



PACIFIC STATES MARINE FISHERIES COMMISSION

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Revised Pre-Season Testing Protocol for the Tri-State Coastal Dungeness Crab Commercial Fishery

May 2020

I. Purpose

In accordance with the Tri-State Dungeness Crab Memorandum of Understanding (see Appendix A), the Washington Department of Fish and Wildlife (WDFW), Oregon Department of Fish Wildlife (ODFW) and the California Department of Fish and Wildlife (CDFW) will conduct a coast wide test fishery in the area from Point Arena, California to the United States-Canadian border. Meat recovery results from the test fishery will be used as a basis for recommendations to the department directors (or their designees) in each state regarding the commercial Dungeness crab season opening date(s). The intent is to employ a standardized and consistent protocol for coordinating the season opening date based upon coast-wide crab quality. Department directors (or their designees) will consider the test fishing data to coordinate an organized season opening structure in the event that season delays due to poor quality crab are necessary.

II. Test Fishery Procedures

- a. Each state agency will determine the number and location of test areas necessary to collect data that is sufficient to be representative of the primary range of the fishery. Detailed information on test areas and station locations are provided by each state to the other Tri-State Dungeness Crab Committee member states and the Pacific State Marine Fisheries Commission (PSMFC) in the appendices to this document. If changes are required to the information provided in the appendices, notification will be provided to the other member states a minimum of two weeks prior to conducting the test fishery. Each test area is made up of 1-3 test station(s) centered on major crabbing ports in each state. Each test station is made up of three strings of six pots at three pre-determined depths. The test areas, stations and target depths are listed in each state's appendix to this document. California statute requires testing to be conducted and funded by an entity authorized by the CDFW. (California Fish and Game Code [FGC] section 8276.2)
- b. Vessels and processors involved in the testing program will be selected based on consultation between State agency personnel and industry representatives. Persons

on board testing vessels will be limited to captain, crew, and state or other authorized observers.

- c. A string of pots will be deployed at each station at depths of 15, 30, and 45 fathoms. If those depths are not practicable, deviations should be noted and explained in the station location appendix.
- d. Six standard commercial Dungeness crab pots will be used at each station. Pots will generally be soaked for 24 hours, unless weather conditions require a shorter or longer soak time. All legal-sized male crabs from each pot string, regardless of shell condition, will be collected for meat recovery. Crab will be kept in water until they are drained in preparation for weighing. Catch (number of crab) per pot will not be recorded. Crab collected from a single test area (all stations) will be combined and processed as a group to generate a single meat recovery percentage for each test area. Each test area will be assessed individually to meet the minimum meat recovery criteria as specified in sections III and IV and not averaged together. If the boat weight (as defined in section III. c.) of all of the crab from a single test area is less than 300 pounds that sample will be resampled as soon as possible. If the boat weight of the sample appears to be to be less than 300 pounds, at the discretion of the vessel operator, pots may be reset immediately and the crab from a second pull of all of the pots in the area can be combined with the first for a single sample of crabs for the test area.
- e. Crabs from each test station may be collected as part of each state's domoic acid test, if such test will be conducted.
- f. Test-fishing and domoic acid test results will be provided to each state and the PSMFC as soon as possible.

III. Meat Recovery Testing Procedures

- a. All crab collected for meat recovery testing will be included regardless of condition.
- b. If crabs are transported to a processing facility, they will be transported in a closed container or vehicle.
- c. Crab will be weighed 30 minutes from offload of the vessel and this number will be reported as boat weight. The boat weight will be used to calculate meat recovery for test results. For every test area, the amount of time between offload and weighing will be recorded and an explanation provided if crab were drained longer than 30 minutes.
- d. Crab used in the meat recovery test will be backed and cooked (not steamed) in fresh water for 12 minutes.

- e. Crab will be chilled in cold water then held in cold storage for a minimum of 2 hours prior to picking. Picking will be completed within approximately 24 hours.
- f. The pick-out process for each test will be observed by state agency staff or other persons approved by the states.
- g. Crab meat will be picked out, **including tips**. Crab meat will be brined in a 90% solution, cleaned, rinsed, drained, pressed, drip tested and weighed to obtain packed weight.
- h. Packed weight is divided by boat weight to calculate the meat recovery percentage.
- i. The meat recovery results collected from all test fisheries and for each test station will be provided to each state and the PSMFC as soon as possible after each test fishery. All deviations from these procedures will be reported with meat recovery results.

IV. Season Opening Criteria

The decision to open the season on December 1 or to delay the opening will be made by consultation among WDFW, ODFW and CDFW. Meat yield from a high quality crab in the region north of Cascade Head may not be the same as the meat yield from a high quality crab in the region south of Cascade Head and as such, the Tri-State agreement to recommend opening the season on December 1 is based on the meat recovery criteria as follows:

- i. **North of Cascade Head:** Meat recovery rate for each test area to reach **23 percent** (no rounding).
- ii. **South of Cascade Head:** Meat recovery rate for each test area to reach **24 percent** (no rounding).

V. Test Fishing and Process for Setting the Season Opening Date

With the goal of providing sufficient advanced notice of the season opening, **each round of testing** will be scheduled to be completed a minimum five days prior to the gear set date if the season were approved to open. Decision makers retain the flexibility to reduce the notification period taking into account the needs of the coastal Dungeness crab industry.

A test is considered complete when the meat recovery results from the areas tested have been collected and distributed to the states and the PSMFC.

In the event of regional differences in meeting the minimum meat recovery criteria, agency Directors or their designees can mutually agree to follow the procedures outlined in Section VI to establish two fishing zones with differing opening dates.

States have the option to conduct an early test fishery targeted for completion by the end of October. Any test area that meets the minimum meat recovery criteria in an optional early test fishery is not required to be retested in the first round of test fishing.

State managers will hold a technical conference call prior to the beginning of testing around November 5. The purpose of this call is to share plans for testing with a goal to test in a similar time frame, as close as possible, given the vagaries of weather, vessel availability, or other unforeseeable variables.

a. First Round of Test Fishing

- i. The three states will conduct test fishing, targeted for completion by November 15 and no later than November 22.
 1. WDFW will notify the other states if there are soft-shell delays north of Klipsan Beach, Washington (with the understanding that this information may not be available until late November).
- ii. A Tri-State conference call will be scheduled as soon as possible following the completion of the first round of test fishing (or in the event that testing was not completed). During the call department Directors or their designees will discuss the results and mutually decide to: open the season on December 1 or delay the season. The results of the first round of test fishing will be used as follows:
 1. **If every test area meets the minimum meat recovery criteria:** Tri-State protocols prescribe that the season open on December 1.
 2. **If there are test areas that do not meet the minimum meat recovery criteria or the test fishing was not able to be completed:** Tri-State protocols prescribe that the season be delayed until December 16 and schedule additional testing.

b. Second Round of Test Fishing

- i. If a second round of test fishing is necessary, all three states will re-test all areas that did not meet the minimum meat recovery criteria in earlier test fishing. The second round of test fishing will be scheduled for completion by December 7.
- ii. A Tri-State conference call will be scheduled as soon as possible following completion of the second round of test fishing (or in the event the test fishing was not completed). During the call the agency Directors or their designees will discuss the results and mutually decide to: open the season on December 16 or delay the season further. The results of the second round of test fishing will be used as follows:
 1. **If every test area meets the minimum meat recovery criteria:** Tri-State protocols prescribe the season open on December 16.

2. **If there are test areas that do not meet the minimum meat recovery criteria or the second round of test fishing was not able to be completed:** Tri-State protocols prescribe that the season be delayed until December 31 and schedule any additional testing.

c. Third Round of Test Fishing

- i. If a third round of test fishing is necessary, all three states will re-test all areas that did not meet the minimum meat recovery criteria in earlier test fishing. The third round of test fishing will be scheduled for completion by December 22.
- ii. A Tri-State conference call will be scheduled as soon as possible following the completion of the third round of test fishing (or in the event the third test was not completed). During the call the agency Directors or their designees will discuss the results and mutually decide to open the season on: December 31, January 15 or February 1. The results of the third round of test fishing will be used as follows:
 1. **If every test area meets the minimum meat recovery criteria as defined in section IV:** Tri-State protocols prescribe the season open on December 31.
 2. **If every test area is greater than or equal to 23% (no rounding) meat recovery:** Tri-State protocols prescribe the season open on January 15.
 3. **If there are test areas that are below 23% or the third round of test fishing was not completed, but there are significant threats to the fishery forecast (whales, biotoxin, etc):** Tri-State protocols prescribe the season open on January 15.
 4. **If there are test areas that are below 23% and there are insignificant known threats to the fishery forecast (whales, biotoxin, etc):** Tri-State protocols prescribe the season open on February 1.

d. Fourth Round of Test Fishing (optional)

- i. States have the option to conduct a fourth round of test fishing and use the results to mutually decide to open the season on: January 15 or February 1. The optional fourth round of test fishing will be scheduled for completion by January 7.

VI. Procedure for Establishing Fishing Zones

- a. If the season opening is delayed due to poor meat recovery rates, the states will take mutually supportive administrative action to divide the coastal fishery north of


Point Arena, CA into fishing zones. Due to differences in meeting the meat recovery criteria, the opening dates for the fishery may differ in the fishing zones.

- b. The boundary between the zones will take traditional fishing patterns into account so as to minimize disruption. The boundary will be set by mutual agreement of WDFW, ODFW and CDFW. The boundary(s) will not be set south of the Oregon-California border in order to conform to California statutes.
- c. Fishers may elect to fish in any zone. However, a vessel used for fishing in an open zone may not be used for fishing crab in any zone that opens later within the same crab season until 30 days after the first gear retrieval date for the later-opening zone. See the table in appendix E for each State's fair start regulations.
- d. Gear-setting periods immediately prior to season opening dates will be allowed as describe by each State's regulations.
- e. See appendix E for the Tri-State fair start regulation clarification table. If changes are required to the information provided in the appendix, notification will be provided to the other member states as soon as possible.

Signature Page for the
**Revised Pre-Season Testing Protocol for the
Tri-State Coastal Dungeness crab Commercial Fishery**

May 2020

The undersigned agree to the current protocol.

_____ Date	_____ Sonke Mastrup, Invertebrate Program Manager, Marine Region, California Department of Fish and Wildlife
6/17/2020 _____ Date	 _____ Caren Braby, Marine Resources Program Manager Oregon Department of Fish and Wildlife
_____ Date	_____ Heather Hall, Intergovernmental Ocean Policy Coordinator Washington Department of Fish and Wildlife

Appendix A: 2007 Tri-State MOU

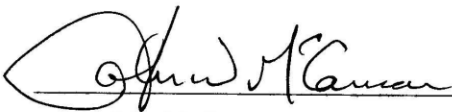
**MEMORANDUM OF UNDERSTANDING REGARDING MANAGEMENT
OF THE PACIFIC COAST DUNGENESS CRAB FISHERY¹**


The Directors of the fishery agencies of California, Oregon, and Washington recognize that a need exists for interstate cooperation in management of the Pacific Coast Dungeness crab fishery in general, and specifically in dealing with adjustments of the fishing season.

Therefore, the Directors of the aforementioned agencies declare it to be their intent to take mutually supportive actions to further the management and maximize the sound economic and biological utilization of the crab resource when appropriately requested by the Director of one of the other three cooperating state agencies.

With regard to the incidence of soft shelled crab at the beginning of the winter season, the Directors endorse the recommendations agreed to by the state agency representatives of the Tri-State Dungeness Crab Committee and agree to take whatever measures necessary to implement its provisions.

Should any state agency decide that it cannot act within the provisions of this agreement, or is unable to meet its financial obligations under this agreement, the Directors agree to provide at least 30 days advance notice to the remaining parties of the agency's intent.

10/2/04
Date 
John McCamman, Acting Director
California Department of Fish and Game

10/8/07
Date 
Roy Elicker, Director
Oregon Department of Fish and Wildlife

11/13/07
Date 
Jeff Koenings, Director
Washington Department of Fish and Wildlife

¹ Supersedes the memorandum dated April 1996; last modified August 24, 2007

Appendix B: Washington

WASHINGTON CRAB TEST FISHING PROCEDURES

Updated September 2013

Test Fishing Procedures

The Washington Department of Fish and Wildlife (WDFW) will conduct a test fishery to determine the percentage of meat recovered from a sample of Dungeness crab starting in late October. WDFW will conduct two test fisheries, the target start for the first test is the last week of October, and the second test will be conducted with a target date for completion of November 15.

Crab will be collected from two test stations in October. If necessary to gather additional information on crab condition in northern areas an additional station may be tested in November. For each area, three lines will be sampled. Pot strings of six pots each will be set at approximately 15, 30, and 45 fathoms along each line. Each pot will have two bait boxes both filled with approximately one pound of squid and razor clams. Pots will be soaked for a minimum of 24 hrs up to 48 hours. All legal-sized male crab in each string at all depths will be collected for meat recovery testing regardless of shell condition. Additionally, WDFW staff will randomly sample the catch for carapace width and shell condition data to maintain the historical shell condition database. Crab from each of the areas will be processed to collect a meat recovery rate for each area according to the protocols described below. Six crabs from each test station will be collected as part of the Department of Health (DOH) domoic acid test. Crab collected for DOH testing will be cooked whole in fresh water for 20 minutes. Crab per pot data will not be collected.

October Test Areas

Westport Area

Buoy 3:	46° 55'	124° 15'
Grayland:	46° 49'	124° 12'
Willapa:	46° 44'	124° 11'

Long Beach Area

Peacock Spit:	46° 15'	124° 10'
Seaview:	46° 19'	124° 09'
Cranberry:	46° 23'	124° 09'

Optional November Test Area

Northern Area

Destruction Island:	47° 39'	124° 35'
Kalaloch:	47° 32'	124° 36'
Raft River:	47° 26'	124° 34'

Appendix C: Oregon

OREGON CRAB TEST FISHING PROCEDURES

Updated October 2017

In partnership with the Oregon Dungeness Crab Commission, ODFW will conduct pre-season testing in accordance with the Tri-State testing protocols for softshell crab prior to the Ocean Dungeness Crab Fishery opening each year.

Crab will be collected in eight test areas off the Oregon coast. Each area consists of one or two stations where strings of six pots will be set at approximately 15, 30, and 45 fathoms centered around the locations listed below. Each pot will be a standard commercial 38 inch crab pot and will be baited with two baiters filled with approximately 1 pound of squid each. For each depth, all legal-sized male crab will be collected. All crab will be combined and processed for a single meat recovery rate for each area, according to Tri-State protocols. The meat recovery by test area will be made available to each of the states and PSFMC for posting on their website as soon as possible. The total poundage by test area for each round of testing will be available to permit holders upon request. Six legal male crabs from each test station (1 from each pot) will be collected as part of the Oregon Department of Agriculture (ODA) domoic acid tests as needed. Secondly, the contents of two pots per string will be further examined by the ODFW at-sea observer to assist in collecting data about the quantity and species composition of the bycatch caught in the fishery. The sex and carapace widths of all of the Dungeness crab and the amount and species composition of all other bycatch will be recorded for each of these pots. This additional information will be available upon request after the first 30 days of the Ocean Dungeness Crab fishery. Lastly, genetic samples (one posterior leg) from female and undersized male crab may be retained and brought back to port for future population genetic analyses.

TEST AREAS

Astoria area: OR/WA border to Cape Falcon

Centered around (46° 00'N 124° 3.6'W)

Garibaldi area: Cape Falcon to Cape Lookout

Centered around (45° 33'N 124° 02'W)

North Newport area: Cape Lookout to Cape Foulweather

Centered around (45° 10'N 124° 2.8' W) and (44° 54'N 124° 06.3'W)

South Newport area: Cape Foulweather to Heceta Head

Centered around (44° 34.2'N 124° 11' W) and (44° 17.5'N 124° 12'W)

North Charleston area: Heceta Head to North Bend

Centered around (43° 57.5'N 124° 12.5' W) and (43° 36.5'N 124° 15.3' W)

South Charleston area: North Bend to Cape Blanco

Centered around (43° 19.5'N 124° 26.3' W) and (42° 58.5'N 124° 31.4' W)

Port Orford area: Cape Blanco to Gold Beach

Centered around (42° 37.5'N 124° 27.5' W)

Brookings area: Gold beach to OR/CA border

Centered around (42° 10'N 124° 24.1' W)

Appendix D: California

NORTHERN CALIFORNIA CRAB TEST FISHING PROCEDURES

Updated April 2015

I. Test Fishery Procedures

Pre-season testing in California will be funded and conducted by an entity approved by CDFW in accordance with the Tri-State testing protocols for softshell crab, prior to the Ocean Dungeness Crab Fishery opening each year. Crab will be collected in four test areas off the California coast. Each area consists of two stations where strings of six pots will be set at approximately 15, 30, and 35-45 (depending on station) fathoms centered around the locations listed below. Each pot will be a standard commercial 38 inch crab pot and will be baited with two baiters filled with approximately 1 pound of squid each, or their equivalent. For each depth, all legal-sized male crab will be collected in the presence of an on-board observer authorized by CDFW. All crab will be combined and processed for a single meat recovery rate for each area, according to Tri-State protocols. The meat recovery by test area will be made available to each of the states and PSFMC for posting on their website as soon as possible. The total poundage by test area for each round of testing will be available to permit holders upon request. Six legal male crabs from each test station (1 from each pot) will be collected as part of the California Department of Public Health domoic acid tests as needed. In addition, the onboard observers may collect biological data and samples as directed by the CDFW.

Crescent City Area:

- | | | | | |
|-----|----------------|-----------|------------|----------|
| (1) | Klamath River: | N 41° 33' | W 124° 11' | 15/30/45 |
| (2) | St George Reef | N 41° 46' | W 124° 15' | 15/25/35 |

Trinidad Area:

- | | | | | |
|-----|----------------|-----------|------------|----------|
| (3) | Lagoons: | N 41° 16' | W 124° 09' | 15/30/45 |
| (4) | Trinidad Head: | N 41° 03' | W 124° 09' | 15/30/45 |

Eureka Area:

- | | | | | |
|-----|------------|-----------|------------|----------|
| (5) | LP Eureka: | N 40° 50' | W 124° 14' | 15/30/45 |
| (6) | Eel River: | N 40° 39' | W 124° 23' | 15/25/35 |

II. Additional Testing Outside the Tri-State Fishing Zones

Beginning in 2011 two test areas south of Point Arena will be established using Tri-State protocols but with testing results for informational purposes only. Test results will not be used in determining season delays.

Bodega Bay Area:

- | | | | | |
|-----|---------------|-----------|------------|----------|
| (7) | Russian River | N 38° 26' | W 123° 11' | 15/30/45 |
| (8) | Pt Reyes | N 38° 02' | W 123° 03' | 15/30/45 |

Half Moon Bay Area:

- | | | | | |
|------|---------------|-----------|------------|----------|
| (9) | Duxbury | N 37° 50' | W 122° 46' | 15/25/35 |
| (10) | Half Moon Bay | N 37° 37' | W 122° 41' | 15/25/35 |

Appendix E: Fair Start Clarification Table

		Washington	Oregon	California
1	Is the fair start waiting period 30 days?	Yes*		
2	Is an area declaration required?	No	Yes (on hold inspections)	No
3	Is fair start applied to areas delayed due to low meat pickout?	Yes		
4	Is fair start applied for areas delayed due to elevated domoic acid?	Yes		
5	Is fair start applied to all individual area openings within the Tri-State region (i.e. not first opening within each state)?	Yes		
6	What is the day and time vessels subject to fair start can start crabbing in a delayed area that opened?	12:01AM 30 days after first gear retrieval day for delayed area (including the first gear retrieval day)		
7	What is the earliest a vessel can set gear in an already open area and NOT be subject to fair start in a delayed area?	First gear retrieval day and time for delayed area		
8	Can a vessel subject to fair start transport crab into an area that opened on a later date during the 30 day fair start period? Any notification procedures?	Yes; notification required	Yes; no notification required	No
9	Are vessels that only set pots for another vessel during the presoak period (aka ‘barging’) subject to fair start provisions?	NA; crab permitted vessels prohibited from barging	No	NA; crab permitted vessels prohibited from barging
10	Can a crab permitted vessel help barge pots in Oregon (only state that allows crab permitted vessels to barge) in an open area and then use that vessel to participate in an area that opens later within the same crab season and not be subject to fair start?	Yes		

* 35 days fair start period for tribal delays in WA north of Point Chehalis