

Derelict Fishing Gear Program Progress and Updates

March 21, 2016



partners in marine conservation

Reporting, Response and Retrieval Program

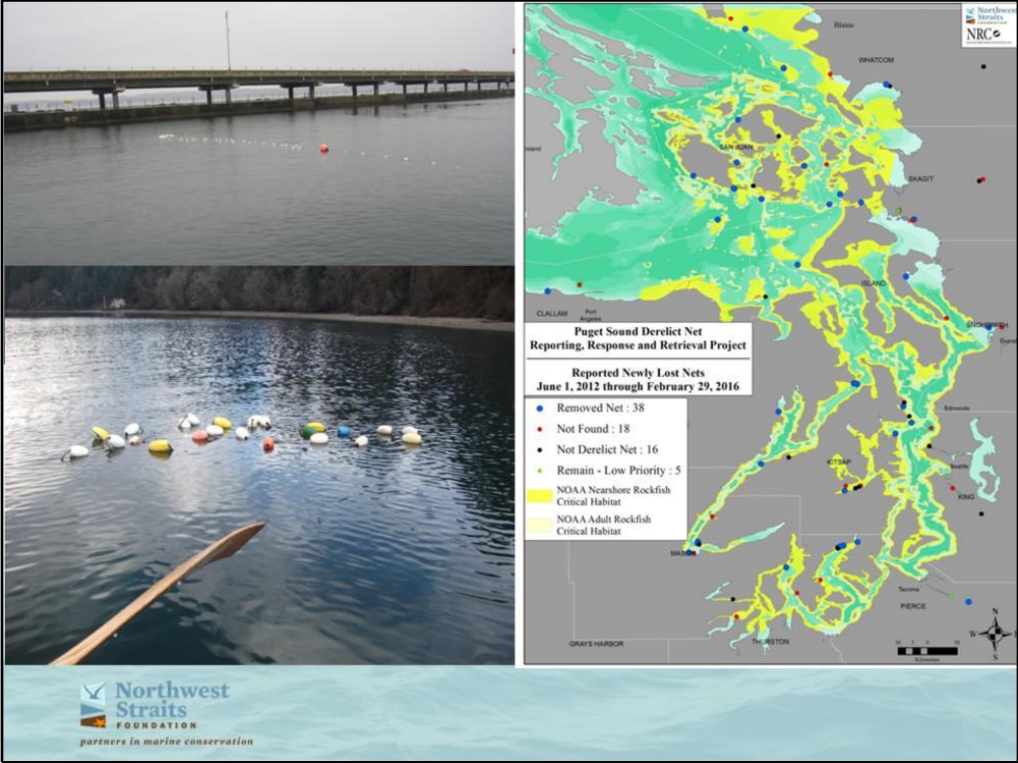
- Reporting system in place
- Non-tribal fishermen required to report within 24 hours by state law
- Tribal fisheries agencies required to report under NOAA harvest rules
- Ongoing outreach
- Currently funded to respond to all reports, coordinate with fishermen, agencies to retrieve nets
- Removal vessels mobilized when needed
- Funded through September, 2018



Results of Pilot RRR Program

- 77 Nets Reported
- 38 Nets Removed
- 18 Nets Not Found
- 16 Nets not derelict fishing gear
- 5 Remaining low priority





Reports of Newly Lost Nets – June 2012 – February 2016

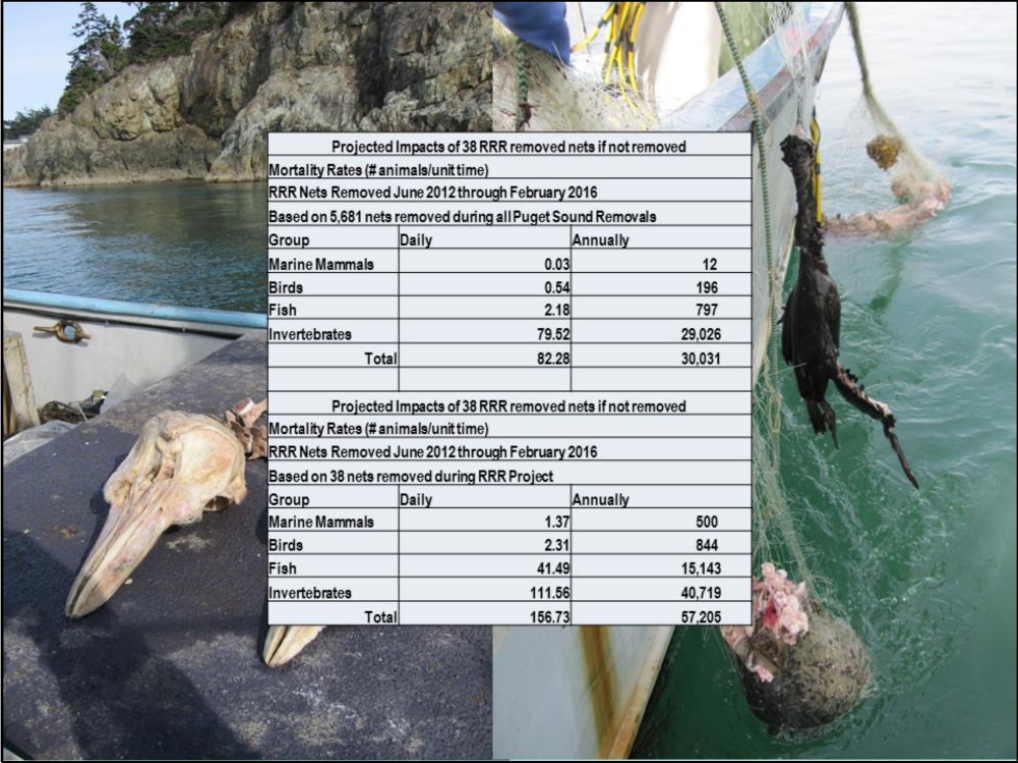
Source	Reports	Method
Fishermen reported own net	4	1 Tribal Enforcement
		3 Tribal Resource Manager
Fishermen reported other's net	2	WDFW Phone
Private citizen	47	3 NRC Phone
		20 NWSF Online
		6 NWSF Phone
		2 Tribal Enforcement
		2 WDFW Enforcement Phone
	14 WDFW Phone	
Tribal Resource Manager	1	1 NWSF Online
WDFW Resource Manager	1	1 WDFW Phone
Other agency (BLM, DNR, Port of Kingston, NWSF, WSDOT)	9	3 NRC email
		4 NWSF Online
		1 NWSF Phone
		1 WDFW Phone
Recreational Fisherman	2	1 NWSF Phone
		1 WDFW Phone
NWSF Removal team	10	NRC Phone
Anonymous	1	NWSF Online
TOTAL	77	

Observed impacts in RRR removed nets as of April 15, 2015

Species Group	Number of Dead	Number of Alive	Species Observed
Mammal	16	0	harbor porpoise, harbor seal
Bird	27	0	Brandt's cormorant, pelagic cormorant, red-necked grebe, cormorant unid., seabird unid.
Fish	407	44	copper rockfish, PS rockfish, rockfish unid., chum salmon, coho salmon, salmon unid., cabezon, Irish lords, lingcod, sculpins, dogfish, English sole, kelp & painted greenling, ratfish
Invert.	2,220	796	Dungeness crab, red rock crab, PS king crab, urchins, heart crab, slender cancer crab

Rockfish encountered in 38 NEWLY LOST derelict nets removed. Puget Sound June 2012 through February 2016

Group	Species Common	Species Scientific	Num Alive	Num Dead	Total
Rockfish	copper rockfish	Sebastes caurinus	1	2	3
	Puget Sound rockfish	Sebastes emphaeus	1	-	1
	rockfish unid.	Sebastes sp.	-	5	5
Rockfish Total			2	7	9



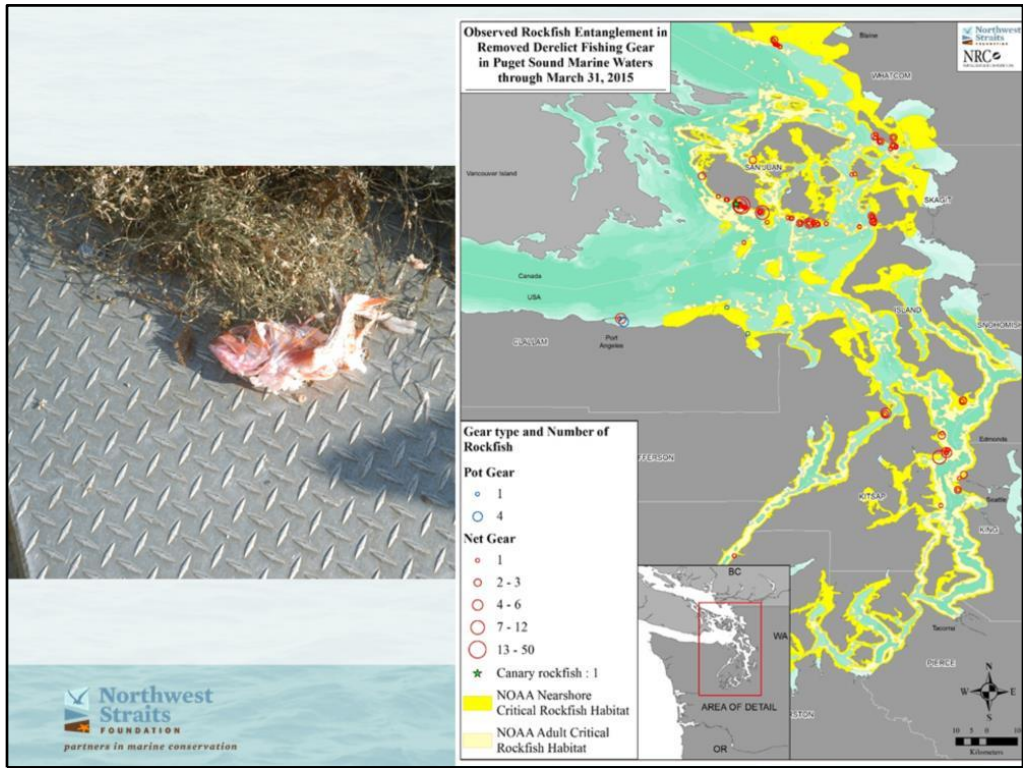
Projected Impacts of 38 RRR removed nets if not removed		
Mortality Rates (# animals/unit time)		
RRR Nets Removed June 2012 through February 2016		
Based on 5,681 nets removed during all Puget Sound Removals		
Group	Daily	Annually
Marine Mammals	0.03	12
Birds	0.54	196
Fish	2.18	797
Invertebrates	79.52	29,026
Total	82.28	30,031

Projected Impacts of 38 RRR removed nets if not removed		
Mortality Rates (# animals/unit time)		
RRR Nets Removed June 2012 through February 2016		
Based on 38 nets removed during RRR Project		
Group	Daily	Annually
Marine Mammals	1.37	500
Birds	2.31	844
Fish	41.49	15,143
Invertebrates	111.56	40,719
Total	156.73	57,205

Species Common Name	Species Scientific Name	# Live	# Dead	Total
black rockfish	Sebastes melanops	5	59	64
brown rockfish	Sebastes auriculatus	-	2	2
canary rockfish	Sebastes pinniger	-	1	1
China rockfish	Sebastes nebulosus	1	-	1
copper rockfish	Sebastes caurinus	16	25	41
Puget Sound rockfish	Sebastes emphaeus	11	4	15
quillback rockfish	Sebastes maliger	15	28	43
rockfish unid.	Scorpaenidae sp.	35	63	98
	Sebastes sp.	-	24	24
yellowtail rockfish	Sebastes flavidus	1	2	3
Rockfish Total		54	208	292



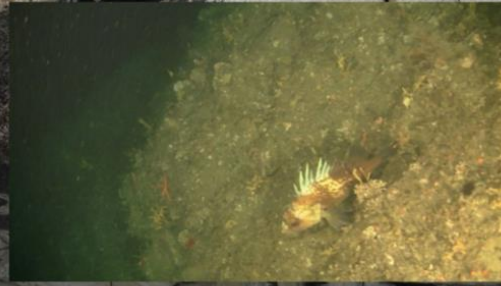

Northwest Straits
 FOUNDATION
partners in marine conservation



Deep Water Derelict Net Removal

- Eliminate harm from derelict fishing gear in Puget Sound
- Restore deep water marine habitat for rockfish and other species
- Eliminate mortality of rockfish and other species

 Northwest
Straits
EDUCATION
partnered by marine conservation



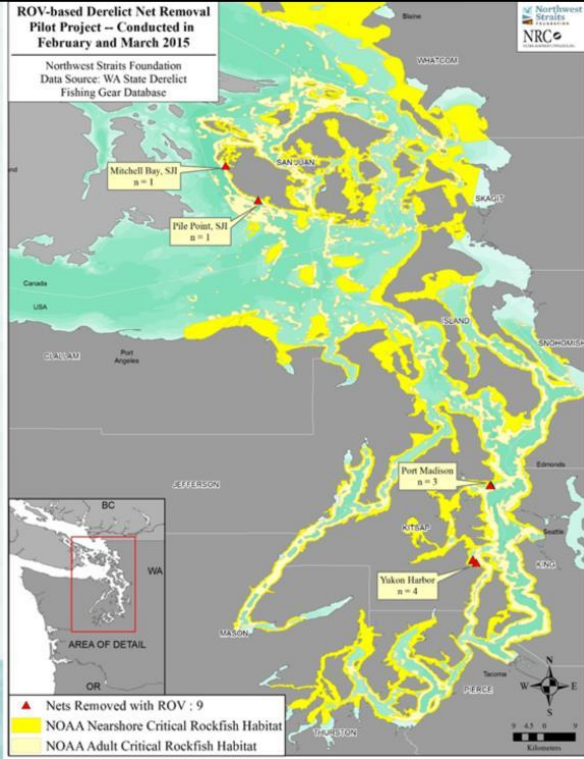
Deepwater Pilot Project Goals

- Determine whether ROVs can remove derelict fishing nets completely and without habitat impacts
- Test ROV removal methods on a variety of net/habitat configurations
- Develop and test a number of tools under a variety of conditions
- Establish baseline cost for removing derelict nets with ROVs



ROV-based Derelict Net Removal Pilot Project -- Conducted in February and March 2015

Northwest Straits Foundation
Data Source: WA State Derelict Fishing Gear Database





ROV-based Derelict Net Removals – Pilot Phase

Habitat Type	Nets Removed	Gear Type	Location	Area (ft ²)	Area (acres)
Boulders on sand, mud and gravel	7	Gillnet	Port Madison & Yukon Harbor	64,150 ft ²	1.47 acres
High-relief rocky substrate	2	Purse seine	San Juan Island	32,300 ft ²	0.74 acres
TOTAL	9			96,450 ft²	2.21 acres

Species Group	Number of Dead	Number of Alive	Species Observed
Fish	4	6	Red Irish lord, sculpin, fish unid.
Invert.	157	952	Dungeness crab, red rock crab, spiny lithode crab, heart crab, golfball crab, urchins and many more

Deepwater Derelict Net Removals – Next steps

- 232 Deepwater net targets
 - 93 verified
 - 139 unverified

- Locations for next steps
 - Samish – Guemes Area
 - South San Juan Island
 - Lopez Is. & Rosario Strait
 - Point Roberts
 - Others based on results from verification



Known Remaining Deepwater Derelict Net Targets in Puget Sound Marine Waters as of March 31, 2015

Northwest Straits Foundation
Data Source: WA State Derelict Fishing Gear Database

