

TABLE X-25.—ESTIMATED CHANGE IN CATCH RATES RESULTING FROM THE PREFERRED OPTION FOR NORTHERN CALIFORNIA—Continued

Species	Avg. total catch 1996–2000	Total recreational losses from impingement and entrainment	Change in recreational losses from impingement and entrainment as % of total catch
Other .....	1,442,356	62,760	4.351
All Species .....	5,795,833	315,788	5.449

The willingness to pay values for boat and shore anglers for an additional fish per trip, and for the expected benefits from reducing impingement and entrainment at cooling water intake structures in the Northern California region are shown in Table X-26. Table X-26 shows that boat anglers value most

highly the improvements in catch rates for sturgeon and salmon, followed by flounder and big game fish. Boat and shore anglers show a few notable differences in values. For example, the value for flounders is higher for boat anglers. This can be explained by the fact that most boat anglers target and

catch halibut, a larger species; most shore anglers catch the smaller flounders. The value for flounders is also higher for boat anglers. This can be explained by the fact that most boat anglers target and catch halibut, a larger species; most shore anglers catch the smaller flounders.

TABLE X-26.—PER TRIP WELFARE GAIN FROM IMPROVEMENTS IN FISHING QUALITY AT ALL SITES IN NORTHERN CALIFORNIA (2002\$)

Targeted species group	Per trip welfare gain (2002\$)				WTP for an additional fish per trip (2002\$)	
	Eliminating impingement and entrainment		Reducing impingement and entrainment with preferred technology		Boat anglers	Shore anglers
	Boat anglers	Shore anglers	Boat anglers	Shore anglers		
Flounders .....	\$0.32	\$0.96	\$0.02	\$0.01	\$2.97	\$0.99
Small Game fish .....	1.19	3.37	0.32	0.96	0.76	3.55
Bottom fish .....	0.24	0.11	0.18	0.08	0.75	0.54
Other fish .....	NA	0.58	NA	0.46	NA	1.10
No Target .....	2.66	0.02	2.48	0.00	8.53	0.76
Salmon .....	NA	NA	NA	NA	9.40	10.66
Sturgeon .....	NA	NA	NA	NA	33.5	NA
Big Game fish .....	NA	NA	NA	NA	4.05	NA

As shown in Table X-26, the estimated welfare gains from impingement and entrainment reduction are \$0.02, \$0.32, and \$0.24 per trip for boat anglers targeting flounders, small game and bottom fish, respectively; and \$0.01, \$0.96, \$0.08, and \$0.46 per trip for shore anglers targeting flounders, small game, bottom fish and other species, respectively (all in

2002\$). Anglers targeting small game are expected to experience the greatest welfare gain from reducing impingement and entrainment at cooling water intake structures in Northern California.

EPA then combined the estimated per trip welfare gain from eliminating impingement and entrainment at Northern California cooling water intake

structures with NMFS fishing participation estimates to estimate the annual value to recreational anglers of improved catch rates resulting from reduced impingement and entrainment in the Northern California region. Table X-27 provides the total number of angler days in Northern California by fishing mode and targeted species.

TABLE X-27.—TOTAL NORTHERN CALIFORNIA FISHING TRIPS BY MODE, 2001 AND PERCENT OF ANGLERS TARGETING EACH SPECIES

Total Northern California trips, 2001	Boat mode 920,196		Shore mode 864,178		Charter mode 193,007	
	Percent of Anglers Targeting Each Species by Mode and Number of Trips by Mode and Species					
Salmon .....	34.93%	321,424	1.41%	12,185	27.54%	53,154
Sturgeon .....	8.73%	80,333	1.41%	NA	0.00%	0
Flounders .....	13.86%	127,539	1.86%	16,074	0.00%	0
Small Game .....	7.28%	66,990	22.2%	191,848	1.32%	2,548
Big Game .....	2.12%	19,508	0.83%	NA	0.00%	0
Bottom Fish .....	13.27%	122,110	23.1%	199,625	57.97%	111,886
Other Fish .....	0.03%	NA	1.86%	16,074	0.00%	0
No Target .....	19.77%	181,923	47.34%	409,102	13.18%	25,438