

EPA calculated total baseline recreational losses to Northern California anglers by multiplying the estimated per trip welfare gain from impingement and entrainment elimination for a given species group by the relevant number of recreational fishing trips in 2001. Similarly, EPA

calculated the total gains resulting from the preferred technology. Table X-28 summarizes results of these calculations. The total value of baseline recreational losses for all species impinged and entrained is \$1,432,645 per year (2002\$), for boat, shore, and charter anglers. The total annual value

of reduced recreational losses with the preferred option is \$790,560 per year (2002\$), for boat, shore, and charter anglers. Table X-28 also presents the discounted values, using EPA's preferred 3% discount rate and OMB's 7% discount rate.

TABLE X-28.—ESTIMATED ANNUAL WELFARE CHANGE TO RECREATIONAL ANGLERS IN NORTHERN CALIFORNIA UNDER THE BASELINE AND POST-COMPLIANCE SCENARIOS (2002\$) —

Species	Total baseline welfare losses			Total welfare gain from reductions in impingement and entrainment baseline losses under the preferred option		
	Before discounting	3% Discount rate	7% discount rate	Before discounting	3% discount rate	7% discount rate
Salmon <sup>a</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A
Sturgeon <sup>a</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A
Flounders .....	\$56,634	\$45,307	\$35,679	\$2,702	\$2,189	\$1,729
Small Game .....	728,909	634,151	532,104	206,584	183,860	157,004
Big Game .....	N/A	N/A	N/A	N/A	N/A	N/A
Bottom Fish .....	77,312	71,900	67,261	59,041	54,908	51,366
Other Fish .....	9,276	7,699	6,772	7,376	5,975	5,458
No Target .....	560,514	465,227	409,175	514,857	471,034	390,994
Totals .....	1,432,645	1,224,284	1,050,991	790,560	663,965	596,551

<sup>a</sup> Impingement and entrainment data are not available for these species.

#### 5. Commercial Fishing Valuation

Table X-29 provides EPA's estimate of the value of gross revenues lost in commercial fisheries resulting from the

impingement of aquatic species in the Northern California region. Table X-30 displays this information for entrainment. As described above, EPA estimates that 0 to 40% of these revenue

losses represent surplus losses to producers, assuming no change in prices or fishing costs. EPA will refine these assumptions for the final rule.

TABLE X-29A.—ANNUAL COMMERCIAL FISHING GROSS REVENUES LOST DUE TO IMPINGEMENT AT ESTUARY FACILITIES IN THE NORTHERN CALIFORNIA REGION

Species	Estimated pounds of harvest lost	Estimated Value of Harvest Lost (in dollars)		
		Undiscounted	Discounted using 3% discount rate	Discounted using 7% discount rate
Anchovies .....	10,156	\$812	\$781	\$744
Cabazon .....	1,019	3,383	2,899	2,401
Croakers .....	97	55	48	40
Dungeness .....	404	623	588	546
Flounders .....	4,606	1,428	1,368	1,294
Herrings .....	25,560	5,368	4,840	4,257
Rock crabs .....	165	188	171	151
Rockfishes .....	38,955	21,425	16,863	12,547
Sculpins .....	147	384	367	345
Smelts .....	1,520	395	375	352
Surfperches .....	3,198	5,020	4,650	4,219
Total .....	85,826	39,082	32,949	26,897

TABLE X-29B.—ANNUAL COMMERCIAL FISHING GROSS REVENUES LOST DUE TO IMPINGEMENT AT OCEAN FACILITIES IN THE NORTHERN CALIFORNIA REGION

Species	Estimated pounds of harvest lost	Estimated Value of Harvest Lost (in dollars)		
		Undiscounted	Discounted using 3% discount rate	Discounted using 7% discount rate
Anchovies .....	0	\$0	\$0	\$0
Cabazon .....	21	69	59	49
Croakers .....	8	5	4	3
Dungeness .....	1,583	2,438	2,301	2,137