

September 2019 WDFW Gear Test and Results

Introduction

To test how whale-safe crabbing devices work in the Washington coastal commercial Dungeness crab fishery's normal operations, breakaway devices including [1700 lbf \(pounds of force\) whale-release rope sleeves](#) and [600 lbf weak buoy links](#) (both shown in the photo below) were rigged onto test crab pot gear. Five crabbers volunteered to deploy four test pots each, and to provide feedback on how the test gear worked for them. Secondary objective: test several line marking strategies, including black, red, and green spray paint as well as red drip paint.

Observations/Results Summary

A total of five of twenty pots were lost during this study period, two of which were likely lost when the buoys were cut off by vessel traffic. The other three lost pots were tacked down in mud after initial deployment in places where pots are known to become stuck during normal fishing operations. When force was applied to line attached to each of the three stuck pots, the whale-release sleeve broke as designed. Two of these three had portions of the line that were returned to WDFW and our examination confirmed that that had occurred. See photo below.



and may last longer (although that has not yet been tested). Reflective electrical tape was suggested, but tape was observed fraying in a short period of time. "Vinyl-On" paint was also suggested for line marking; it is the same kind of paint crabbers use on their buoys, and it also has yet to be tested.

Future Directions

WDFW continues to collect industry feedback regarding line marking methods used voluntarily by the fleet during the 2019-2020 season. Line marking will be required on any gear deployed in Washington waters after December 1, 2020. Please see the [Fish and Wildlife Commission meeting notes](#) for more details. Further WDFW-organized gear testing is not slated for 2020 due to COVID-19 concerns, but the Department will be soliciting industry feedback in the form of more virtual engagement, including July and August Industry Meetings as well as a fleetwide survey currently in development.

The weak links at the buoy functioned well during the test, and all test participants reported satisfaction with the use of them.

Line Marking Observations

Bright green spray paint and black spray paint both do not show well. Red spray paint seems to hold well, but it also comes off easily when being handled. Red drip paint maintains brightness/visibility the best, but it is also the most cumbersome method to employ – it's messy and takes much longer for the paint to dry; flaking appears to be just as much of an issue.

Follow-Up Survey/Interview Notes

Paint may not stick to old line well, even when bleached. Paint is possibly the easiest line-marking method (esp. for crabbers who rig their gear in a covered area). Twine weaved into the line may work better for some crabbers

Tag #	Yale Sleeve splice	Break away swivel	Line diameter	shot length (fm)	Line mark color	Line mark paint type	Location Deployed	Depth (ft)	In tact?	Notes (incomplete)
1351	Tucked	Light Duty	7/16"	15	Black	Spray	one at 46°16'50 x124°07'40" up on the beach and got surf, one at 46°23.5'x 124°04'08" and two at 46°19.5x124°05' (all three with strong tidal influence). Good weather where they wouldn't get tacked down.	30	Y	
1352	Tucked	Light Duty	7/16"	15	None	None		30	Y	
1353	Tucked	Link	7/16"	15	None	None		30	Y	Tuna fins found in pot
1354	Tucked	Link	7/16"	15	None	None		30	Y	
1355	Hog Ringed	Light Duty	7/16"	20	Green	Spray	just outside buoy 5	36	N	Likely succumbed to boat traffic
1356	Tucked	Light Duty	7/16"	20	Green	Spray	one just outside buoy 5 and two S of the tip of the S jetty	36	Y	
1357	Tucked	Light Duty	7/16"	20	Green	Spray		36	Y	
1358	Hog Ringed	Link	7/16"	20	Green	Spray		36	Y	
1359	Hog Ringed	Heavy Duty	1/2"	20	Red	Spray	46°52'05" 124°11'03"	50	Y	
1360	Hog Ringed	Heavy Duty	1/2"	20	Red	Spray	46°52'05" 124°11'03"	50	Y	
1361	Tucked	Heavy Duty	1/2"	20	Red	Spray	46°52'05" 124°11'03"	50	Y	sleeve stretched thin in the middle for ~6inches
1362	Tucked	Heavy Duty	1/2"	20	Green	Spray	46°52'05" 124°11'03"	50	Y	
1363	Tucked	Heavy Duty	1/2"	20	Red	Unknown	46°45'19" 124°07'44"	30	N	stuck, laid on it for ~15 sec and the sleeve broke
1364	Tucked	Heavy Duty	1/2"	20	Red	Spray	46°45'19" 124°07'44"	20-50	Y	
1365	Hog Ringed	Heavy Duty	1/2"	20	Red	Drip	46°45'19" 124°07'44"	20-50	Y	
1366	Hog Ringed	Heavy Duty	1/2"	20	Red	Drip	46°45'19" 124°07'44"	20-50	Y	
1367	Tucked	Heavy Duty	1/2"	20	Red	Spray	North of Buoy 5	40	N	Yale sleeve broke, electrical tape and sleeve both fraying at splice
1368	Tucked	Heavy Duty	1/2"	20	Green	Spray	North of Buoy 5	40	N	Yale sleeve broke, electrical tape fraying from Yale sleeve splice, line marking showing through sleeve
1369	Hog Ringed	Heavy Duty	1/2"	20			North of Buoy 5	40	N	Was likely cut off or dragged off by a boat, not found
1370	Hog Ringed	Heavy Duty	1/2"	20	None	None	North of Buoy 5	40	Y	sleeve stretched thin in the middle for ~1inch or so