

# Performance Progress Report

## NOAA Restoration Center, Office of Habitat Conservation

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1. Federal Agency and Organization Element to Which Report is Submitted  <div style="text-align: center;">NOAA Fisheries</div>	2. Federal Grant or Other Identifying Number Assigned by Federal Agency  <div style="text-align: center;">NA09NMF4630322</div>	3a. DUNS Number 149220274 3b. EIN 91-2147136	
4. Recipient Organization (Name and complete address including zip code) Northwest Straits Marine Conservation Foundation 10441 Bayview-Edison Road Mt. Vernon, WA 98273		5. Recipient Identifying Number or Account Number ARRA09	
6. Project/Grant Period Start Date: (Month, Day, Year) <div style="text-align: center;">7/1/2009</div>	End Date: (Month, Day, Year) <div style="text-align: center;">12/31/2010</div>	7. Reporting Period End Date (Month, Day, Year) <div style="text-align: center;">6/30/2010</div>	8. Final Report? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 9. Report Frequency <input type="checkbox"/> annual <input checked="" type="checkbox"/> semi-annual <input type="checkbox"/> quarterly <input type="checkbox"/> other
10. Performance Narrative (see instructions): <p>Project is on schedule. We have removed 1,776 derelict nets or 59% of our goal of 3,000 nets. We have surveyed approximately 89% of identified high priority areas. We are on schedule to complete removal of 3,000 nets and to survey 100% of identified high priority areas by December 31, 2010. The update and refinement of the statewide derelict fishing gear reporting system and database is complete. Outreach to user groups to increase reporting of lost nets is on-going. A project highlight this period was the complete cleaning of thirteen distinct areas of Puget Sound. See the attached press release announcing this accomplishment.</p> <p>621.25 of the 825 planned days of vessel operations have occurred, including 62.75 days of net surveys and 558.50 days of removal days (including transit, offload, and weather days). A total of 1,776 derelict nets have been removed weighing approximately 104.97 metric tons. Approximately 4.61 metric tons of lead lines were removed from the nets and recycled. Project dive teams took it upon themselves to developed a tool to efficiently remove lead line from the nets in order to keep this heavy metal out of the waste stream. Approximately 170.2 acres of marine habitat have been restored. Attached are maps of removal activity and surveys in the high priority areas in Puget Sound. Maps also indicate future planned survey areas.</p> <p>Four removal vessels worked throughout the high priority areas as weather permitted with a full complement of biologists, dive teams, boat pilots, and deckhands. 98,000 animals were found entangled in the removed gear, including a canary rockfish, recently listed as threatened under the federal Endangered Species Act. Other animals</p>			
11. Other Attachments (see instructions): Attached are: maps of areas surveyed and nets removed and remaining; tables of species encountered in removed gear; tables of outreach events, onboard observations and media coverage; photos from removal operations; sample of promotional materials and two press releases.			
<b>12. Certification: I certify to the best of my knowledge and belief that this report is correct and complete for performance of activities for the purposes set forth in the award documents.</b>			
12a. Typed or Printed Name and Title of Authorized Certifying Official  Ginny Broadhurst, Secretary		12c. Telephone (area code, number and extension) 360-428-1085 12d. Email Address foundation@nwstraits.org	
12b. Signature of Authorized Certifying Official  <div style="text-align: center;">(submitted electronically via Grants Online)</div>		12e. Date Report Submitted (Month, Day, Year) <div style="text-align: center;">1/28/2010</div>	

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<p>10. Performance Narrative (Continued):</p> <p>dead include ten marine mammals and 108 birds. 135 different marine species have been found in removed gear. Table 1.0 is a comprehensive list of species impacts.</p> <p>During this project reporting period, we refined our survey technique. Our previous surveying method was to use a drop camera towed by the survey vessel. Coordinates of nets were noted, and divers verified their locations. This survey technique has its limitations and cannot cover more than about 30 feet of area all around the survey vessel. During this project period one of our subcontractors, Fenn Enterprises, perfected an advanced surveying technique using 300 kHz sidescan sonar. This new technique allows us to detect every obstacle on the seabed that is likely to snag lost fishing nets. See example of the images produced in the attachments to this report. Diver verification has confirmed that most of these obstacles (50-90%) in high priority areas do indeed have nets snagged on them. The new technique gives us a range of 'visibility' from the water surface to a depth of about 105' with a width of about 100 meters on each side of our survey vessel. We intend to survey every mile of the high priority areas with this new survey technique by the end of our ARRA project. There remain only 73 high priority shoreline miles left to survey.</p> <p>With results from this more accurate surveying, combined with field reports from our vessels, we now estimate that from 500 to 1,000 derelict nets may remain in Puget Sound after this project is completed. We are on target to remove 3,000 derelict nets by December 31, 2010. We estimate this will result in removal of from 81% - 89% of known derelict nets in high priority areas of Puget Sound. The final numbers ultimately depend on how many nets we find in remaining surveys and how many of those nets can be removed with remaining funding. We are confident that the new survey technique is finding all nets in surveyed areas.</p> <p>Update and refinement of the statewide derelict fishing gear database and reporting system was completed this project period. The database was migrated to a Structured Query Language server database platform. It is accessible online to those with permission, including researchers and resource managers. It allows easy querying of the data for information related to number of gear reports, location of removed gear, species impacts, etc. It also allows for data downloads to Excel spreadsheets for data manipulation and to Geographic Information System databases. The reporting system was also updated to allow for efficient and prompt reporting of lost gear by fishermen as well as reporting of gear encountered in the field by others, such as recreational divers. Reports can be made by phone or the internet. Web-based reporting is available via the WDFW and NWSI websites. Reports made through the WDFW site are now seamlessly transferred to the NWSI site. Phone reports can be made to WDFW or NWSI and are entered into the online system by staff taking the reports. All web-based reports are forwarded to our Field Project Manager for verification before being added to the database. We are coordinating with Puget Sound tribes to encourage and enable reporting from tribal.</p> <p>Outreach to user groups increased this project period. The goal of the outreach was to increase reporting of lost gear by fishermen and increase reporting of found gear by divers. Rack cards, wallet-sized cards, and small stickers were developed to advertise the reporting system. Materials were mailed out to licensed gillnetters and licensed harvest divers. Advertisements and articles were also placed in NW Dive News recreational dive magazine. The rack card design is included in the attachments. All materials echoed this design. Feedback has been very positive and reports of nets from harvest divers have increased dramatically.</p> <p>Outreach events are summarized in Table 2.0. Observation events, including one for NOAA Fisheries Director Eric Shwaab, (see press release) are summarized in Table 3.0. Media coverage is summarized in Table 4.0.</p>		

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## Continuation of Performance Progress Report Cover Page

(1) Label	(2) Additional Information on Grantee and Project	(3) Provide Information Requested:
2-01	Project Title	Derelict Fishing Gear Removal in Puget Sound, WA
2-02	Federal Program Officer's Name	David Landsman
2-03	Project's Main Contact Person – Name	Joan Drinkwin
2-04	Project's Main Contact Person – Title	Programs Director
2-05	Project's Main Contact Person - Email	drinkwin@nwstraits.org
2-06	Project's Main Contact Person- Phone No.	360-733-1725
2-07	Organization website (if applicable)	www.nwstraits.org; www.derelictgear.org
2-08	Project Location: City	Throughout Puget Sound marine waters
2-09	Project Location: County	All 12 Puget Sound counties
2-10	Project Location: State	WA
2-11	Land Ownership (check one)	<input checked="" type="checkbox"/> Public <input type="checkbox"/> Private <input type="checkbox"/> Both
2-12	Geographic Coordinates (in decimal degrees if readily available)	12304.455      Longitude (X-coordinate) <hr/> 4828.436      Latitude (Y-coordinate) <hr/>
2-13	Are there multiple project sites for this award?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2-14	List of Project Partners	U.S. EPA; Washington Department of Fish and Wildlife; Natural Resources Consultants; State and private funding programs
2-15	List of Target Species (e.g., coho salmon, blue crab, striped bass, Olympia oyster, etc.)	Marine mammals: harbor seal, harbor porpoise, orca Marine birds: grebes, cormorants (Brandt's, Pelagic, Double-crested), scoters, etc. ESA listed and candidate fish: salmon (Chinook, steelhead), rockfish Commercially valuable invertebrates: Dungeness crab

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## A. Program Indicators

(1) Activity Number or Label	(2) Activity Description	(3) Indicator or Status	(4) Explanation
1	Engineering & Design	Completed	Completed before start of award
2	Permitting/Env Compliance	Completed	Completed before start of award
3	Construction (Removal Phase 1)	Completed	Phase 1 period ended 12/31/2009, over 30% of removal and survey days completed
4	Construction (Removal Phase 2)	In progress	74% of removal days and 84% of survey days have been completed. Database update and conversion is complete.
5	Monitoring	In progress	

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## B. Performance Measures

(1) Measure Number or Label	(2) Objective/Goal Description	(3) Measure	(4) Baseline	(5) Target Year	(6) Project Target	(7) Actual To Date (cumulative)	(8) Explanation
1	Nets recovered	Number	0	2011	3,000	1,776	We are removing approximately 3.18 nets per removal day
2	Percent legacy nets recovered	Percent	41	2011	90	59	We are 59% of the way toward removing 3,000 nets from high priority areas
3	Metric tons of nets removed	Metric tons	0	2011	208	104.97	50% of target. Approximately 4.61 metric tons of lead lines have been recycled.
4	Acres of nets removed	Acres	0	2011	731	173.3	24% of target. Smaller nets are being removed because we are spending more time thoroughly cleaning areas by picking up more smaller pieces of net.
5	Acres of habitat restored	Acres	0	2011	645	170.2	26% of target. Smaller nets are being removed because we are spending more time thoroughly cleaning areas by picking up more smaller pieces of net.
6	Jobs	Hours (fed) Hours (match)	0 0	2011	118,560 5,157	29,817.15 1,521.30	We estimated that we would need 26 divers for the project. In reality, we are employing about 8 divers full-time and several more part time.
7	Total number of animals caught in nets	Number	0	2011	NA		We did not predict the number of animals found in recovered gear. Table 1.0 is a list of all animals found.
8	Total number of ESA animals caught in nets	Number	0	2011	NA	1	A dead canary rockfish was found in a net off of San Juan Island.

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(1) Measure Number or Label	(2) Objective/Goal Description	(3) Measure	(4) Baseline	(5) Target Year	(6) Project Target	(7) Actual To Date (cumulative)	(8) Explanation
	NAICS Code 88330 Navigational Services to Shipping	Federal \$ Match \$	0 0	2011	\$ 3,006,250 \$200,000	\$2,218,356 \$158,653	Includes hours of boat pilots, divers, deckhands
	NAICS Code 541620 Environmental Consulting Services	Federal \$ Match \$	0 0	2011	\$ 1,222,535 \$0	\$902,412 \$28,776	Includes hours of field operations manager and project manager
	NAICS Code 541512 Computer Systems Design Services	Federal \$ Match \$	0 0	2011	\$ 67,500 \$0	\$56,452 \$2,089	Includes IT consultant and consultation with state agency personnel
	NAICS Code 813312 Env, Cons. and Wildlife Organizations	Federal \$ Match \$	0 0	2011	\$ 299,084 \$0	\$28,212 \$1,877	Includes indirect costs
	NAICS Code 562119 Other Waste Collection	Federal \$ Match \$	0 0	2011	\$0 \$0	\$13,800 \$0	Driver to haul waste to landfill

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### C. Table of Activities and Funding

(1) Expenditure or Label	(2) Expenditure Description	(3.1) Total Approved NOAA Funds	(3.2) Total Approved Match Funds	(3.3) NOAA Funding Expended (Cumulative to Date)	(3.4) Match Funding Expended (Cumulative to Date)	(3.5) Match Source
Travel	Travel expenses	\$9,084	\$0	\$7,564	\$0	na
Supplies	Computer & software	\$7,600	\$0	\$2,818	\$1,877	Private fnding for materials
Contractual	Surveys	\$247,500	\$0	\$209,055	\$0	na
Contractual	Removals	\$2,758,750	\$200,000	\$2,023,101	\$158,653	Private and state funding
Contractual	Field management	\$1,156,935	\$0	\$768,766	\$5,468	in-kind hours; free
Contractual	Species ID	\$65,000	\$0	\$5,495	\$0	na
Contractual	Project management	\$142,500	\$0	\$124,291	\$23,308	Private and state funding
Contractual	IT services	\$67,500	\$0	\$52,748	\$2,089	state employees in-kind
Other	indirect costs	\$139,900	\$0	\$25,394	\$0	na

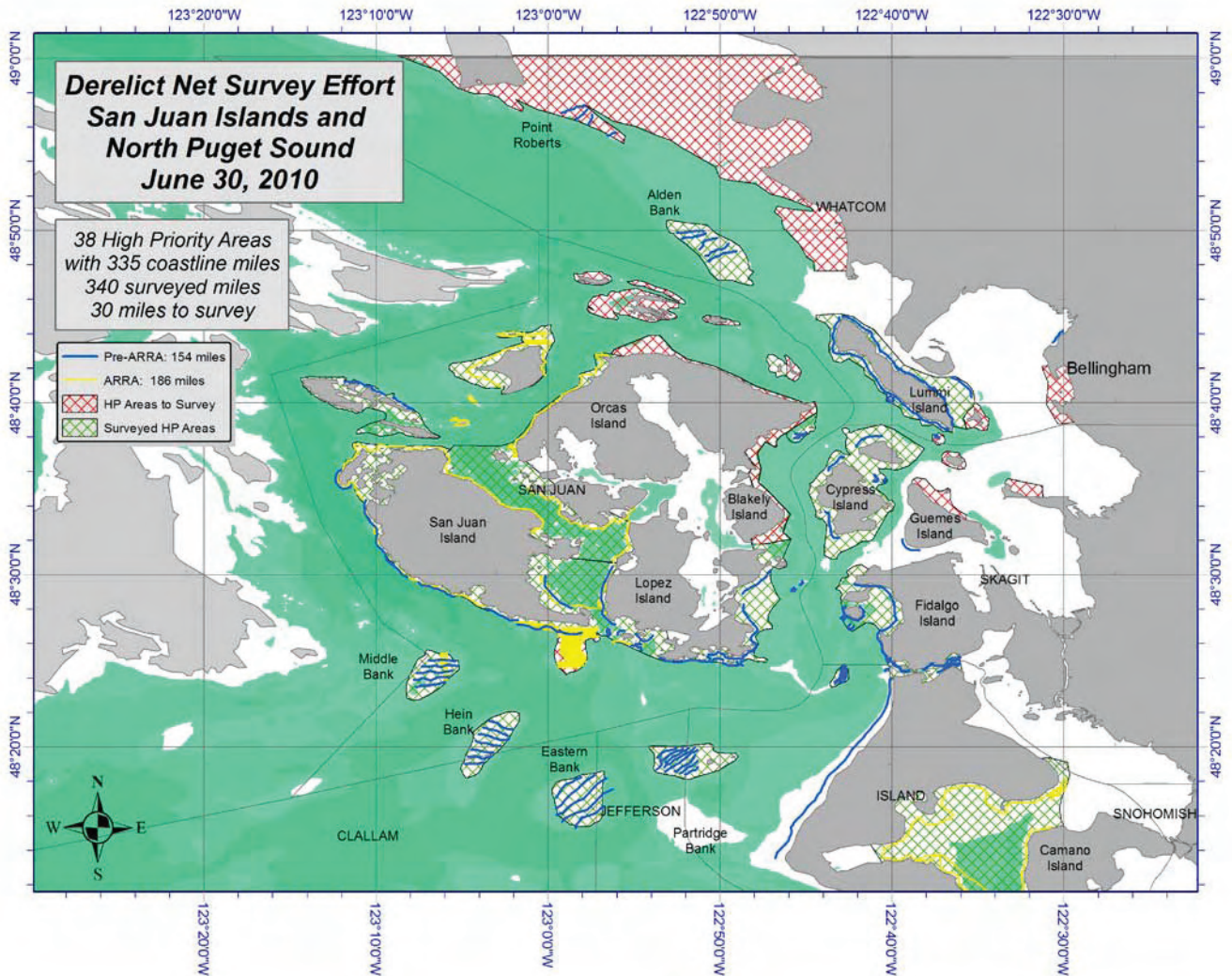
**C. (4) Please explain any deviations from approved budget. NOTE: Some budget changes require prior approval. (e.g., To date, our budget has been executed as outlined in our application narrative that was approved by the NOAA Grants Officer.)**

We have slight variations in the source of our non-federal matching funds, with some of these matching funds coming from in-kind contributions rather than entirely from cash. And some of the cash matching funds are paying for supplies, and project management contractual services, rather than removal contractual services. Our indirect costs are coming in lower than expected, since some anticipated staffing advances are going to contractors. Otherwise, our budget has been executed as outlined in our application narrative.



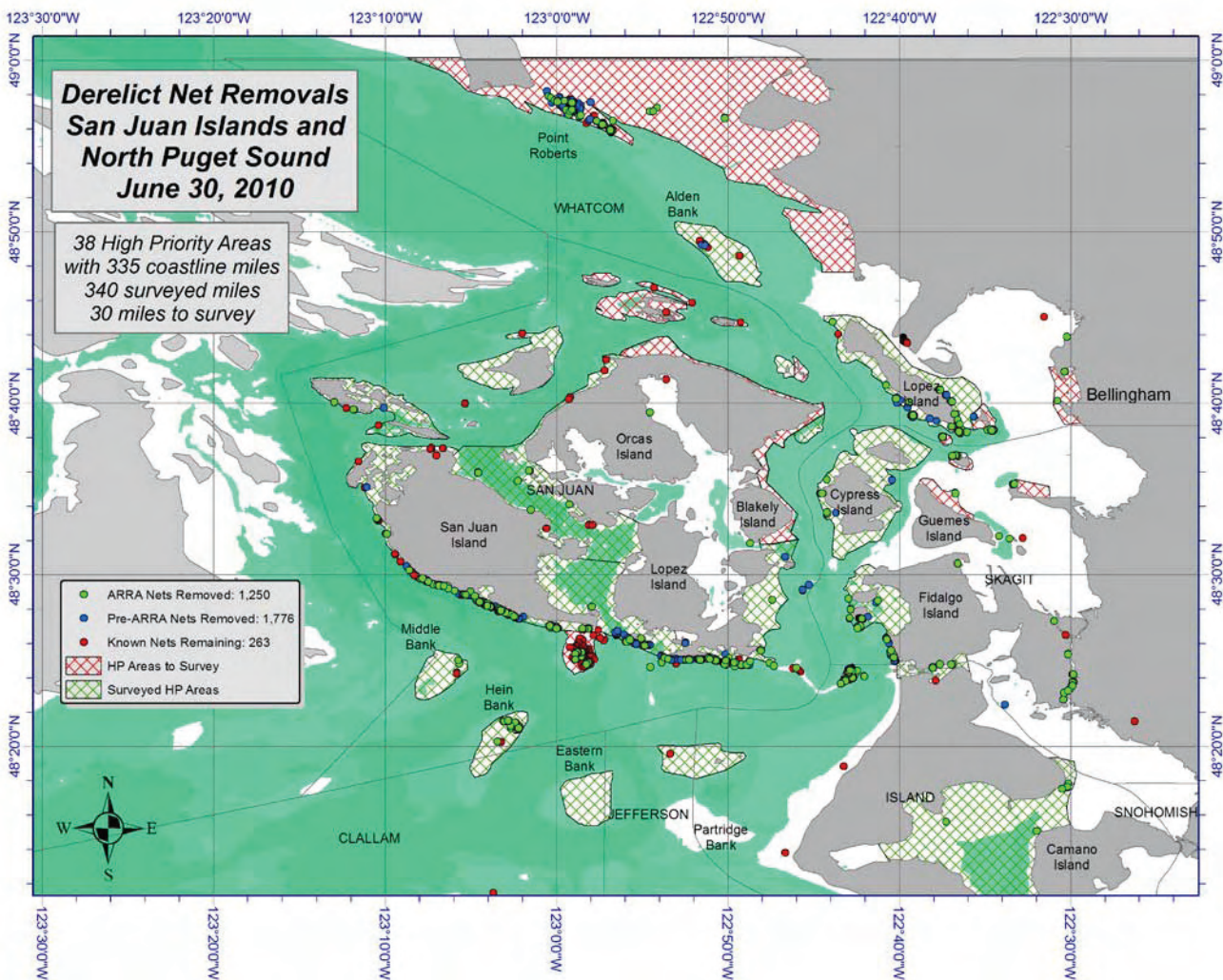
Attachments to semi-annual progress report for Derelict Fishing Gear Removal in Puget Sound  
Award #NA09NMF4630322  
July 30, 2010

Map 1. High priority areas surveyed and remaining to be surveyed pre-ARRA project and during the ARRA project in northern Puget Sound and the San Juan Islands.

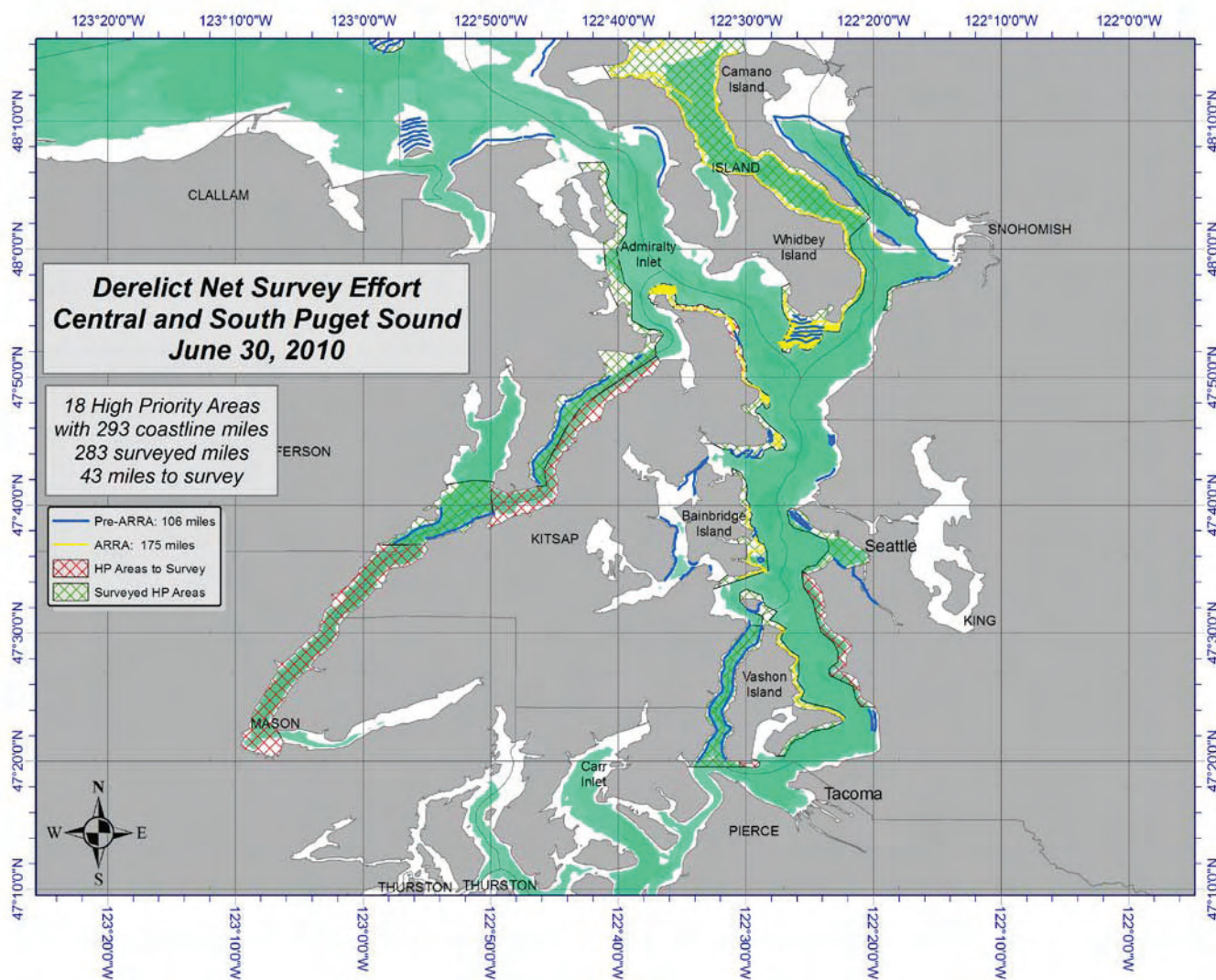




Map 2. Derelict nets removed pre-ARRA project and during the ARRA project and known to be remaining in northern Puget Sound and the San Juan Islands.

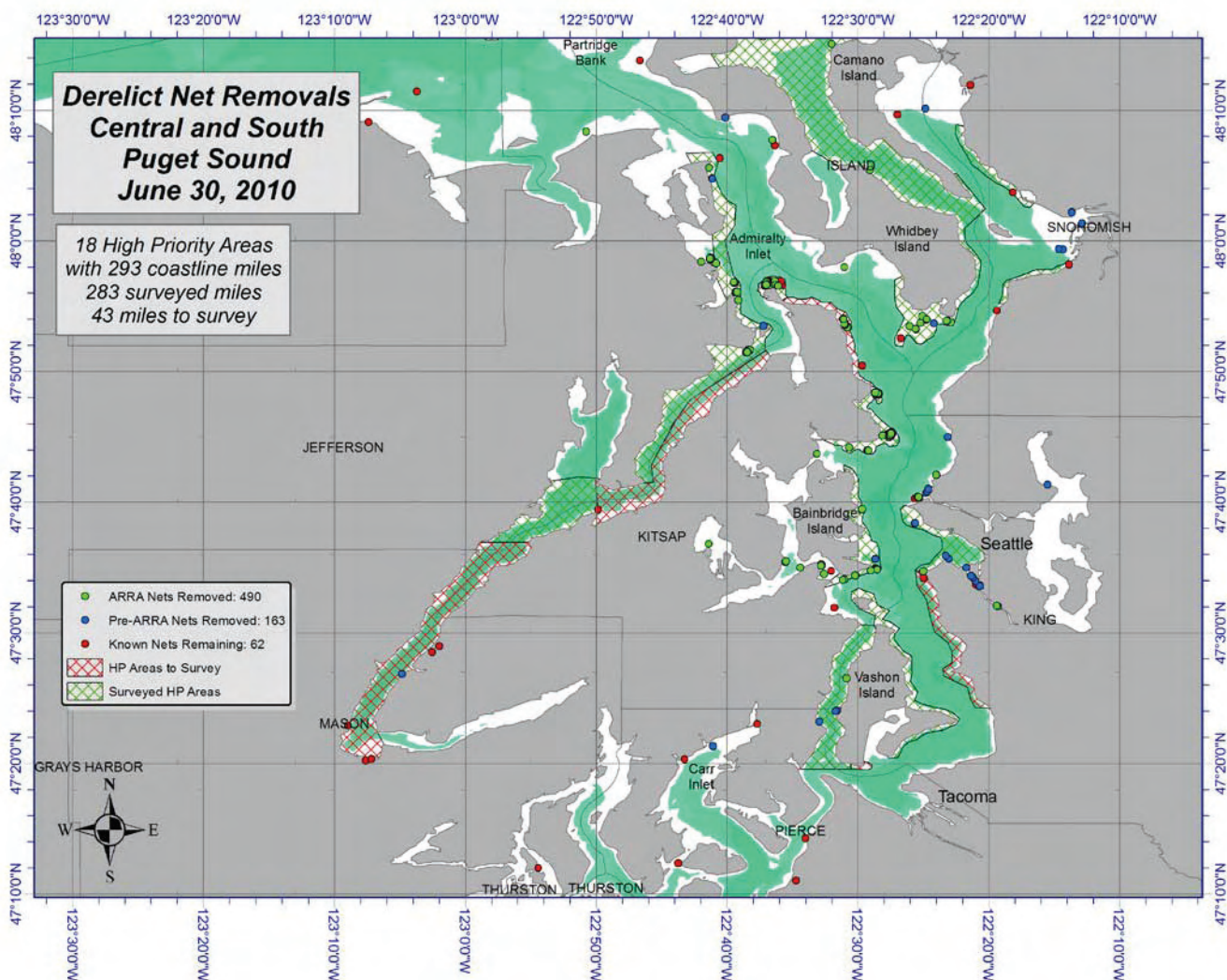


Map 3. High priority areas surveyed and remaining to be surveyed pre-ARRA project and during the ARRA project in Central and South Puget Sound and Hood Canal.





Map 4. Derelict nets removed pre-ARRA project and during the ARRA project and known to be remaining in Central and South Puget Sound and Hood Canal.



Map 5. Derelict nets removed pre-ARRA project and during the ARRA project and known to be remaining in the Strait of Juan de Fuca.

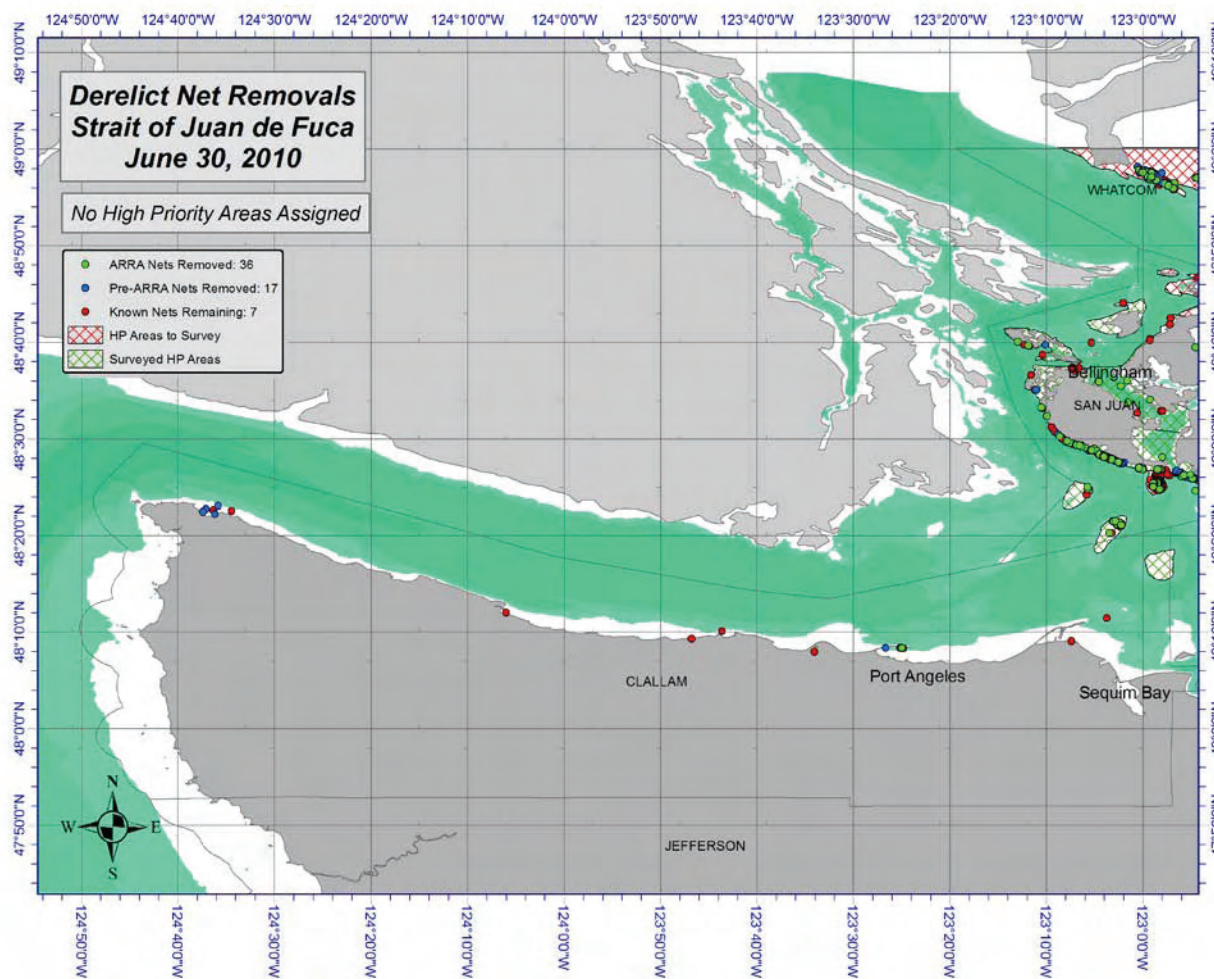


Table 1.0 Animals found in recovered derelict gear from project start through June 30, 2010

Species Group	Species Local Common	Species Scientific	Sum Number of Dead	Sum Number of Alive	Total
Mammal	Harbor Porpoise	Phocoena phocoena	1	0	1
Mammal	Harbor Seal	Phoca vitulina	7	0	7
Mammal	mammal unid.		1	0	1
Mammal	river otter	Lontra canadensis	1	0	1
<b>Mammals Total</b>			<b>10</b>	<b>0</b>	<b>10</b>
Bird	Brandt's Cormorant	Phalacrocorax penicillatus	20	0	20
Bird	Bufflehead	Bucephala albeola	1	0	1
Bird	Cormorant unid.	Phalacrocorax sp.	11	0	11
Bird	Pelagic Cormorant	Phalacrocorax pelagicus	52	0	52
Bird	Pigeon Guillemot	Cephus columba	1	0	1
Bird	seabird unid.		22	0	22
Bird	Swans	Cygnus	1	0	1
<b>Birds Total</b>			<b>108</b>	<b>0</b>	<b>108</b>
Fish	big skate	Raja binoculata	2	7	9
Fish	black rockfish	Sebastes melanops	5	3	8
Fish	buffalo sculpin	Enophrys bison	2	3	5
Fish	cabezon	Scorpaenichthys marmoratus	17	8	25
Fish	canary rockfish	Sebastes pinniger	1	0	1
Fish	cartilaginous fish unid.	Chondrichthyes sp.	4	0	4
Fish	China rockfish	Sebastes nebulosus	0	1	1
Fish	copper rockfish	Sebastes caurinus	0	2	2
Fish	decorated warbonnet	Chirolophis decoratus	0	15	15
Fish	English sole	Parophrys vetulus	0	1	1
Fish	fish unid.		29	0	29
Fish	flatfish unid.	Pleuronectidae sp.	1	1	2
Fish	great sculpin	Myoxocephalus polyacanthocephalus	13	4	17
Fish	greenling unid.	Hexagrammos sp.	5	1	6
Fish	Irish lord unid.	Hemilepidotus sp.	2	1	3
Fish	kelp greenling	Hexagrammos decagrammus	23	13	36
Fish	lingcod	Ophiodon elongatus	94	9	103
Fish	northern ronquil	Ronquilus jordani	0	2	2
Fish	plainfin midshipman	Porichthys notatus	1	0	1
Fish	Puget Sound rockfish	Sebastes emphaeus	0	1	1
Fish	quillback rockfish	Sebastes maliger	14	7	21
Fish	red Irish lord	Hemilepidotus hemilepidotus	14	12	26
Fish	rockfish unid.	Scorpaenidae sp.	1	0	1

Species Group	Species Local Common	Species Scientific	Sum Number of Dead	Sum Number of Alive	Total
Fish	rockfish unid.	Sebastes sp.	12	0	12
Fish	sailfin sculpin	Nautichthys oculofasciatus	1	3	4
Fish	salmonid unid.	Oncorhynchus sp.	1	0	1
Fish	sculpin unid.	Cottidae sp.	1	1	2
Fish	spiny dogfish shark	Squalus acanthias	60	5	65
Fish	spotted ratfish	Hydrolagus colliei	3	0	3
Fish	staghorn sculpin	Leptocottus armatus	0	6	6
Fish	starry flounder	Platichthys stellatus	59	22	81
Fish	sturgeons	Acipenser sp.	1	0	1
Fish	tidepool sculpin	Oligocottus maculosus	1	0	1
Fish	wolf eel	Anarrhichthys felis	1	0	1
<b>Fishes Total</b>			<b>368</b>	<b>128</b>	<b>496</b>
Invertebrate	basket star	Gorgonocephalus eucnemis	0	4	4
Invertebrate	bat star	Asterina miniata	0	1	1
Invertebrate	bent nose macoma	Macoma nasuta	12	2	14
Invertebrate	black clawed shore crab	Lophopanopeus bellus bellus	1	4	5
Invertebrate	black katy chiton	Katharina tunicata	0	5	5
Invertebrate	black-eyed hermit	Pagurus armatus	0	45	45
Invertebrate	blood star	Henricia leviuscula	65	2213	2278
Invertebrate	blood worm	Glycera americana	0	47	47
Invertebrate	blue mussel	Mytilus trossulus	31	37	68
Invertebrate	blue topsnail	Calliostoma ligatum	7	959	966
Invertebrate	blunt gaper	Mya truncata	2	0	2
Invertebrate	bread crumb sponge	Halichondria sp.	0	14	14
Invertebrate	brittle star unid.	Ophiuroidea sp.	0	34	34
Invertebrate	butter clam	Saxidomus gigantea	9704	657	10361
Invertebrate	California sea cucumber	Parastichopus californicus	24	3502	3526
Invertebrate	California sunset clam	Gari californica	9	0	9
Invertebrate	channelled dogwinkle	Nucella canaliculata	0	4	4
Invertebrate	clam worm	Nereis vexillosa	0	41	41
Invertebrate	clown doris	Triopha catalinae	9	168	177
Invertebrate	common Pacific octopus	Enteroctopus dofleini	0	3	3
Invertebrate	coonstriped shrimp	Pandalus danae	0	124	124
Invertebrate	cryptic kelp crab	Pugettia richii	28	5567	5595
Invertebrate	cushion star	Pteraster tessellatus	0	18	18
Invertebrate	daisy brittle star	Ophiopholis aculeata	4	1116	1120
Invertebrate	dark mahogany clam	Nuttallia obscurata	2	0	2
Invertebrate	dire whelk	Lirabuccinum dirum	15	165	180
Invertebrate	Dungeness crab	Cancer magister	529	398	927



Species Group	Species Local Common	Species Scientific	Sum Number of Dead	Sum Number of Alive	Total
Invertebrate	fat henricia	<i>Henricia sanguinolenta</i>	0	1	1
Invertebrate	frilled dogwinkle	<i>Nucella lamellosa</i>	6	38	44
Invertebrate	geoduck clam	<i>Panopea abrupta</i>	192	56	248
Invertebrate	giant barnacle	<i>Balanus nubilus</i>	10913	8284	19197
Invertebrate	giant dendronotid	<i>Dendronotus iris</i>	0	1	1
Invertebrate	giant Pacific chiton	<i>Cryptochiton stelleri</i>	4	61	65
Invertebrate	giant white dorid	<i>Archidoris odhneri</i>	0	3	3
Invertebrate	glassy sea squirt	<i>Ascidia paratropa</i>	0	217	217
Invertebrate	glove sponge	<i>Neoesperiopsis digitata</i>	0	2	2
Invertebrate	golfball crab	<i>Rhinolithodes wosnessenski</i>	3	52	55
Invertebrate	granular claw crab	<i>Oedignathus inermis</i>	0	4	4
Invertebrate	green false-jingle	<i>Pododesmus macroschisma</i>	1783	321	2104
Invertebrate	green sea urchin	<i>Strongylocentrotus droebachiensis</i>	116	2714	2830
Invertebrate	hairy cancer crab	<i>Cancer oregonensis</i>	30	647	677
Invertebrate	hairy lithodid	<i>Hapalogaster mertensii</i>	0	2	2
Invertebrate	heart crab	<i>Phyllolithodes papillosus</i>	3	15	18
Invertebrate	helmet crab	<i>Telmessus cheiragonus</i>	9	16	25
Invertebrate	hermit crab sponge	<i>Suberities suberea</i>	0	2	2
Invertebrate	hermit crab unid.	<i>Paguridae sp.</i>	0	5	5
Invertebrate	horse clam	<i>Tresus sp.</i>	104	5	109
Invertebrate	horsehair crab	<i>Erimacrus isenbeckii</i>	0	2	2
Invertebrate	horseshoe ascadian	<i>Chelyosoma productum</i>	0	3292	3292
Invertebrate	hudson's dorid	<i>Acanthodoris hudsoni</i>	0	6	6
Invertebrate	humpback shrimp	<i>Pandalus hypsinotus</i>	6	63	69
Invertebrate	kelp isopods	isopoda	0	7	7
Invertebrate	Kennerley venus	<i>Humilaria kennerleyi</i>	105	2	107
Invertebrate	lampshell	<i>Terebratalia transversa</i>	9	493	502
Invertebrate	leafy hornmouth	<i>Ceratostoma foliatum</i>	86	514	600
Invertebrate	leopard dorid	<i>Diaulula sandiegensis</i>	10	15	25
Invertebrate	lined chiton	<i>Tonicella lineata</i>	0	8	8
Invertebrate	lined ribbon worm	<i>Tubulanus sexlineatus</i>	0	2	2
Invertebrate	long ray star	<i>Stylasterias forreri</i>	0	1	1
Invertebrate	longarm brittle star	<i>Amphiodia urtica</i>	0	9	9
Invertebrate	longhorn decorator crab	<i>Chorilia longipes</i>	148	2547	2695
Invertebrate	lyre crab	<i>Hyas lyratus</i>	0	1	1
Invertebrate	manila clam	<i>Venerupis philippinarum</i>	6	0	6
Invertebrate	mask limpet	<i>Tectura persona</i>	0	3	3
Invertebrate	metridium anemone	<i>Metridium giganteum</i>	0	52	52

Species Group	Species Local Common	Species Scientific	Sum Number of Dead	Sum Number of Alive	Total
Invertebrate	moon snail	Euspira lewisii	3	0	3
Invertebrate	morning sunstar	Solaster dawsoni	1	26	27
Invertebrate	mossy chiton	Mopalia muscosa	0	5	5
Invertebrate	mottled star	Evasterias troschelii	0	63	63
Invertebrate	mudstar	Ctenodiscus crispatus	0	2	2
Invertebrate	northern kelp crab	Pugettia producta	20	258	278
Invertebrate	Nuttall's cockle	Clinocardium nuttalli	245	0	245
Invertebrate	ochre star	Pisaster ochraceus	0	93	93
Invertebrate	orange sea cucumber	Cucumaria miniata	0	23	23
Invertebrate	orange sunstar	Solaster paxillatus	0	1	1
Invertebrate	Oregon triton	Fusitriton oregonensis	162	1009	1171
Invertebrate	Pacific blue mussel	Mytilus edulis	132	973	1105
Invertebrate	Pacific gaper	Tresus nuttallii	9	3	12
Invertebrate	Pacific littleneck clam	Protothaca staminea	150	0	150
Invertebrate	Pacific oyster	Crassostrea gigas	3	5	8
Invertebrate	Pacific razor clam	Siliqua patula	30	1	31
Invertebrate	painted anemone	Urticina felina	0	75	75
Invertebrate	painted star	Orthasterias koehleri	18	61	79
Invertebrate	pointed macoma	Macoma inquinata	2	0	2
Invertebrate	porcelain crab	Petrolisthes sp.	10	421	431
Invertebrate	prawn	Pandalus platyceros	0	14	14
Invertebrate	primitive ribbon worm	Tubulanus polymorphus	0	514	514
Invertebrate	Puget Sound king crab	Lopholithodes mandtii	43	48	91
Invertebrate	purple ring topsnail	Calliostoma annulatum	7	189	196
Invertebrate	purple shore crab	Hemigrapsus nudus	0	1	1
Invertebrate	red fur crab	Acantholithodes hispidus	3	11	14
Invertebrate	red octopus	Octopus rubescens	0	4	4
Invertebrate	red rock crab	Cancer productus	711	482	1193
Invertebrate	red sea urchin	Strongylocentrotus franciscanus	44	273	317
Invertebrate	red sponge nudibranch	Rostanga pulchra	0	2	2
Invertebrate	ridged blood star	Henricia aspera	4	119	123
Invertebrate	rock scallop	Crassadoma gigantea	135	31	166
Invertebrate	rose star	Crossaster papposus	0	38	38
Invertebrate	scale worm	Halosydna brevisetosa	0	4	4
Invertebrate	scaly lithodid	Placetrion wosnessenskii	11	8	19
Invertebrate	sea lemon	Anisodoris nobilis	0	6	6
Invertebrate	sharp-nosed crab	Scyra acutifrons	0	606	606
Invertebrate	shiny orange sea squirt	Cnemidocarpa finmarkiensis	0	31	31
Invertebrate	short plumose anemones	Metridium senile	0	1	1

Species Group	Species Local Common	Species Scientific	Sum Number of Dead	Sum Number of Alive	Total
Invertebrate	slender cancer crab	Cancer gracilis	2	16	18
Invertebrate	slender decorator crab	Oregonia gracilis	0	1355	1355
Invertebrate	slender kelp crab	Pugettia gracilis	2	1922	1924
Invertebrate	smooth pink scallop	Chlamys rubida	8394	4635	13029
Invertebrate	softshell clam	Mya arenaria	10	2	12
Invertebrate	spiny mudstar	Luidia foliolata	0	2	2
Invertebrate	spiny pink shrimp	Pandalus eous	0	4	4
Invertebrate	spiny pink star	Pisaster brevispinus	0	3	3
Invertebrate	spiny sea squirt	Halocynthia hilgendorfi igaboja	0	260	260
Invertebrate	spiny top snail	Cidarina cidaris	2	1	3
Invertebrate	spot shrimp	Pandalus platyceros	1	39	40
Invertebrate	squat lobster	Munida quadrispina	0	1	1
Invertebrate	stalked hairy sea squirt	Boltenia villosa	50	14768	14818
Invertebrate	striped dogwinkle	Nucella emarginata	0	18	18
Invertebrate	striped sun star	Solaster stimpsoni	2	36	38
Invertebrate	sunflower star	Pycnopodia helianthoides	8	243	251
Invertebrate	tanner crab	Chionoecetes bairdi	2	4	6
Invertebrate	tennis ball sponge	Craniella villosa	0	32	32
Invertebrate	thick-claw porcelain crab	Pachycheles rudis	0	48	48
Invertebrate	transparent sea squirt	Corella willmeriana	0	151	151
Invertebrate	tube worm	Phoronid	0	355	355
Invertebrate	umbrella crab	Cryptolithodes sitchensis	0	9	9
Invertebrate	vermillion sea star	Mediaster aequalis	0	5	5
Invertebrate	white dendronotid	Dendronotus albus	0	1	1
Invertebrate	white sea cucumber	Eupentacta quinquesemita	3	99	102
Invertebrate	yellow encrusting sponge	Myxilla lacunosa	0	44	44
Invertebrate	yellow margin dorid	Cadlina luteomarginata	0	2	2
Invertebrate	yellow sponge	Spongia barbara	0	8	8
<b>Invertebrates Total</b>			<b>34194</b>	<b>64055</b>	<b>98249</b>
<b>Total Entangled</b>			<b>34680</b>	<b>64183</b>	<b>98863</b>

Table 2.0 Outreach events for the reporting period January, 2010 through June 30, 2010

Date	Outreach Events Description	Location	Number attending
2/16/10	Presentation: NW Indian Fisheries Commission, Environmental Policy Committee	Shelton	30 tribal leaders engaged in fisheries issues
2/22/10	Testimony: Senate Natural Resources Committee on HB 2593	Olympia	25 state senators and representatives
2/24/10	Presentation: Trout Unlimited, Edmonds Chapter, Crab Mortality Study	Edmonds	35 recreational fishers
3/25/10	Presentation: Nisqually Tribal Council Welcome Ceremony	Lacey	25 tribal leaders
4/07/10	Presentation: Depth Chargers Dive Club	Puyallup	60 recreational and commercial divers
4/05/10	Presentation: Corinthian Yacht Club	Seattle	26 recreational boaters
4/07/10	Presentation: San Juan MRC	Friday Harbor	20 MRC members and general public
4/14/10	Presentation: Bellingham Coastal Conservation Association, North Sound Chapter	Bellingham	20 citizens active in coastal conservation
4/21/10	Presentation: Puget Sound Anglers	Whidbey Island	14 recreational fishers
5/11/10	Presentation: National meeting of chairs of NOAA Sanctuary Advisory Councils and headquarters staff	Port Angeles	50 staff and advisory council members from NOAA sanctuaries around the country
5/12/10	Presentation: Poggie Club	Bremerton	60 community members
5/21/10	Presentation: Northwest Straits Commission	Port Townsend	15 commissioners and general public
5/21-5/23/10	Staffed Booth: Dive Expo	Tacoma	300 recreational and professional divers and dive gear retailers
5/21/10	Presentation: USFWS Endangered Species Day	Lacey	40 general public
6/8/10	Presentation: Snohomish Coastal Conservation Association	Everett	110 citizens active in coastal conservation
6/9/10	Presentation: Puget Sound Anglers	Hansville	86 recreational fishers
6/12/10	Presentation: CCA/Trout Unlimited, joint meeting of Board of Directors		
6/5-6/6/10	Staffed Booth: Pt. Defiance Aquarium World Ocean Days	Tacoma	Over 500 general public

Date	Outreach Events Description	Location	Number attending
6/24/10	Snohomish/King County Chapter of CCA	Woodinville	16 citizens active in coastal conservation

Table 3.0 Removal observations for the reporting period January, 2010 through June 30, 2010

Date	Observer (name and affiliation)	Boat
1/08/10	Arn Thoreen, commercial fishermen	Bet Sea
1/29/10	Nir Barnea, NOAA Technical Monitor	Surveyor II
2/19/10	Rob Rau, Lisa Macchio, EPA divers	Surveyor II
4/01/10	Congressman Jay Inslee, staffer Peter Mills and NOAA Laurel Jennings	Surveyor II
4/21/10	Eric Schwaab, administrator for NOAA Fisheries, Jen Steger, NOAA, Sheila Babb, staff for Senator Murray, Chris Townsend, PSP	Surveyor II
6/8/10	Nir Barnea, NOAA Technical Monitor	Bet Sea
6/7/10	Don Velasquez, WDFW	Tenacious

Table 4.0 Media coverage for the reporting period January, 2010 through June 30, 2010

Date	Publication	Title/Link
1/27/10	Seattle PostGlobe	Thousands of lost crab pots in Puget Sound harm marine wildlife <a href="http://www.seattlepostglobe.org/2010/01/27/thousands-of-lost-crab-pots-in-puget-sound-harm-marine-wildlife">http://www.seattlepostglobe.org/2010/01/27/thousands-of-lost-crab-pots-in-puget-sound-harm-marine-wildlife</a>
3/05/10	NW Dive News	Derelict Gear Removal <a href="http://www.divenewsnetwork.com/pdf/nwdn/NWDN_0310.pdf">http://www.divenewsnetwork.com/pdf/nwdn/NWDN_0310.pdf</a>
3/12/10	Bellingham Herald, also The News Tribune	100,000 pounds of abandoned fishing gear taken from Whatcom County <a href="http://www.bellinghamherald.com/2010/03/12/1336083/100000-pounds-of-abandoned-fishing.html">http://www.bellinghamherald.com/2010/03/12/1336083/100000-pounds-of-abandoned-fishing.html</a>
3/13/10	The Seattle Times	Divers lift 50 tons of fishing gear from Whatcom County waters <a href="http://www.heraldnet.com/article/20100314/NEWS03/703149854/1008/SPORTS02">http://www.heraldnet.com/article/20100314/NEWS03/703149854/1008/SPORTS02</a>
3/06/10	Kitsap Sun	Fewer "ghost nets" in Kitsap waters <a href="http://www.kitsapsun.com/news/2010/mar/06/kitsap-waters-cleared-of-derelict-nets/">http://www.kitsapsun.com/news/2010/mar/06/kitsap-waters-cleared-of-derelict-nets/</a>

Date	Publication	Title/Link
3/09/10	Port Townsend Leader	Lost fishing nets removed from 13 Puget Sound locations <a href="http://ptleader.com/main.asp?Search=1&amp;ArticleID=26468&amp;SectionID=36&amp;SubSectionID=55&amp;S=1">http://ptleader.com/main.asp?Search=1&amp;ArticleID=26468&amp;SectionID=36&amp;SubSectionID=55&amp;S=1</a>
3/07/10	Island Guardian	13 PS areas free of derelict fishing nets - SJC not one of them <a href="http://www.islandguardian.com/archives/00003144.html">http://www.islandguardian.com/archives/00003144.html</a>
3/11/10	KUOW Radio	Litter cleanup in Puget Sound <a href="http://www.kuow.org/program.php?id=19675">http://www.kuow.org/program.php?id=19675</a>
4/25/10	KOMO TV	Abandoned "killer nets" destroying Puget Sound sea life <a href="http://www.komonews.com/news/local/92062169.html">http://www.komonews.com/news/local/92062169.html</a>
5/18/10	USA Today	Crews Fish Out Lost Nets to Save Trapped Wildlife <a href="http://www.usatoday.com/news/nation/environment/2010-05-17-ghost-fishing-rescue-conservation_N.htm?loc=interstitialskip">http://www.usatoday.com/news/nation/environment/2010-05-17-ghost-fishing-rescue-conservation_N.htm?loc=interstitialskip</a>
5/23/10	Delmarvanow.com	Ghost Pots Haunt Chesapeake <a href="http://www.delmarvanow.com/article/20100523/NEWS01/5230303">http://www.delmarvanow.com/article/20100523/NEWS01/5230303</a>
5/28/10	Indian Country Today	Nisqually, Puyallup, Squaxin Island Remove Derelict Gear <a href="http://www.indiancountrytoday.com/national/northwest/95120234.html">http://www.indiancountrytoday.com/national/northwest/95120234.html</a>
5/29/10	Seattle Times	Gill Nets in Rivers Could Pose Major Damage to Resources <a href="http://seattletimes.nwsourc.com/html/othersports/2011987819_outn30.html">http://seattletimes.nwsourc.com/html/othersports/2011987819_outn30.html</a>
6/10/10	Bellingham Herald	Efforts Under Way to Remove Derelict Fishing Gear in the Nooksack River <a href="http://www.bellinghamherald.com/2010/06/10/1473462/efforts-under-way-to-remove-derelict.html?story_link=email_msg">http://www.bellinghamherald.com/2010/06/10/1473462/efforts-under-way-to-remove-derelict.html?story_link=email_msg</a>
6/12/10	The Outdoor Line	Radio Interview with Ginny Broadhurst



Photos from fishing net removal operations

A dead canary rockfish found in a net off of San Juan Island, January 2010



A live copper rockfish found in a net off of Possession bar, March 2010



Thousands of Dungeness crab were found entangled in a net in Whatcom County waters, June 2010



Congressman Jay Inslee helps haul in a net, April 2010





Image produced by 300 kHz sidescan sonar, showing locations of obstructions and nets

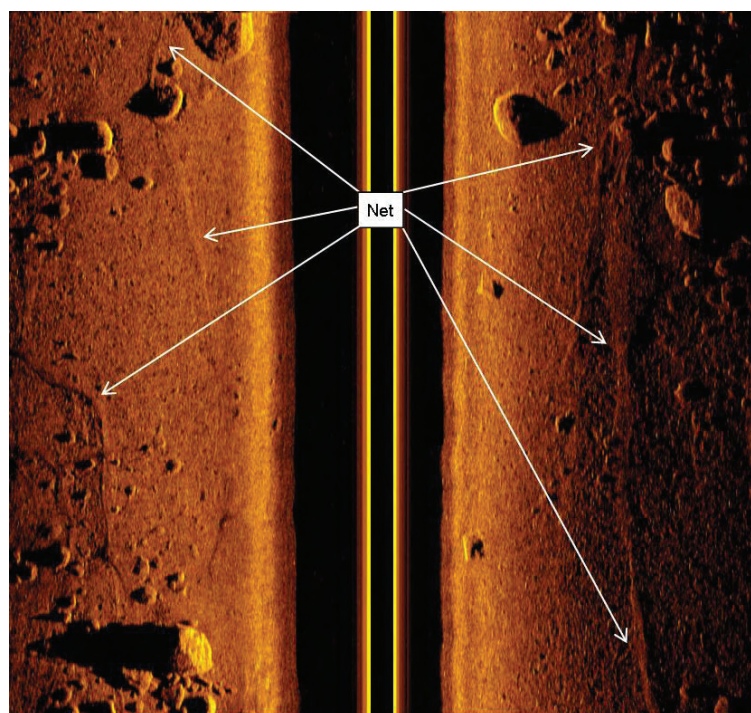




Figure 1: Promotional Materials: Rack cards, wallet cards and ads were created to raise awareness:

(front)

# Still Fishing After All These Years



*Lost and abandoned fishing gear continues to fish, killing marine animals and destroying habitat. The Northwest Straits Initiative removes derelict fishing nets from Puget Sound.*




**Report lost or abandoned nets or pots at**  
**[www.derelictgear.org](http://www.derelictgear.org)** or call  
**360-428-1084** (Northwest Straits Initiative)  
**800-477-6224** (WA Dept. of Fish and Wildlife)

Please collect the following information for reporting:

- Type of gear
- Latitude (ex. 4834.333)
- Approximate water depth
- Longitude
- General location
- (ex. 12300.333)

*There are no penalties associated with reporting lost fishing gear. Nets are dangerous! Do not attempt to remove nets. Divers, stay a safe distance away.*

(back)



The **Northwest Straits Initiative** is currently removing lost and abandoned fishing nets from Puget Sound. Since 2001, the Initiative has worked cooperatively with fishermen, tribes, and agencies to document the impacts of derelict gear, remove damaging gear, and raise awareness about the harm caused by derelict gear in Puget Sound.




The Initiative has removed more than 2,500 derelict fishing nets and 1,500 crab pots from Puget Sound. Over 100,000 animals, representing more than 135 species, were found entangled in this gear; including marine mammals, birds and commercially valuable fish and shellfish. And this is only a snapshot of the long-term impacts of these nets, some of which have been derelict for over twenty years, yet still effectively capture and kill animals. Hundreds of derelict nets still remain in Puget Sound.

In 2009, the Initiative was awarded funding from NOAA to complete the removal of legacy derelict nets in Puget Sound. Funding will allow the Initiative to remove remaining legacy derelict nets and newly reported lost nets through the end of 2010.

Please report lost nets or abandoned nets or crab pots using the reporting information on the front of this card. This is a no-fault program and there are no penalties associated with fishermen reporting lost nets. The Initiative employs highly trained divers and removal vessels to conduct this work. All removals follow state-approved protocols and safety is the first concern. Do not approach derelict nets found in the water and do not attempt to remove nets.

*Learn more about the Northwest Straits Initiative's Derelict Gear Program by visiting*

**[www.derelictgear.org](http://www.derelictgear.org)**

**NORTHWEST STRAITS**  
marine conservation initiative



NORTHWEST STRAITS  
marine conservation initiative

**For Immediate Release:** March 3, 2010

**Contact:** Ginny Broadhurst, 360.428.1085, [broadhurst@nwstraits.org](mailto:broadhurst@nwstraits.org)  
Northwest Straits Marine Conservation Initiative

### **13 PUGET SOUND AREAS COMPLETELY FREE OF DERELICT FISHING NETS**

Mount Vernon, WA - The Northwest Straits Initiative announced today that it has completely removed lost and abandoned commercial fishing nets from 13 distinct locations in Puget Sound. Director Ginny Broadhurst said, "It's great to see a significant number of sites in Puget Sound fully clean of dangerous derelict nets. These areas, including popular dive sites, are now safer for people and marine species. We've been working at this since 2002 and I look forward to our next report that will show that all of Puget Sound is free of derelict nets."

Divers working for the Initiative have been busy removing nets from Puget Sound since last July after receiving American Recovery and Reinvestment Act funds from the National Oceanic and Atmospheric Agency (NOAA). The goal is to remove nearly all derelict gill nets from high priority areas of Puget Sound. It is estimated that when the project began, there were nearly 3,000 lost nets, many dating back several decades that continue to capture and kill fish, birds and marine mammals.

Divers working from four full-time removal boats have already removed over 1,200 mostly gill nets and are on schedule to complete the project by December, 2010. They are working throughout all of Puget Sound in areas that have historically been fished for commercial salmon. The locations that are now completely free of all derelict nets are:

Blakely Rocks, Kitsap County, 5 nets removed

Apple Cove Point, Kitsap County, 12 nets removed

Jefferson Head, Kitsap County, 194 nets removed

Point No Point, Kitsap County, 13 nets removed

Foulweather Bluff, Kitsap County, 132 nets removed

Apple Tree Cove, Kitsap County, 71 nets removed

Colvos Passage, Kitsap and King Counties, 6 nets removed

Sisters Rock, Jefferson County, 11 nets removed

Olele Point and Colvos Rocks, Jefferson County, 4 nets removed

Williamson Rocks, Skagit County, 8 nets removed

Sares Head, Skagit County, 17 nets removed

Urchin Rocks, Skagit County, 25 nets removed

Viti Rocks, Whatcom County, 5 nets removed

This project is one of 50 selected by NOAA for federal stimulus funding authorized by Congress earlier this year. There are currently 30 people employed, including divers, boat crews, biologists and information technology professionals.

“Healthy coastal habitats are critical to the recovery and sustainability of the U.S. economy,” said Pat Montanio, Director of NOAA Habitat Conservation. “Coastal areas generate more than 28 million jobs in the United States. Commercial and recreational fishing employs 2 million people and contributes \$185 billion to the nation’s economy.”

The Northwest Straits Initiative is nationally recognized as an innovative approach to bring sound science and an ecosystem perspective together with citizen energy and entrepreneurship. It began its derelict fishing net and crab pot removal program in 2002.

###

A jpg map noting the locations of the cleaned areas is available at:

[http://www.derelictgear.org/uploads/Images/Derelict\\_Gear/Webpage\\_Images/Cleaned%20areas.jpg](http://www.derelictgear.org/uploads/Images/Derelict_Gear/Webpage_Images/Cleaned%20areas.jpg)

Additional information is available on our Web site at [www.derelictgear.org](http://www.derelictgear.org).





**NORTHWEST STRAITS**  
marine conservation initiative

**For Immediate Release: April 21, 2010**  
**Contact: Brian Gorman 206-526-6613**

**NOAA Celebrates Earth Week at Recovery Act Project  
to Remove Abandoned Fishing Gear from Puget Sound**

NOAA, the Northwest Straits Foundation and other local partners celebrated Earth Week today in Seattle at an American Recovery and Reinvestment Act project that is employing local residents to remove derelict fishing nets from Puget Sound to restore fish and wildlife habitat.

"The Recovery Act is working, providing both immediate and long-term economic benefits here and across the country," said Eric Schwaab, NOAA Assistant Administrator for NOAA's Fisheries Service. "We're in Seattle today to celebrate how local workers are restoring habitat for salmon, orcas, and other threatened and endangered species that are so important to the culture and economy of the Northwest."

NOAA provided \$4.5 million in Recovery Act funding to the Northwest Straits Foundation for a project that is employing divers to remove more than 3,000 tangled and abandoned nets and other derelict gear from Puget Sound.

Abandoned fishing gear damages habitat and can cause marine species to become entangled and die. Removing the derelict fishing gear benefits threatened Southern Resident Orca whales, Chinook salmon, and chum salmon among many other species in the area. Removal teams include members of the Nisqually, Puyallup and Squaxin Indian tribes, as well as other commercially trained divers.

"I returned from serving our country in Iraq with limited job prospects," said Chris Bolt of the Northwest Straits Foundation, currently working as a diver removing derelict gear. "Today, I'm diving to remove abandoned fishing gear to improve the habitat for fish, whales and other animals for the long-term health of Puget Sound."

Through the Recovery Act, NOAA was provided \$167 million for marine and coastal habitat restoration. The Puget Sound project is one of 50 habitat restoration projects selected by NOAA.

More than 30 projects have broken ground, with the rest preparing to start and finish throughout the next year and a half. The 50 projects are supporting thousands of short-term and long-term jobs. They support the equivalent of more than 250 full-time jobs as of the latest report and are expected to support the equivalent of an additional 1,000 full-time jobs before they are completed. When all the planned projects are complete, 8,900 acres of habitat will be restored, and fish will gain access to 700 stream miles that had been blocked by obsolete and unsafe dams. The projects also will

remove more than 850 metric tons of abandoned fishing gear and other marine trash, rebuild oyster and other shellfish habitat, and reduce threats to 11,750 acres of coral reefs.

NOAA understands and predicts changes in the Earth's environment, from the depths of the ocean to the surface of the sun, and conserves and manages our coastal and marine resources. Visit us at <http://www.noaa.gov> or on Facebook at <http://www.facebook.com/noaa.lunchenco>.

#### **On the Web**

NOAA Recovery Act: [www.noaa.gov/recovery](http://www.noaa.gov/recovery)

NOAA Earth Day: [www.noaa.gov/earthday](http://www.noaa.gov/earthday)