-Nov
2017	2-Aug	15-Aug	16-Aug	15-Sep	15-Nov	15-Nov	27-Nov
2018	9-Mar	14-Mar	14-Mar	15-Sep	26-Nov	26-Nov	29-Nov
2019	28-Jun	3-Jul	3-Jul	5-Aug	21-Nov	21-Nov	27-Nov
2020	4-May	9-May	11-May	14-Aug	2-Nov	2-Nov	9-Nov
2021	1-May	15-May	15-May	13-Sep	8-Nov	8-Nov	12-Nov
2022	10-May	18-May	20-May	13-Sep	17-Nov	17-Nov	21-Nov
2023	24-Jul (vi)	26-Jul	27-Jul	15-Sep	14-Nov	14-Nov	17-Nov

- 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.