

NORTHWEST STRAITS FOUNDATION: ESCAPE CORD OUTREACH EVALUATION

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INTRODUCTION

The Northwest Straits Foundation has been participating in education and outreach to recreational crab fishers. The program uses trained volunteers to intercept crab fishers at boat launches during the opening days of crabbing season. Volunteers also walked through marinas to recruit crab fishers to participate in the survey. The volunteers provide a card describing the hazards of derelict gear for sea life and crab populations, along with a free biodegradable escape cord for the crabbers to use with their gear. Volunteers also engage the crabbers, asking if they have heard of escape cords, answering their questions about their use and where to get more. This has been especially effective in areas where there are long lines of boaters waiting to use ramps. Volunteers have found the boaters willing to engage in conversations while they wait.

Prior efforts to assess the program have resulted in good responses. Out of 400 four-question surveys distributed last year, about 100 were returned by mail. These initial efforts have great value since they helped to identify important barriers to use of the cords, including:

- Sunk costs – the crabber already has invested in zip ties or wires to keep the traps shut
- Beliefs that the cord isn't strong enough
- Lack of knowledge regarding how to use the cords
- Beliefs that they won't lose their gear

The 2008 program addressed each of these issues. The goal of the outreach was to increase the portion of crabbers using escape cords from an estimated 70% to 85%. Approximately 5000 cards were distributed in 2007. The position that the NWSF would like crabbers to take is that by using escape cords, they will have more crabs in their pots, and that when they lose gear, they will not be wasting crab by inadvertently capturing and killing them.

APPROACH

Volunteers and program managers generated information about the practices and beliefs of crabbers, yet the program required more systematic, reliable evaluation. Given budget and logistical constraints of the program, a representative random sampling of crab fishers was not feasible. Instead, the NWSF employed an intercept survey model for assessing the impact of its program.

The necessary elements of this research included:

- Design of the evaluation to efficiently and effectively be merged into the outreach and education effort
- Implementation of protocols to assure rigorous application of the research design
- Training of volunteers in the research methods and protocols
- Data entry, analysis and reporting.

RESEARCH METHODS

Volunteer educators approached boaters while they waited at area boat launches. Upon delivering the training, they asked if the participant would be willing to be interviewed for evaluation purposes. The evaluator followed the educator in most instances to provide an opportunity for candor and to separate the education function from the evaluation of the program.

A total of 821 crabbers were surveyed during the opening of crabbing season. More than thirty sites were targeted for the intervention and evaluation with Everett having the most surveys completed. Table 1 shows the number of evaluation surveys returned from each site.

Table 1. Number of crabber surveys by launch site/county				
County		<u>n</u>	<u>% of county</u>	<u>% of total</u>
Clallam	Ediz Hook	19	18	2%
	John Wayne Marina	72	70	9%
	Cline Spit	6	6	1%
	Port Angeles boat haven	3	3	0%
	Port Williams	2	2	0%
	Oysterhouse	1	1	0%
	Total	103	100	13%
Island	Oak Harbor Marina	43	22	5%
	Freeland	12	6	1%
	Cornet Bay	11	6	1%
	Langley	27	14	3%
	Possession	3	2	0%
	Camano Island State Park	98	50	12%
	Honey Moon Bay	3	2	0%
	Total	197	100	24%
Jefferson	Boat Haven- Port Townsend	45	100	5%
San Juan	Island Marine Center	2	6	0%
	Eastsound	2	6	0%
	Deer Harbor Marina	14	40	2%
	Westsound dock	10	29	1%
	San Juan Kings	6	17	1%
	Other	1	3	0%
	Total	35	100	4%
Skagit	Twin Bridges Boat Launch	14	27	2%
	Washington Park Boat Ramp	4	8	0%
	Skyline Boatlift	2	4	0%
	Cap Sante	31	61	4%
	Total	51	100	6%
Snohomish	Kayak	42	14	5%
	Edmonds	26	9	3%
	Dagmar's Marina	16	6	2%
	Ebbey Landing- Marysville	15	5	2%
	Everett Launch	191	66	23%
	Total	290	100	35%
Whatcom	Larrabee boat launch	24	24	3%
	Squalicum boat launch	31	31	4%
	Birch Bay State Park	6	6	1%
	Blaine boat launch	39	39	5%
	Total	100	100	12%
TOTAL		821		100%

FINDINGS

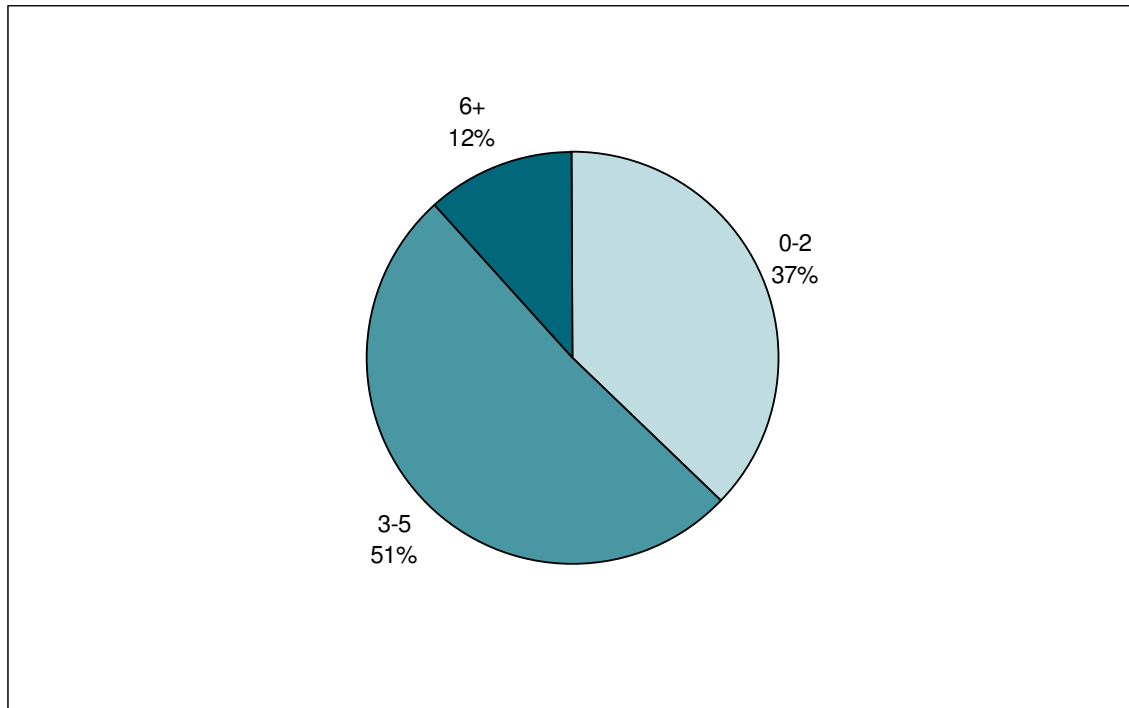
This section provides findings from the survey items. Since the program has been active for several years in some areas but only one year in others, analysis explored whether there were significant differences among areas based on how long the program had been in place. For example, Snohomish County has the longest track record with the program (four years) while Skagit, Clallam, San Juan and Jefferson Counties and parts of Island County were active this year for the first time. Whatcom County and Camano Island (located in Island County) have both been running the program for two years. Analysis showed that responses to surveys in Whatcom County differed significantly from those on Camano Island, so their results are presented separately even though they both have had the program running for two years. Table 2 shows the number of evaluation surveys returned for each group.

Table 2. Number of crabbers by county group		
	<u>N</u>	<u>%</u>
Snohomish (4 year)	290	35
Whatcom (2 year)	100	12
Camano Island (2 year)	98	12
All other counties (1 year)	333	41
Total	821	100

Numbers of crab pots

Boaters were first asked how many crab pots they had with them. Nineteen boaters did not have any crab pots, but still participated in the outreach. Otherwise, most boaters (51%) had three to five crab pots with them. The maximum number of pots was 100. Several mentioned having rings, rather than pots.

Figure 1. Number of crab pots boaters had with them (n=816)

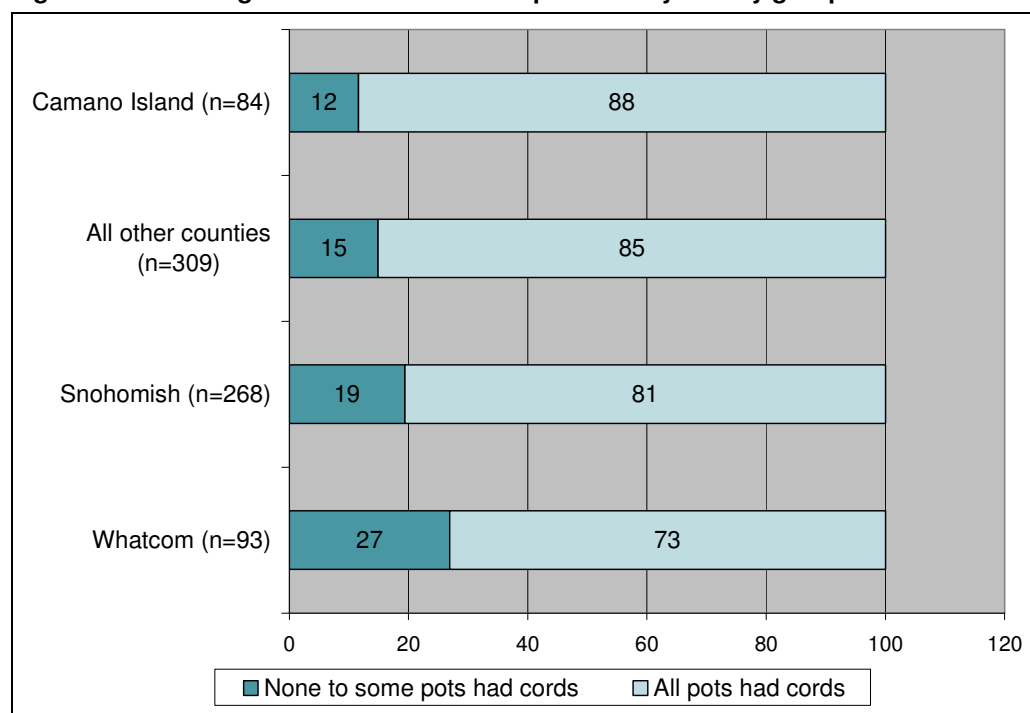


Escape cord use

The large majority of crabbers (87%) had escape cord with them. Of those who had escape cords, 82% had it on all of their pots.

Analysis examined whether crabbers without escape cords on all their pots were more prevalent in areas where the program was more short lived (the one-year implementation sites, listed in Table 2 above). Significant differences were apparent, but not necessarily based on length of the program. Whatcom County (with two years implementation) was least likely to have crabbers using escape cords on all their pots (73%), while Camano Island (also with two years of implementation) had the highest percentage of crabbers using escape cords on all of their pots (88%) (see Figure 2). This finding suggests differences in program administration or the crabber population account for more than simply the length of the program.

Figure 2. Percentage of crabbers with escape cords by county group

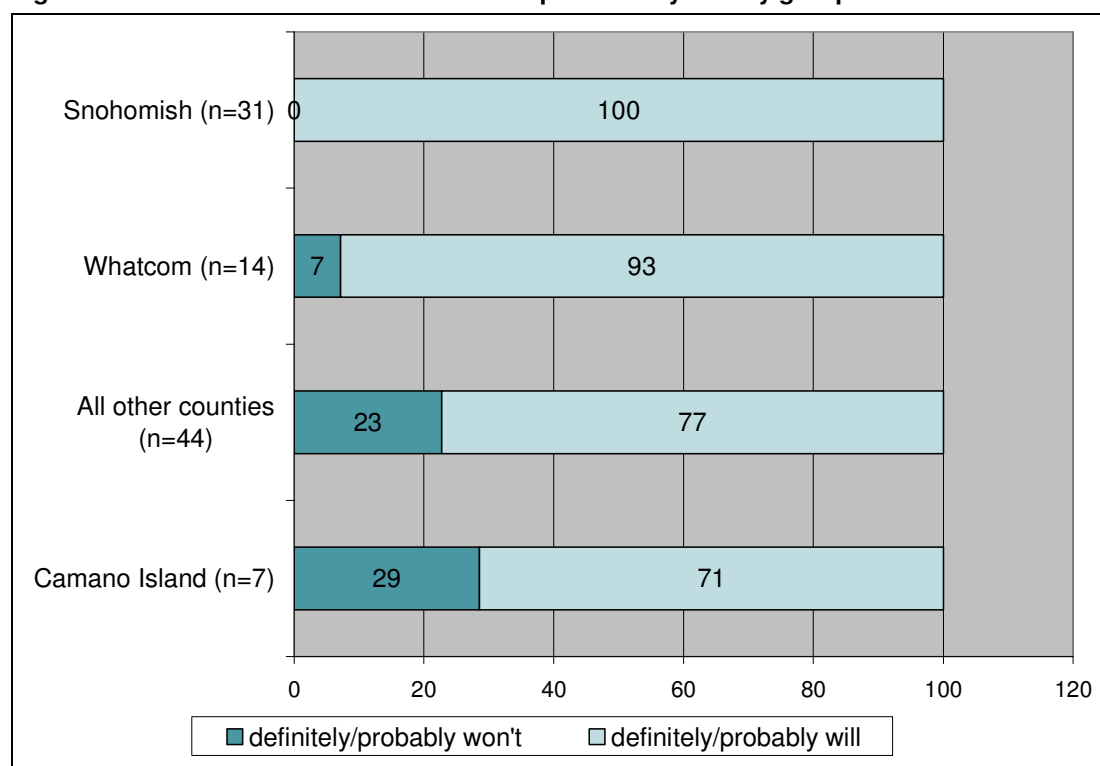


A substantial minority of crabbers said they had not used escape cord prior to this year (24%), though half of those were using escape cord this year. Almost all of the crabbers (98%) said they *probably* or *definitely* would use escape cord in the future. Most of those not using cord this year said they *probably* or *definitely* would use escape cord on all their pots in the future

(87%). Among all respondents who said they would not, the most common reason was that some of their pots did not require them (they used rings or other types of gear).

Additional analysis shows significant variation among county groups. Where just five of the seven Camano Island crabbers not using a cord this year indicated that they *definitely* or *probably* would use escape cords in the future (71%), all 31 crabbers surveyed in Snohomish county said they would (see Figure 3). Again, analysis reveals significant differences between Whatcom County and Camano Island, despite their similarity in program length.

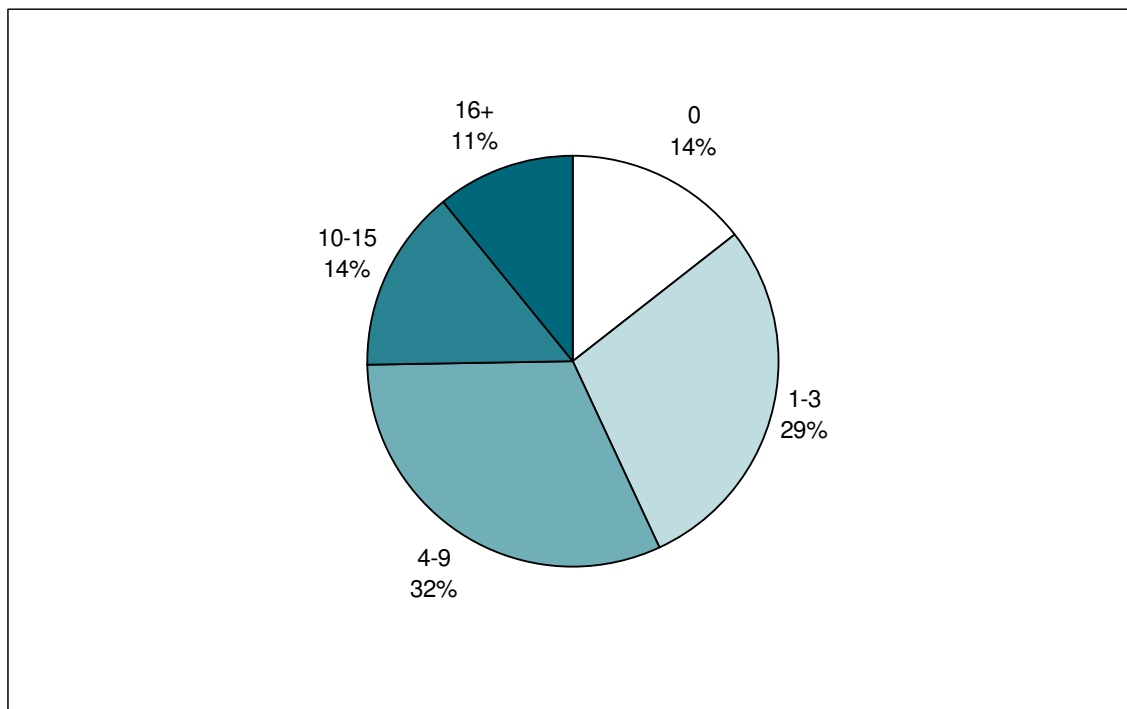
Figure 3. Likelihood of crabbers to use escape cords by county group



Frequency of crabbing

Most crabbers had been crabbing between 1 and 9 times in the last 12 months (see figure 2).

Figure 2. Times crabbing in last 12 months (minimum=0, maximum=365)



Crabbers who were not using cords were no more likely to be heavy fishers – that is, they were not more likely to have more pots, or to have been crabbing more often last year. This means that there is not a high risk category of crabbers who are failing to use cords. In addition, it means that heavy fishers are just as amenable to the messages and teaching as those who rarely crab or use very few pots.

Lost pots

Among those who had been crabbing in the past year, 31% had lost a pot. Many mentioned them being stolen. Evaluators noted a number of details including 24 who said the pots had been stolen, 6 who said “too deep”, 6 who said “tide” as well as mentions of equipment failures and boats driving over the lines. One participant mentioned recovering gear, having found three or four pots for the one that was lost. The variety of notes describing how the crabbers lost their pots suggests another place for education to take place. Helping crabbers learn techniques that prevent loss would likely be valued by this audience and provide an access point for discussing escape cords.

People who crabbed often were more likely to have lost pots than those who rarely crabbed. Those who crab often are at higher risk of losing a pot over time, though they likely have more skill and make fewer mistakes than those who rarely go crabbing.

Happily, people who had lost pots in the past year were more likely to have escape cord on all their pots (87% compared to 81% of those who had not lost any pots). It is possible that having recently lost pots helps the educators' message resonate with crabbers.

Sources of information

Respondents were asked where they got information about crabbing. Most mentioned the Washington State Department of Fish and Wildlife (58%). Others mentioned recreational retail stores (16%), and friends and family (13%). Other sources were also mentioned, including the internet. Many also said that they had been crabbing so long or were so experienced that they no longer sought out new information.

Table 3. Sources of Information	
WA Fish and Wildlife	58%
Other	30%
Retail stores	16%
Other people	13%
Newspaper	6%

CONCLUSION

Results of this assessment suggest that escape cord use in the areas of the Puget Sound where escape cord education is being conducted may already exceed the goal of 80%. Many of those who use crab pots use escape cord on all their pots, not just a portion (82% of all crabbers). Notes from evaluators showed that boaters recognized the program and the educational materials from prior years' efforts. It appears that the Department of Fish and Wildlife is the most prevalent source of new information for crabbers and could be leveraged as a partner in ongoing education efforts.

There are some significant differences across county groups: variation in the percentage of crabbers with escape cords, and likelihood of crabbers to use escape cords in the future. These

differences may be due in part to the variation in program length across counties, or in the case of Camano Island and Whatcom County, the differences may stem from differences in program administration or the crabber populations.

FUTURE RESEARCH

Three issues surfaced in the analysis of the respondent data that should be attended to in future evaluations. First, evaluation tools should make it easier for surveyors to record other types of gear than pots that people mention. For example, there was no differentiation among the types of traps that require cords and those that don't. This led to some confusion in determining the portion of pots that were eligible to use escape cords and recording practices that varied widely.

In addition, the evaluators were unsure how to use the survey when multiple crabbers were going out together. In the future, evaluators should either select only one respondent to interview, or interview multiple respondents independently even if they are planning to crab with others that day. The diversity of their equipment, experience and awareness of escape cord use was difficult to record on the survey tool provided. Also, people who are not crabbing or who use exclusively gear that does not require escape cord should not be included in the evaluation.

Media channels that people used to get information about crabbing needs to include the Internet, as well as a "not applicable" category. Many people said they didn't look up new information any more as they'd been crabbing for a long time. For that reason, the face-to-face outreach provided by this program is a good choice for program delivery.

Although mechanisms were in place to track refusal rates, they were difficult for evaluators to use reliably. Since response rates are one indicator of data quality, this should be better addressed in future evaluation efforts.

Finally, the methods used in this project are adequate for program evaluation, but do not accurately describe the use of escape cord for all crabbers. Surveys contacting a random sample of residents who purchased a crabbing license would generate more representative information about crabber populations in the Puget Sound.

SURVEY INSTRUMENT

SITE: _____ **COUNTY:** _____ **DATE:** _____ **SURVEYOR:** _____

Hi! I'm a volunteer with WSU Beach Watchers. We are collecting confidential information on crabbing practices so we can do a better job in reducing the unintended loss of crabs. Thanks for being willing to answer our questions!

If you encounter a crabber/car that does not want to participate in the evaluation, please enter an "X" here:

	Interview No.	Enter # _____	Enter # _____	Enter # _____
1	How many pots do you have with you today?	Enter # _____	Enter # _____	Enter # _____
2	How many, if any, have escape cord on them?	Enter # _____	Enter # _____	Enter # _____
3	Have you used escape cord prior to this year?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
4	How likely are you to use escape cords on <u>all</u> your pots in the future?	<input type="checkbox"/> Definitely will (<i>go to 6</i>) <input type="checkbox"/> Probably will (<i>go to 6</i>) <input type="checkbox"/> Probably won't <input type="checkbox"/> Definitely won't	<input type="checkbox"/> Definitely will (<i>go to 6</i>) <input type="checkbox"/> Probably will (<i>go to 6</i>) <input type="checkbox"/> Probably won't <input type="checkbox"/> Definitely won't	<input type="checkbox"/> Definitely will (<i>go to 6</i>) <input type="checkbox"/> Probably will (<i>go to 6</i>) <input type="checkbox"/> Probably won't <input type="checkbox"/> Definitely won't
5	<i>If probably or definitely won't:</i> What keeps you from using escape cord on all your pots?	<i>Describe:</i>	<i>Describe:</i>	<i>Describe:</i>
6	Not including today, how many times did you go crabbing in the last 12 months?	Enter # _____	Enter # _____	Enter # _____
7	Would you say that's more, less or about the same as usual?	<input type="checkbox"/> More <input type="checkbox"/> Less <input type="checkbox"/> About the same <input type="checkbox"/> Not applicable - don't usually crab	<input type="checkbox"/> More <input type="checkbox"/> Less <input type="checkbox"/> About the same <input type="checkbox"/> Not applicable - don't usually crab	<input type="checkbox"/> More <input type="checkbox"/> Less <input type="checkbox"/> About the same <input type="checkbox"/> Not applicable - don't usually crab
8	In the past year, have you lost any of your crab pots? <i>Skip if they answered 'NONE' to #6.</i>	<input type="checkbox"/> Yes – how many pots? _____ <input type="checkbox"/> No <input type="checkbox"/> Not applicable – didn't crab last year	<input type="checkbox"/> Yes – how many pots? _____ <input type="checkbox"/> No <input type="checkbox"/> Not applicable – didn't crab last year	<input type="checkbox"/> Yes – how many pots? _____ <input type="checkbox"/> No <input type="checkbox"/> Not applicable – didn't crab last year
9	Where do you usually get information about crabbing each year? For example, about new gear or regulations?	<input type="checkbox"/> WDFW <input type="checkbox"/> Retail fishing/outdoor stores <input type="checkbox"/> Newspaper <input type="checkbox"/> Other people (friends/family) <input type="checkbox"/> Other _____	<input type="checkbox"/> WDFW <input type="checkbox"/> Retail fishing/outdoor stores <input type="checkbox"/> Newspaper <input type="checkbox"/> Other people (friends/family) <input type="checkbox"/> Other _____	<input type="checkbox"/> WDFW <input type="checkbox"/> Retail fishing/outdoor stores <input type="checkbox"/> Newspaper <input type="checkbox"/> Other people (friends/family) <input type="checkbox"/> Other _____

We're done! Thank you for your time!