
CHAPTER 4

GREEN BAY ANGLER PROFILE

4.1 INTRODUCTION

This chapter provides data on fishing activity and attitudes for our sample of anglers who actively fished the Wisconsin waters of Green Bay in 1998. These results focus on the 647 anglers who completed both the telephone and mail surveys, and who report over 7,000 Green Bay fishing days and over 18,000 total fishing days in 1998. In this chapter, Green Bay fishing refers to fishing the Wisconsin waters of Green Bay, including all tributaries up to the first dam or obstruction, unless specifically identified otherwise.

The vast majority of anglers active in Green Bay fishing are aware of and show a general knowledge about the PCB FCAs. Anglers express that cleaning up PCBs so that the FCAs can be removed is one of the most important improvements, if not the single most important improvement, that can be made in the Green Bay recreational fishery. Boat launches, improved facilities, and reduced costs are desirable, but much less important than uncontaminated fish and increased catch rates (in that order).

The impacts of PCB contamination and the resultant FCAs are substantial. The majority of current Green Bay anglers indicate that as a result of PCB contamination and FCAs, they have altered their Green Bay fishing behavior. Additionally, over 10% of the sampled anglers that did not fish Green Bay in 1998 express that PCB contamination was a key factor explaining why they did not fish Green Bay in 1998.

These results indicate that the PCB contamination and the FCAs can be expected to result in significant damages to Green Bay anglers and to other anglers who do not currently fish Green Bay.

Section 4.2 provides angler reported data on the number of Green Bay fishing days per Green Bay angler, as well as expenditure data and additional angler characteristics. Section 4.3 provides attitudinal data about the Green Bay fishery as a whole. Section 4.4 discusses anglers' awareness of FCAs, and the impacts of FCAs on recreational fishing behavior and enjoyment are presented in Section 4.5.

4.2 GREEN BAY FISHING ACTIVITY AND EXPENDITURES

Data on the number of days Green Bay anglers fished in 1998 were collected in two parts. First, in the telephone survey anglers were asked how many days they had spent fishing from January 1, 1998, until the time of the telephone interview. Second, in the mail survey they were asked how many days they had fished in 1998 since the day of the telephone interview. The data from these two sources were combined for the total reported days fished in 1998. Unless stated otherwise, the results in this chapter are as reported by respondents and are not adjusted for potential recall, sample, and nonresponse bias (see Section 3.5.4).

The number of reported 1998 fishing days is reported in Table 4-1. These numbers are slightly higher than the reported days in Chapter 3, which were only for fishing activity from January 1, 1998, to the day the telephone survey was completed (between late October and December 1998). As noted in Chapter 3, the total fishing days and Green Bay fishing days estimated in the telephone survey were similar for mail survey respondents and nonrespondents. The number of open-water fishing days by anglers active in Green Bay fishing, as reported in Table 4-1, is used as the basis for the open-water fishing damage computations.¹ In Section 3.5.4, we develop an adjustment factor of 52.8% for potential recall, sampling, and nonresponse biases, and the adjusted numbers, which are reported in the last column of Table 4-1, are used in Chapters 8 and 10 to compute annual damages in 1998 and the present value of damages from 1999 into the future.

These avidity levels are similar to estimates from Bishop et al.'s (1994) study where they found that Lake Michigan anglers averaged 32 fishing days a year with 9 of those days on the Great Lakes. Once adjusted for potential recall, sample, and nonresponse biases, the estimates are comparable to or less than estimates from the 1996 National Survey of Fishing, Hunting and Wildlife Associated Recreation (U.S. DOI, 1998) for anglers active in the Wisconsin waters of Lake Michigan (see Section 3.5.4).

Estimates for Green Bay angling days demonstrate a highly skewed distribution. As seen in Figure 4-1, most individuals fish the open waters of Green Bay only a few times in the season, but many fish almost weekly, and some fish several times a week.

1. These estimates are based on the entire year of fishing, whereas the telephone survey estimates are based on a larger sample of 839 Green Bay anglers (Table 3-14 "Total" column); they omit up to six weeks of potential fishing for some anglers. The mail survey estimates of 9.95 Green Bay open-water fishing days and 24.98 total open-water fishing days, are, respectively, 0.4% and 2.7% larger than the corresponding telephone survey estimates.

**Table 4-1
Number of Days Fishing in 1998 by Mail Survey Respondents
(combined telephone and mail survey data)**

	Reported Days					Adjusted Mean Days ^a
	Mean (SE)	Median	Mode	Minimum	Maximum	
Days fishing open waters of Green Bay	9.95 (0.55)	5	2	1	120	5.25
Days ice fishing on Green Bay	1.18 (0.16)	0	0	0	50	.62
Total days fishing on Green Bay	11.14 (0.63)	6	2	1	142	5.88
Total days open-water fishing — all sites	24.98 (0.98)	20	30	1	180	5.88
Total days ice fishing — all sites	4.07 (0.31)	0	0	0	60	2.15
Total days fishing — all sites	29.05 (1.12)	20	10	1	210	15.34

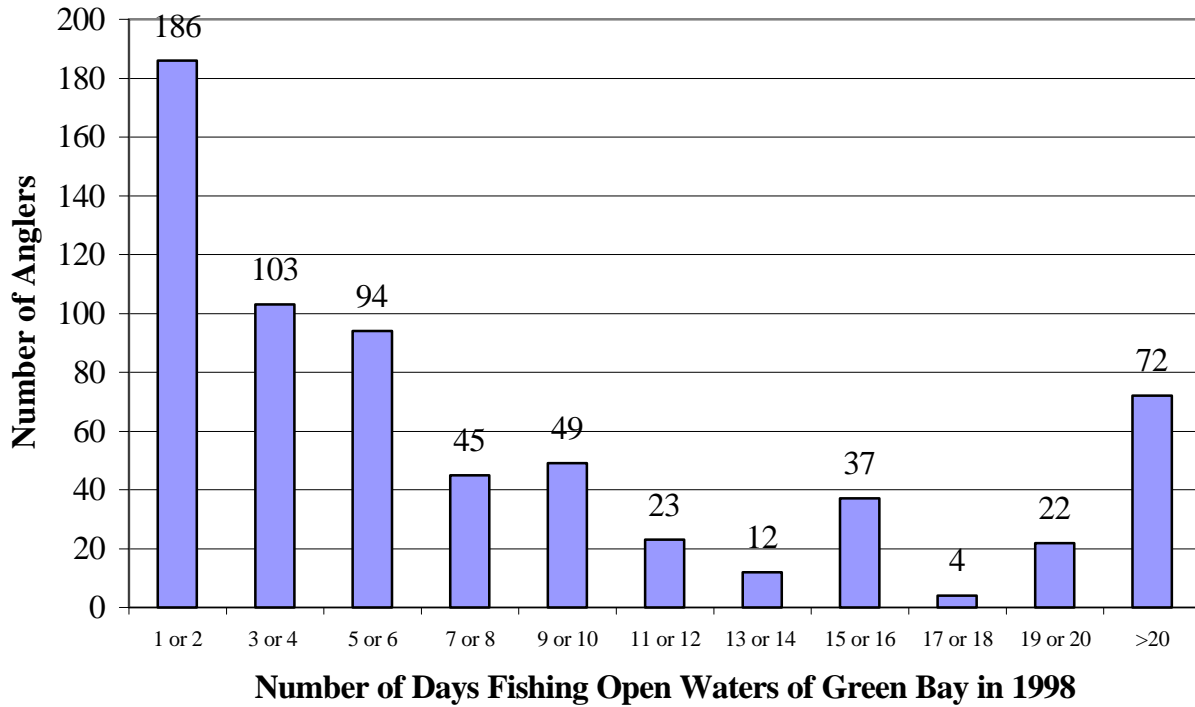
a. Adjusted by a factor of 52.8% for potential recall, sampling, and nonresponse bias (see Section 3.5.4).

Table 4-2 presents per angler estimates of total Green Bay fishing days by angler residence. (The same table for open-water fishing days on the waters of Green Bay is found in Appendix F, Table F-5.) The per angler Green Bay days decrease as the angler’s resident county or state is farther from Green Bay. We separated anglers into four basic distance tiers: anglers in a county adjacent to the bay, anglers in a nonadjacent but targeted county, anglers in a nontargeted county, and anglers who live out-of-state.

The Green Bay anglers in adjacent counties averaged between 12.0 and 20.6 total Green Bay fishing days in 1998, whereas anglers in nonadjacent but targeted counties averaged between 8.5 and 9.4 days. This decline continues with distance. Green Bay anglers from Wisconsin but outside of the eight targeted counties averaged 8.3 days fishing Green Bay in 1998, and those from out-of-state averaged 6.8 days. Notice also that Green Bay anglers from Michigan averaged 22.2 days on the Wisconsin waters of Green Bay in 1998. Almost all these anglers live in Michigan counties that are adjacent to Green Bay. This same pattern can be seen for open-water fishing days (see Appendix F, Table F-1) and ice-fishing days.

Table 4-3 shows the proportion of fishing days in the Wisconsin waters of Green Bay that are on the Lower Fox River (from the dam at DePere down to the mouth of the Bay) for total, open-water, and ice-fishing days in 1998. These data are based on fishing days reported through the

Figure 4-1
Distribution of Reported Number of Open-Water Fishing Days on Wisconsin Waters of Green Bay in 1998, for All Mail Survey Respondents (combined telephone and mail survey data)



telephone survey by the 647 respondents who completed both the telephone and mail survey and omit about 2% of total fishing days reported between the telephone and mail survey. About 13.4% of all fishing days are on the Lower Fox River, with the proportion higher for open-water fishing days than for ice-fishing days. This percentage is higher than the 5% reported for the WDNR creel survey for 1998 (Table 2-2). The reason for this divergence in results is uncertain given the otherwise overall consistency between our results and the WDNR results.² Similar results for all 906 Green Bay anglers completing the telephone survey are found in Appendix F (Table F-6).

In the mail survey, anglers were asked how often they target specific species when fishing on Green Bay. Figure 4-2 shows the distribution of targeting effort. The percent of anglers who

2. It would be difficult to explain this difference with sampling variability in either survey. Other plausible explanations could include differences in how WDNR and our respondents assign days between the Bay of Green Bay and the Lower Fox River, or potential undersampling of the Lower Fox River in the WDNR creel survey.

Table 4-2
Total Number of Reported Fishing Days on Wisconsin Waters of Green Bay in 1998, by Residence, for Mail Survey Respondents (combined telephone and mail survey data)

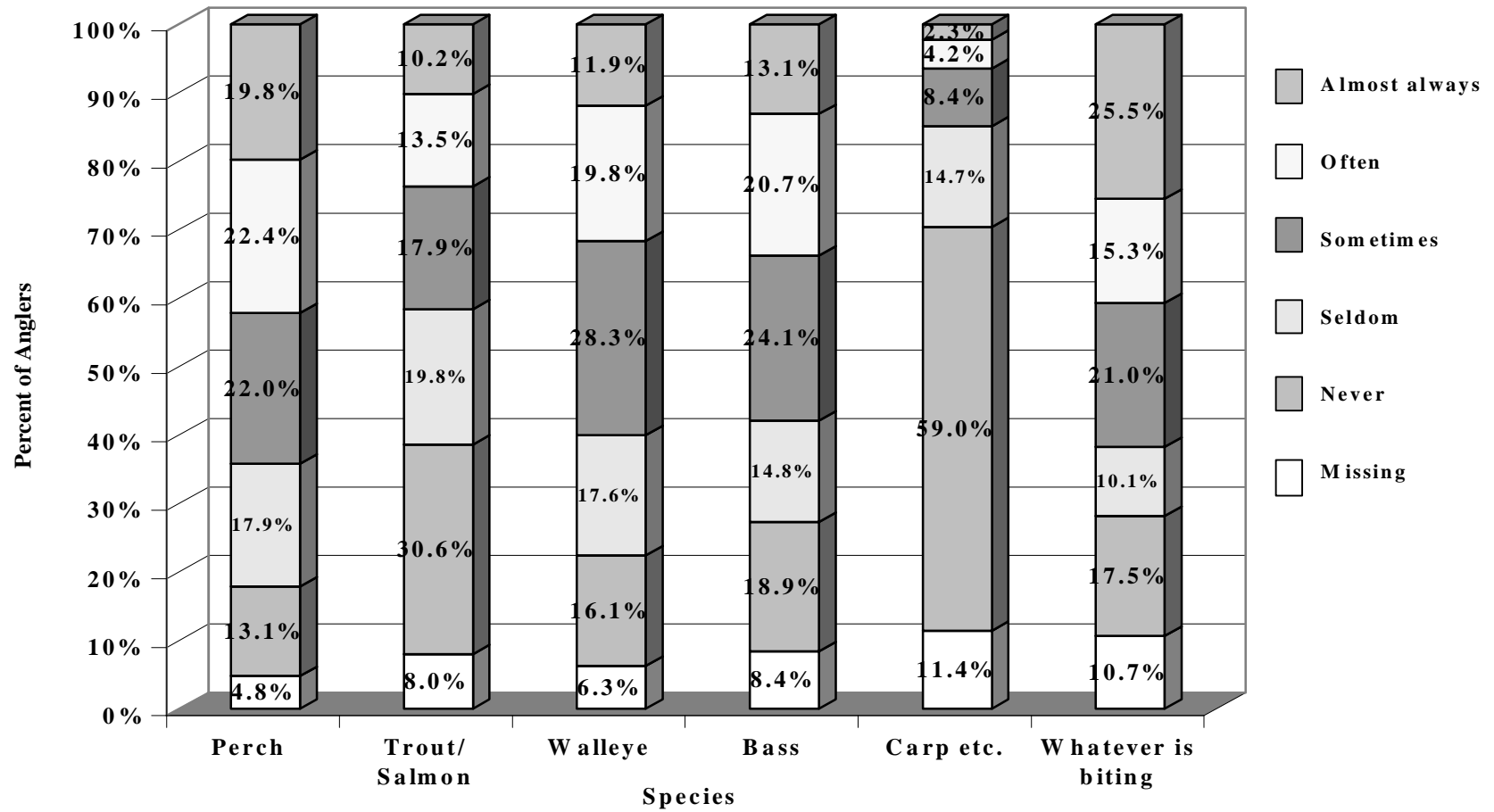
Residence	Number of Anglers	Total Days		Days per Angler				
		Total	% of Total Green Bay Fishing Days	Mean (SE)	Median	Mode	Min.	Max.
Other states								
Total	117	800	11%	6.8 (1.03)	4	2	1	95
Michigan	13	289	4%	22.2 (7.62)	15	1	1	95
Wisconsin, but not eight targeted counties	37	306	4%	8.3 (1.55)	5	2	1	38
Eight targeted counties								
Total	493	6,100	85%	12.4 (0.77)	6	2	1	142
Brown County	195	2,340	32%	12.0 (1.24)	6	2	1	142
Door County	46	947	13%	20.6 (3.7)	11	4	1	100
Kewaunee County	20	345	5%	17.3 (5.60)	7.5	1	1	90
Manitowoc County	49	462	6%	9.4 (1.64)	7	10	1	76
Marinette County	59	773	11%	13.1 (1.64)	9	2	1	60
Oconto County	37	462	6%	12.5 (2.45)	6	3	1	57
Outagamie County	53	450	6%	8.5 (1.46)	3	1	1	50
Winnebago County	34	321	4%	9.4 (3.09)	4.5	1	1	105
All mail survey respondents	647	7,206	100%	11.1 (0.63)	6	2	1	142

Table 4-3							
Number of Reported Fishing Days on the Fox River between the Mouth and DePere Dam as Compared to All Wisconsin Waters of Green Bay in 1998, for Mail Survey Respondents (N = 647)^a (telephone survey data)							
	Sample Days per Angler						
	Total	% of Total Green Bay Fishing Days	Mean (SE)	Median	Mode	Min.	Max.
Green Bay total days							
All sites	7,107	100%	11.0 (0.62)	6	2	1	142
On Fox River	951	13.4%	1.5 (0.28)	0	0	0	130
Green Bay open-water days							
All sites	6,342	89.2%	9.8 (0.55)	5	2	1	120
On Fox River	865	12.2%	1.3 (0.25)	0	0	0	110
Green Bay ice-fishing days							
All sites	765	10.8%	1.2 (0.16)	0	0	0	50
On Fox River	86	1.2%	0.1 (0.05)	0	0	0	20
a. Sample includes anglers who fish the open-water Wisconsin waters of Green Bay. Anglers who only ice fished these waters are excluded.							

“often” or “almost always” target each the four key species is 42% for perch, 34% for bass, 32% for walleye, 24% for trout/salmon, 7% for carp/catfish/whitebass, and 41% for “whatever is biting.”³ Note that the percentages of anglers citing “often” or “always” totals to 180%. Adjusted to the 180% total the perch share, for example, is 23% (42%/180%), which is comparable with the percent of activity identified as targeting perch by the WDNR creel survey (Table 2-6). Note also that a large share of anglers are opportunistic and target whatever is biting (41%). Thus,

3. The nonresponse rate for the different species in this question is much higher than other questions in the survey. This is likely because some respondents who never target a particular species left the answer for that species blank. Only 2 of the 647 respondents left all the species blank. The percentages listed are for all anglers, assuming those who left the response blank for a species do not fish for that species. Omitting missing responses increases the percentages to 44% for perch, 37% for smallmouth bass, 34% for walleye, 26% for trout/salmon, and 46% for whatever is biting. The carp percentage is unchanged.

Figure 4-2
How Often Anglers Target a Specific Species on Green Bay
 (mail survey Question 4)



while in the long-run an angler may be a perch angler, often or always it appears they will end up targeting what they can catch on any individual day.

Table 4-4 shows mail survey respondents’ perceptions on how long it takes to catch various fish species in Green Bay. The order of the perceived catch times per fish (perch, bass, walleye, trout/salmon) parallels the proportions of anglers who target the species (i.e., perch has the lowest catch time and is targeted by the largest group of anglers, and trout/salmon has the highest catch time and is “often” or “almost always” targeted by the fewest anglers).

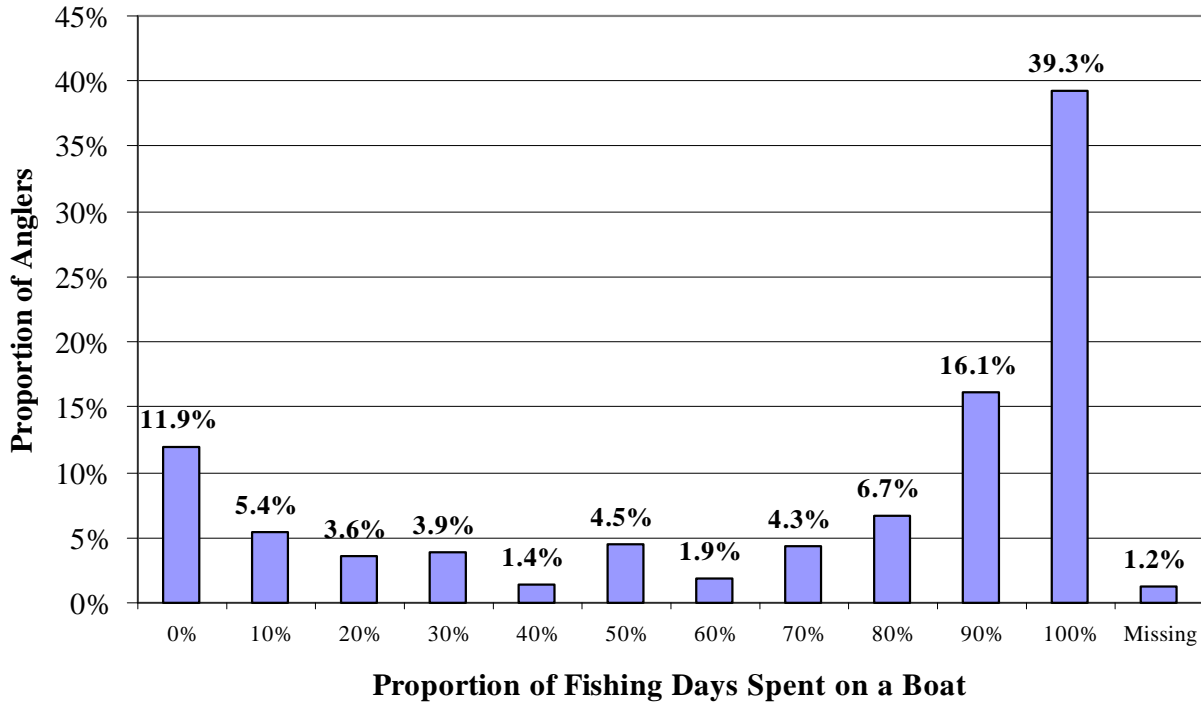
	N	Mean (SE)	Median	Mode	% Missing
Yellow perch	626	0.9 (0.06)	0.5	0.5	3.3%
Trout/salmon	629	2.7 (0.10)	2	2	2.8%
Walleye	625	2.1 (0.08)	1	1	3.4%
Smallmouth bass	617	1.3 (0.07)	0.67	0.5	4.6%

Data from the telephone survey show that 72% of anglers who fished Green Bay in 1998 live in a household where an occupant owns a boat. This compares to 66% of anglers who fished Green Bay, but not in 1998, and 57% of anglers who have never fished Green Bay. The difference between resident Wisconsin anglers and out-of-state anglers was smaller: 65% of the former and 62% of the latter live in households where someone owns a boat.

From the mail survey the majority of the Green Bay anglers spend most or all of their fishing time in a boat (Figure 4-3). About 73% indicate that 50% or more of their Green Bay fishing days are spent in a boat and only 12% report that they never fish from a boat when fishing the waters of Green Bay. These data indicate that about 70% of all fishing effort is from a boat. The percent of angling effort from a boat varies little by the species that anglers are targeting.⁴ These estimates match well with the WDNR 1998 creel survey data, which indicate that about 76% of angling in the

4. Here and for the remainder of the report, targeting is defined as targeting one species “often” or “almost always” and not targeting any other species “often” or “almost always” so as to focus on anglers specifically focused on a species. See Table 5-7 for a tally of sample anglers by this definition of targeting.

Figure 4-3
Percent of Green Bay Fishing Days Spent on a Boat
(mail survey Question 5)



waters of Green Bay are from a boat (defined as hours under the categories of ramp, moored, and charter).

Anglers who fish by boat report an average of 2.5 people (including themselves) in the boat for a typical trip. The minimum was 1 person and the maximum was 5 people. The average number of people in a boat varies somewhat among those who target different specific species: 2.6 for perch targeters, 2.8 for trout/salmon targeters, 2.1 for walleye targeters, 2.2 for bass targeters, and 2.4 for those with no specific target.

In Question 12, anglers report expenses for a “typical” day of fishing on the waters of Green Bay. Anglers report spending an average of about \$74 per day, with a median of \$31 and a mode of \$20. The breakdown of these costs is presented in Table 4-5. The 1996 National Survey (U.S. DOI, 1998) reports a yearly expenditure of \$328 per angler (\$1998) on Great Lakes fishing, with an average of 5 days per angler, resulting in an average of about \$65 per day (\$1998). Bishop et al. (1994) report per capita expenditure per day of \$130 (\$1998) for Wisconsin Great Lakes fishing.

Table 4-5
Typical Expenditures on Green Bay Fishing Days
(mail survey Question 12 mean estimate \$/day)

	Mean	SE	Median	Mode	Min.	Max.	Missing
Gas for vehicle/boat	21.23	6.97	10	10	0	4000	0.9%
Boat launching fee	2.60	0.11	3	0	0	20	0.9%
Motel/hotel	9.12	1.41	0	0	0	500	0.9%
Fishing gear	15.66	4.48	5	5	0	2000	1.1%
Bait	5.73	0.79	5	5	0	500	1.1%
Food and beverages	12.30	1.74	6	10	0	998	0.9%
Guide or charter fees	5.40	1.36	0	0	0	400	0.9%
Other	5.36	3.94	0	0	0	2500	1.1%
Total ^a	74.32	14.84	31	20	0	8705	0.8%

a. This does not equal the sum of the means of the expenditure items. This is the mean of the total expenditures that was calculated by each respondent.

In the mail survey (Q38), anglers were asked, “What do you think is the average daily boat launch fee for the waters of Green Bay?” The mean of the angler estimates is \$4.41, the median is \$4.00, and the mode is \$3.00. The median reported in Questions 12 and 38 are the same, but the mean is lower in Question 12. Question 12 respondents were asked what they actually pay, and over one-fourth of the anglers do not use a boat on their “typical” day of fishing on the waters of Green Bay (Figure 4-3), and others may launch their boats from their own or free boat launches.

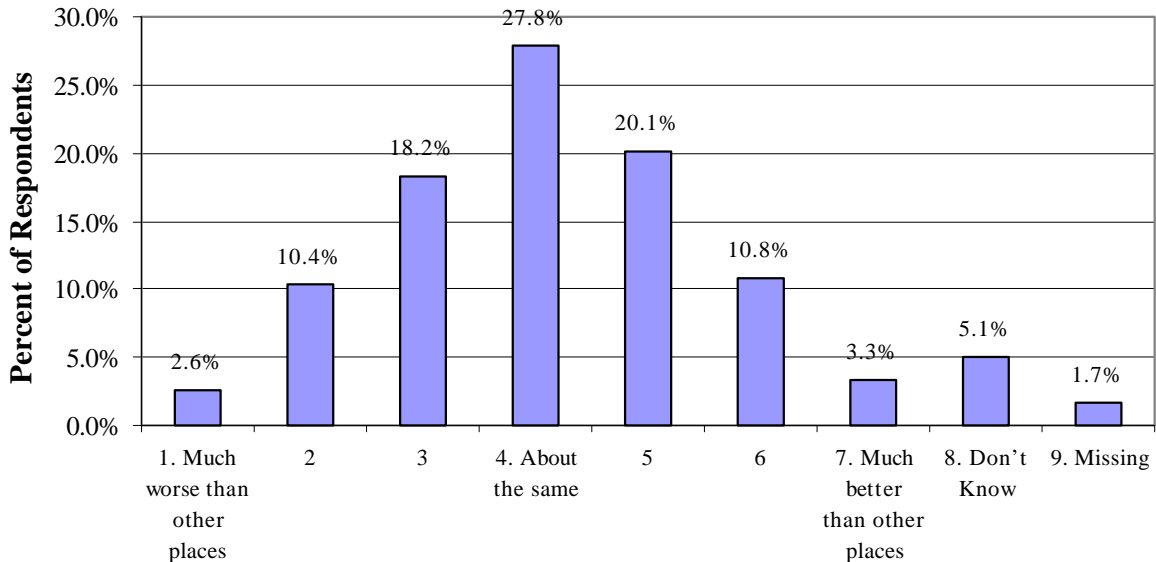
Current Green Bay anglers (those active in Green Bay fishing in 1998) are more likely than other anglers to have a vacation home near Green Bay: 28% of current green Bay anglers own vacation homes, which are on average 90 miles (SE = 12.3) from Green Bay; 29% of anglers who have fished Green Bay in the past, but not in 1998, own vacation homes with an average distance of 107 miles (SE = 8.7); and 25% of anglers who have never fished Green Bay own vacation homes with an average distance of 164 miles from Green Bay. A difference in the location of vacation homes is also seen between anglers who reside in and outside of Wisconsin. About 27% of both groups own vacation homes, but the vacation homes of Wisconsin residents are on average 93 miles (SE = 5.9) from Green Bay, and the vacation homes of nonresidents are on average 266 miles (SE = 30.6) from Green Bay. Compared to all anglers, recent Green Bay anglers are more likely to be male, retired or self-employed, and less likely to be homemakers, but beyond this characteristics are similar to other anglers.

4.3 OVERALL ATTITUDES ABOUT THE GREEN BAY RECREATIONAL FISHERY

Overall Attitudes

Anglers were split as to whether they felt the quality of fishing on Green Bay was currently better (34%), worse (29%), or the same (28%) relative to other places they fish (Figure 4-4). Most feel the Green Bay fishery is as good as or better than other places, which explains why they have remained in the fishery. That the 29% who feel the quality of fishing is worse than other sites have remained active in the fishery is evidence that Green Bay is a unique site to these anglers.

Figure 4-4
Quality of Green Bay Relative to Other Places Respondent Fishes



Green Bay Relative to Other Places

Respondents were asked to write a comment to explain their rating of Green Bay relative to other places they fished. For those who feel Green Bay is worse than other sites, catch attributes, negative conditions at the site (such as weather, the size of, distance to, or facilities on Green Bay) and contamination or pollution problems (including PCBs and not being able to eat the fish) are mentioned most frequently as reasons to prefer other sites (see Appendix F, Table F-4, and accompanying discussion).

In mail survey Question 7, when asked about how important different actions are in terms of enhancing recreational fishing on Green Bay, 70% of anglers indicate that cleaning up PCBs so FCAs could be reduced or eliminated is the most important action resulting in a mean score of 4.4 on a 5 point scale (1 = least important to 5 = most important) (see Table 4-6). The action

ranked

<p align="center">Table 4-6 Angler Rating of Importance of Actions in Terms of How the Actions Would Enhance Recreational Fishing on the Waters of Green Bay (mail survey Question 7 where 1 = Least Important to 5 = Most Important)</p>								
Action	Rating						Mean (SE)	Median
	1. Least Important	2.	3.	4.	5. Most Important	Missing		
Adding more boat launch facilities	31.5%	24.1%	24.1%	10.2%	8.7%	1.4%	2.4 (0.05)	2
Adding more shoreline parks, nature centers, and trails	26.9%	20.6%	23.3%	15.3%	12.2%	1.7%	2.6 (0.05)	3
Increasing water clarity	8.7%	8.8%	20.9%	25.8%	34.2%	1.7%	3.7 (0.05)	4
Increasing catch rates	14.8%	14.8%	23.2%	22.6%	22.9%	1.7%	3.2 (0.05)	3
Cleaning up PCBs so fish consumption advisories can be reduced or eliminated	3.7%	3.3%	9.4%	12.8%	70.0%	0.8%	4.4 (0.04)	5

second in importance is improving water clarity in Green Bay, which is on average given a 3.7 with 34% saying it is a most important action by rating it a 5. Increasing catch rates is ranked third in importance, with an average of 3.2 on the 5 point scale and 23% saying it is a most important action. Adding shoreline parks is ranked as a most important action for only 12.2% of respondents, and adding more boat launch facilities is ranked as a most important action for only 8.7% of respondents. This ranking is consistent with the responses to the telephone survey (discussed in Chapter 3) where all the respondents (Green Bay anglers or otherwise) rank cleaning up contaminants as the most important action, followed by improving water clarity, and then increasing catch rates and providing more boat launches.

For most anglers, improving catch rates is rated as less important than removing PCB contamination from Green Bay. However, catch rates still are important to anglers and their fishing experience. Table 4-7 shows how strongly respondents feel about two catch rate issues. Sixty-five percent of respondents agree that efforts should be made to increase Green Bay catch rates, and 80% of the respondents agree that efforts should be made to ensure that fish populations and catch rates do not decline.

Question 13 directly addresses the relative importance of increased catch rates and reduced PCBs in terms of paying higher fees to support these improvements (Table 4-8). Opinion is mixed about

Table 4-7 Statements about Catch Rates (mail survey Question 8)		
	We Should Increase Catch Rates by Increasing Green Bay Fish Populations	We Should Not Let Green Bay Fish Populations Decline because that Would Cause Catch Rates to Decline
1. Strongly Disagree	4.5%	3.9%
2. Disagree	5.9%	2.8%
3. Neither Agree nor Disagree	24.4%	12.7%
4. Agree	27.1%	21.8%
5. Strongly Agree	37.7%	58.3%
Missing	0.5%	0.6%
Mean Rating (SE)	3.9 (0.04)	4.3 (0.04)

Table 4-8 Statements about Boat Launch Fees in Relation to Catch Rates and PCB Contamination (mail survey Question 13)		
	I Would Be Willing to Pay Higher Boat Launch Fees If Catch Rates Were Higher on the Waters of Green Bay	I Would Be Willing to Pay Higher Boat Launch Fees If the Fish Had No PCB Contamination
1. Strongly Disagree	25.0%	18.2%
2. Disagree	11.9%	8.2%
3. Neither Agree nor Disagree	31.4%	24.1%
4. Agree	18.1%	20.9%
5. Strongly Agree	13.5%	28.4%
Missing	0.2%	0.2%
Mean Rating (SE)	2.8 (0.05)	3.3 (0.06)

paying more to increase catch rates, with similar shares of individuals agreeing, disagreeing, and neither agreeing nor disagreeing. The results are different for PCBs, with about 50% agreeing they would be willing to pay more in fees if the fish had no PCB contamination. This is consistent with other survey responses, which all indicate a higher importance and value placed on cleaning up contamination than on improving catch rates.

These mail survey results are consistent with the earlier telephone survey results, where 82% of both Wisconsin and out-of-state anglers feel being able to catch fish free of contaminants is very important (telephone Question 12), and both groups rank cleaning up contaminants in Green Bay, cleaning up contaminants from inland waters, and improving the clarity of water in Green Bay as highest in importance among actions to improve the quality of fishing in Wisconsin (telephone Question 13).

4.4 AWARENESS OF FCAS

The Green Bay anglers who returned the mail survey are both aware and concerned about FCAs for the waters of Green Bay. Eighty-five percent said they had heard or read about the FCAs before receiving this mail survey. This response is consistent with our focus groups and pretest interviews, in which respondents consistently displayed a high level of awareness of and knowledge about fish contamination.

When respondents were asked how much it would bother them to have various levels of FCAs for the fish they target in Green Bay, 24% were “not at all bothered” by an “Eat no more than one meal a week” restriction, and 8.4% were not at all bothered by a “Do not eat” restriction. Conversely, 28.3% found the “Eat no more than one meal a week” restriction very bothersome, and 77% found the “Do not eat” restriction to be very bothersome (Table 4-9). Note that the most frequent response (mode) for all FCA levels is “very bothersome.”

Angler perceptions of advisory levels are generally consistent with the 1998 published advisories, but do reflect variations across individuals. It is important to note that the advisories vary through time, and vary between the Bay of Green Bay, the Lower Fox River (more severe), and in the Michigan waters of Green Bay (less severe). Table 4-10 shows the levels of advisories that respondents thought were closest to the FCAs. The bold, italicized entries show the actual range for the 1998 Wisconsin advisory levels for Green Bay and the Lower Fox River. The final column shows the percent of respondents whose responses are consistent with the 1998 levels for Green Bay and/or the Fox River. Most perch, trout/salmon, and walleye anglers chose one of the current levels for the species they targeted, but many bass anglers underestimated the smallmouth bass restriction.

Table 4-9
How Bothered Anglers Would Be by Different Levels of FCAs
for the Fish They Target in Green Bay
(mail survey Question 10 where 1 = not at all bothersome to 5 = very bothersome)

Rating	Level of FCAs		
	Eat No More than One Meal a Week	Eat No More than One Meal a Month	Do Not Eat
1. Not at all bothersome	24.0%	11.3%	8.4%
2.	13.3%	6.2%	1.7%
3.	18.6%	18.1%	4.0%
4.	13.1%	19.3%	4.6%
5. Very bothersome	28.3%	42.0%	77.1%
Missing	2.8%	3.1%	4.2%
Mean rating of how bothersome (SE)	3.1 (0.06)	3.8 (0.05)	4.5 (0.05)
Median rating of how bothersome	3	4	5

Anglers who live in the eight targeted counties are more likely to report an advisory level that is consistent with the 1998 Wisconsin advisory than those who do not live in the eight targeted counties (whether they live in other Wisconsin counties or out-of-state). Michigan anglers (about 2% of our sample) are more likely to underestimate the Wisconsin advisory, which is consistent with the fact that Michigan advisories are generally less severe than Wisconsin’s advisories (see Chapter 2 for a comparison). Other anglers in the region may also be influenced by the Michigan advisories.

4.5 IMPACTS OF FCAs

As identified in Chapter 2, PCBs and the resulting FCAs can be expected to impact angler behavior and enjoyment. In our telephone survey we asked anglers who had not fished Green Bay in 1998 why they had not fished Green Bay in 1998 or why they had never fished Green Bay, if they would consider fishing Green Bay if conditions were different and if so, what things would have to change before they would consider fishing Green Bay (telephone survey Questions 10 and 11). About 7.4% of anglers in our telephone sample express that PCBs and FCAs are a key factor in explaining why they did not fish Green Bay in 1998. If these anglers were to become

Table 4-10
Respondent Perception of Current FCAs on Green Bay^a
(mail survey Question 37)

	Unlimited	One Meal a Week	One Meal a Month	One Meal Every 2 Months	Do Not Eat	Missing	Consistent with 1998 Wisconsin FCA Range
Yellow perch							
All anglers	28.1%	52.6%	12.5%	1.6%	3.1%	2.2%	65.1%
Perch anglers ^b	25.6%	61.6%	9.6%	0.8%	0.8%	1.6%	71.2%
Live in 8 county region	28.0%	54.0%	12.4%	1.4%	3.0%	1.2%	66.4%
Trout/Salmon							
All anglers	3.1%	27.2%	48.2%	10.5%	9.0%	2.0%	67.7%
Trout/salmon anglers	3.2%	33.3%	44.4%	11.1%	4.8%	3.2%	60.3%
Live in 8 county region	2.4%	25.2%	50.7%	10.6%	9.3%	1.8%	70.6%
Walleye							
All anglers	6.8%	38.8%	35.4%	10.5%	6.3%	2.2%	52.2%
Walleye anglers	9.6%	30.8%	42.3%	9.6%	7.7%	0.0%	59.6%
Live in 8 county region	5.1%	36.9%	39.4%	11.0%	6.7%	1.0%	57.1%
Smallmouth bass							
All anglers	11.9%	39.0%	30.9%	7.0%	8.4%	2.9%	37.9%
Bass anglers	25.4%	39.0%	22.0%	3.4%	8.5%	1.7%	25.4%
Live in 8 county region	9.9%	38.1%	34.3%	6.9%	8.7%	2.0%	41.2%

a. The bold, italicized percentage numbers indicate the 1998 Wisconsin advisory levels. There is more than one box shaded for each species as the advisory changes relative to fish size and location.

b. This refers to anglers who target perch, those who said they “often” or “almost always” target perch on Green Bay, but do not “often” or “almost always” target any other species. The same approach applies to “trout/salmon anglers,” “walleye anglers,” and “smallmouth bass anglers.”

active in Green Bay fishing, the number of anglers active in Green Bay fishing from our population would increase by about 24%.⁵

Mail survey Question 11 asked “In response to the existing fish consumption advisories for the waters of Green Bay, do you do any of the following?,” and then was followed by a list of potential behavioral responses as identified in Table 4-11. Overall, 77% of respondents identify making one or more of the changes. A significant percent of anglers (30%) change how often they fish in Green Bay and where they fish in Green Bay. Keeping with the FCA recommendation, 40-50% change the target species, change the size of the fish they keep, or change how fish are cleaned or prepared.

<p align="center">Table 4-11 Behavioral Changes in Response to FCAs for Green Bay (mail survey Question 11)</p>		
<i>In response to existing FCAs for the waters of Green Bay, do you do any of the following? . . .</i>	Percent Who Made this Change	Missing
Spend fewer days fishing the waters of Green Bay	30.0%	2.0%
Change the places I fish on the waters of Green Bay	30.6%	1.9%
Change the species I fish for on the waters of Green Bay	22.9%	1.9%
Change the species of fish I keep to eat from the waters of Green Bay	45.0%	1.9%
Change the size of fish I keep to eat from the waters of Green Bay	47.1%	2.6%
Change the way Green Bay fish are cleaned or prepared	45.4%	2.6%
Change the way Green Bay fish are cooked at my house	24.7%	2.8%
Made one or more of these changes	77.4%	1.6%

5. About 5.3% of the telephone sample reported stopping Green Bay fishing because of the advisories, and 2.1% reported they would consider fishing Green Bay if the contaminants and FCAs were removed. The potential increase in Green Bay anglers is 23.6% [(5.3% + 2.1%) / 31.4%].