

**GROUND FISH FISHERY
EXEMPTED FISHING PERMIT
AUTHORITY: 50 CFR 600.745(b) AND 50 CFR 679.6**

PERMIT #2019-01

The Administrator, Alaska Region, (Regional Administrator), National Marine Fisheries Service (NMFS), hereby authorizes up to five vessels using trawl gear to conduct two experimental fishing studies in the 2019 Bering Sea and Aleutian Islands (BSAI) Amendment 80 yellowfin and rock sole fisheries under this exempted fishing permit (EFP). The experimental fishing will provide a comparison of the results from a series of censuses of red king crab (RKC) to estimates of RKC generated from NMFS-certified observer (observer) sampling to determine the ability of current prohibited species catch (PSC) rate estimations to accurately account for RKC PSC in these fisheries. A concurrent viability study under this EFP will examine factors that influence RKC PSC mortality and survival in these fisheries. This EFP describes exemptions to regulations and other requirements that are necessary to facilitate the project.

The permit holders and the owner and operator of the participating vessels must comply with the EFP terms, and unless otherwise provided in this permit, the Magnuson-Stevens Fishery Conservation and Management Act, and 50 CFR parts 600 and 679. An authorized designated representative for each vessel participating in experimental fishing under this EFP must complete and sign a copy of the vessel information form contained in Appendix A, of this EFP.

This permit is valid and in effect when signed by both the Regional Administrator and participating permit holders. This permit is valid through April 15th, 2019 or until exempted fishing is concluded, whichever is earlier. If experimental fishing concludes before the expiration date, the Principal Investigator may terminate the permit prior to the expiration date by notifying Bridget Mansfield (907) 586-7642, NMFS Alaska Regional Office. This permit may be revoked, modified, or suspended under the permit's terms, by the Regional Administrator, or by regulatory action under 50 CFR 679, 50 CFR 600.745, or 15 CFR part 904.


James W. Balsiger, Ph.D. *for J/B*
Administrator,
Alaska Region, NMFS

1-30-2019
Date Signed

**BERING SEA AND ALEUTIAN ISLANDS
GROUNDFISH FISHERY
EXEMPTED FISHING PERMIT # 2019-01**

PERMIT HOLDER SIGNATURE PAGE

Cory Lescher

Permit Holder Signature

Cory Lescher

Permit Holder Printed Name

FAST Lab, APU

Permit Holder Company/Affiliation

1/30/19

Date Signed

Brad Harris

Permit Holder Signature

Brad Harris

Permit Holder Printed Name

FAST Lab, APU

Permit Holder Company/Affiliation

1/30/19

Date Signed

**BERING SEA AND ALEUTIAN ISLANDS
GROUNDFISH FISHERY
EXEMPTED FISHING PERMIT #2019-01
TERMS AND CONDITIONS**

AUTHORITY: 50 CFR 600.745(b) AND 50 CFR 679.6

**BIOLOGICAL SAMPLING OF INCIDENTALLY-CAUGHT RED KING CRAB IN THE
BERING SEA AND ALEUTIAN ISLANDS YELLOWFIN AND ROCK SOLE
FISHERIES**

A. Permit Holders

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B. Principal Investigator (PI). The PI, Mr. Cory Lescher, is authorized to receive information or data generated for purposes of this EFP from observers, sea samplers, and vessel operators and crew of any vessel authorized to participate in this EFP.

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C. Designated Vessels. Up to five vessels using trawl gear in the 2019 BSAI Amendment 80 yellowfin and rock sole fisheries will be designated to conduct the sampling for this EFP. In addition to the EFP, the owners and operators of the designated vessels will be required to hold all permits and License Limitation Program endorsements otherwise authorizing participation in the BSAI Amendment 80 yellowfin and rock sole trawl fisheries.

1. A permit holder will submit to NMFS a completed and signed Vessel Data Sheet (see **Appendix A**) for each of the designated vessels no later than three business

days prior to the commencement of the vessel's participation in exempted fishing authorized by this permit. The Vessel Data Sheet includes the following information:

- a. Name of managing company
 - b. Vessel name(s)
 - c. Federal permit number and USCG registration number
 - d. Name, address, telephone number, and email of owner
 - e. Vessel length and tonnage (gross)
 - f. Vessel type
 - g. Vessel homeport
 - h. Name of designated representative
 - i. Contact information for designated representative
 - j. Signature of owner or designated representative
2. If the designated vessel is unable to complete the EFP fieldwork (e.g., due to a mechanical breakdown), a permit holder will inform NMFS and submit the required information for any replacement vessel per the designation and notification instructions in sections C and D of this EFP.
 3. A copy of this EFP must be on board each designated vessel when EFP fishing.

D. Vessel Selection Preference. The permit holder(s) will select vessels from the pool of catcher-processor vessels that hold all permits and License Limitation Program endorsements authorizing participation in the BSAI Amendment 80 trawl yellowfin and rock sole fisheries. For the RKC viability study, vessels must have prior authorization to participate in the halibut deck sorting EFP # 2018-01, as modified in December 2018. Preference will be given to vessels that that have sufficient deck space to accommodate crab holding tanks and provide flow-through seawater to the tank.

E. Notification of Exempted Fishing. The PI must notify NMFS Alaska Regional Office (Bridget.Mansfield@noaa.gov), the NOAA Office of Law Enforcement (NOAA OLE) (Nathan.Lagerwey@noaa.gov and Will.Ellis@noaa.gov), and the NMFS Alaska Fishery Science Center, North Pacific Observer Program (Observer Program) (Brian.Mason@noaa.gov) by email at least 24 hours before any designated vessel embarks on an EFP fishing trip. The PI must notify NMFS, NOAA OLE, and the Observer Program via the same email addresses, within 24 hours of the end of fishing under this EFP.

F. Timing of Fishing under the EFP. Fishing under the terms of this permit is authorized from the date of issuance through April 15, 2019, or until exempted fishing is concluded, whichever is earlier.

G. Area of Exempted Fishing. Exempted fishing under this permit is limited to the BSAI Statistical and Reporting Areas (see Figure 1 to § 679).

H. Requirements for Participating Vessels. In addition to other applicable requirements, owners and operators of a vessel participating in the project must comply with the following provisions:

1. A vessel satisfying all of the following criteria may participate in this EFP:
 - a. it is a participant in the BSAI trawl catcher-processor Amendment 80 fishery;
 - b. it is named on a Vessel Data Sheet (Appendix A) submitted to NMFS by a permit holder.
2. Each vessel that participates in the viability study under this EFP must be authorized to participate in the halibut deck sorting EFP # 2018-01, as modified in December 2018.
3. Each vessel that participates in the viability study under this EFP must maintain sufficient space on deck to conduct RKC sorting and handling activities and adequate space and facilities for the sea sampler and as needed, an on-deck seawater flow-through tank for RKC storage.
4. A copy of this EFP must be kept on board the vessel and made available to the observer or sea sampler at the observer or sea sampler's request.
5. Owners and operators of vessels selected for EFP fishing must operate the vessel and maintain collected experimental data in accordance with the requirements of the EFP, as described in this permit. Vessel owners and operators must follow any sampling or handling protocol adjustments deemed necessary by the PI, in consultation with NMFS.

H. RKC Census Data Collection.

1. Sea samplers will conduct a species-specific census for RKC within every EFP haul. The sea sampler on board each vessel will coordinate with the on-duty NMFS-certified observer (NMFS observer) on a haul by haul basis.
 - a. NMFS observers will sample per standard procedures for species composition and will not be affected by the work of the sea sampler.
 - b. NMFS observers will return all crab to the sorting belt, once the observer's data collection is complete for each crab, to ensure all RKC are included in the census by sea samplers.
 - c. If the NMFS observer's sample for species composition contains any crab that cannot be returned to the sorting line with the catch of their haul of origin, the observer will retain the crab in a basket provided by the vessel and notify the sea sampler to ensure species identification and inclusion in the haul-specific census and immediate discard after biological data has been collected.
 - d. The sea sampler will instruct designated crew to remove all crab from the sorting belt downstream of the observer sampling station and place them in a designated tote that will be labeled with the vessel haul number for that tow. This will keep all haul-specific crab together and will not interfere with the observer's sampling duties or vessel operations.
 - e. The sea sampler will sort the crab from the tote returning all non-RKC immediately to the discard belt and will assess and record biological data from each RKC as described below and return it immediately to the discard belt.

- f. RKC parts (i.e., broken legs, chela, carapace pieces) will also be removed from the sorting belt and placed in the tote for sea sampler accounting but will not be added to the census count. All partial and crushed RKC will be documented in the haul notes including the number of coxa present. Partial and crushed RKC with five or more coxa will be treated as complete RKC in the census accounting analysis.
 - g. Cameras and video recording systems are mandatory on all Amendment 80 catcher-processor vessels with a designated camera observing the flowscale. Vessels selected for the EFP will record flowscale footage at 30 frames per second. After each trip the video footage will be reviewed to record the event time of each RKC crossing the flow scale. These data will be used to analyze the distribution of RKC on the belt for each haul.
2. Onboard sea samplers will assess each RKC for sex determination, size, shell condition, vitality metrics, clutch assessment for females, and physical injuries.
 - a. The abdominal flap will be used to determine the sex of RKC. For very small RKC sexing will be determined using a magnifying glass to detect presence of gonopores on the ventral surface of the coxa of the second pair of walking legs (for females, absent in males).
 - b. Each RKC will be measured for carapace length to the nearest millimeter.
 - c. Shell condition will be classified as soft-shell, new-shell pliable, new-shell, old-shell or very old-shell.
 - d. Clutch assessment will include clutch fullness and egg condition.
 - e. Externally visible physical injuries such as fresh autotomized (lost) legs or chela and cracked or crushed carapace will be recorded.
 3. Immediately following completed data collection for each RKC, the sea sampler will return the RKC to the discard belt for immediate return to the sea with a minimum of injury. Data collection is expected to take approximately one to two minutes per RKC.
 4. Sea samplers will record the following haul characteristics and environmental variables for each haul: vessel haul number, haul set and retrieval time and location, fishing depth, seafloor water temperature, average tow speed, target catch, final catch weight, and ambient air temperature.

I. RKC Viability Sampling

1. RKC holding for the vitality study will commence at the beginning of the EFP fishing trip on one vessel, but will not occur on every haul due to the limited tank holding capacity.
2. Up to a total of 384 RKC may be held in onboard tanks and sampled over multiple trips in one fishing season. Up to 32 RKC (based on on-board tank capacity) at a time will be collected on deck and in the factory from pre-determined hauls and kept in on-deck flow-thru seawater tanks for 72 hours of observations.
3. Each on-deck holding tank will be divided into four separate sections that will hold one to four RKC each (6-16 RKC per tank). Tanks will be plumbed with circulating seawater using the vessels deck pump and will allow unobstructed

- water flow and circulation throughout. Tanks will be equipped with removable lids that can be secured tightly when RKC are not being observed or examined.
4. The collection of individual RKC will coincide with, but is not part of, halibut deck sorting under EFP # 2018-01, as modified in December 2018, to allow the assessment of RKC collected both from the deck and the point of discard in the factory without impeding fishing operations. The halibut deck sorting procedures provide ample time and opportunity to collect RKC on deck without delaying the transfer of catch to the stern tank for more than the 35 minutes allotted as per the rules of the existing halibut deck sorting EFP. The RKC collected on deck will be removed from the catch prior to the collection of the NMFS observer's composition samples. The on-deck collections will be conducted independent of and will not impact halibut deck sorting activities or observer data collections under the halibut deck sorting EFP.
 5. Because this study requires pre-sorting of RKC on deck from selected hauls, the PI will count, weigh, measure, and determine the sex and clutch condition (if applicable) from each RKC collected on deck and provide this data to the vessel's NMFS observer. The total number and weight will be included in the observer data as a presorted composition record, and to correct the official weight (flow scale weight) of each haul with the weight of all RKC. Weights will be obtained using a Marel motion compensated scale and recorded to the nearest tenth of a kilogram. Data will be collected to the same level of accuracy as required by the North Pacific Observer Program.
 6. The collection of RKC in the factory will be at the standard point of discard, downstream of the observer sampling station following the protocols described in section H. above, and will be transferred immediately to the seawater tanks on deck.
 7. A vitality test will be used to select only live RKC, and in particular, RKC with a range of initial impairments and levels of vitality for the holding trials. Each RKC will be labeled with a uniquely numbered tag attached to its forward walking leg via removable twine. Assessment data will be collected for each RKC collected on deck and in the factory, as described above in Section F.2. for census data collection. Assessments will take place at the time of deck or factory collection and will last approximately one 1-2 minutes per RKC, after which they will be placed in the seawater tanks on deck.
 8. Each RKC will be placed directly in one of the four seawater tanks, where they will be re-assessed for vitality metrics every 2, 4, 6, 12, 24, 48 and 72 hours. Results for each vitality assessment will be recorded on deck sheets. RKC will be monitored for up to 72 hours and then released. Before being released, live RKC will be assessed once more for condition and vitality metrics.
 9. During each assessment, dead RKC's will be noted and discarded near time of death.
 10. Once a tank is emptied of the RKC (returned to the sea), the tank will be flushed with seawater and refilled with eight new RKC from a subsequent haul.
 11. Fishing effort information (e.g., length of tow, tow depth, bottom temperature, total catch size) will be recorded for all hauls where deck sampling is taking place, along with RKC-specific time out-of-water, measured as the total time

between when the codend comes up the stern ramp and the RKC is assessed and placed in the sea water tank. Water temperature and dissolved oxygen will be recorded from each of the seawater tanks daily.

- J. Exemptions from Federal Regulations.** The owner, operator, and crew of the designated vessel must comply with all requirements of 50 CFR part 679 regulations applicable to vessels participating in trawl fisheries targeting yellowfin and rock sole in the BSAI, with the exception of the exemptions listed below. These exemptions apply only to the sampling of RKC during the effective period of the EFP.

Immediate Return of Prohibited Species to Sea. EFP participants are exempt from the requirement at §§ 679.21(a)(2)(ii) and 600.350(d), that RKC, as a prohibited species, or RKC parts thereof, be returned to the sea immediately with a minimum of injury, regardless of its condition, for the following specific purpose related to the additional time out of water needed for scientific and data collection purposes of the EFP: to allow sea samplers and the PI to collect RKC from selected hauls, including complete RKC weight and count data from the entire haul (census) and to allow for the collection of vitality and mortality data on up to 384 RKC for up to 72 hours (viability study) for research purposes. With the exception of the RKC sample collection authorized by the EFP, the designated vessel owners, operators, and crew are not exempt from the requirement that RKC be returned to sea with a minimum of injury, regardless of its condition. Furthermore, the owners, operators, and crew of the vessel participating in EFP fishing are exempt from the requirements of § 679.21(a)(2)(ii) as they pertain to RKC only. Vessel owners, operators, and crew are not exempt from the requirement that prohibited species other than RKC must be returned to the sea immediately, with a minimum of injury, regardless of condition.

Prohibition on biasing the observer's sampling procedure by pre-sorting RKC catch. EFP participants are exempt from the requirement at § 679.7(g)(2), that observer's sampling procedures may not be biased by presorting RKC catch for the following specific purpose related to the need to pre-sort RKC for scientific and data collection purposes of the EFP: This exemption is necessary to allow some RKC to be sorted and weighed on deck and transferred to on-deck tanks for the viability study prior to observer sampling. Sorting of PSC species other than halibut will continue to be prohibited.

All catch must be weighed on a NMFS-approved scale. EFP participants are exempt from the requirement at § 679.28(b), that all catch must be weighed on a NMFS-approved scale for the following specific purpose related to the need to weigh RKC with a non-NMFS-approved scale for scientific and data collection purposes of the EFP: This exemption is necessary to allow some RKC to be sorted and sampled on deck and transferred to on-deck tanks for the viability study prior to observer sampling.

Requirement that all catch by Amendment 80 vessels must be weighed on a NMFS-approved scale. EFP participants are exempt from the requirement at § 679.93(c)(1) that all catch by Amendment 80 vessels must be weighed on a NMFS-approved scale for the following specific purpose related to the need to weigh RKC with a non-NMFS-approved scale for scientific and data collection purposes of the EFP. This exemption is necessary

to allow some RKC to be sorted and weighed on deck and transferred to on-deck tanks for the viability study prior to observer sampling.

K. Administration of the Activities under Exempted Fishing. Management of the EFP fieldwork will be the responsibility of the PI. The PI will, in addition to other duties specified in this EFP:

1. Provide all necessary training, sampling, and data recording instructions to sea samplers, data forms, and biological collection equipment and storage materials as necessary for fieldwork data collection.
2. Ensure sea samplers' participating in this project will be provided additional training to supplement the portion of their groundfish observer training pertaining to crab.
3. Ensure sea samplers understand and follow the sampling protocols and data recording instructions, including close coordination with NMFS observers as described above in sections H and I and do not interfere with NMFS observer sampling duties.
4. Coordinate with the vessel operators and crew to provide an overview of sampling procedures and ensure the vessel operators and crew understand and follow the operational instructions to the support sea sampler sampling instructions.
6. Be responsible for all data collected under this EFP and coordinate the collection and shipment of completed data forms for analysis to the Alaska Pacific University.
7. Be responsible for compiling and analyzing all EFP data collected according to the provisions of this permit and presenting a summary of those data to NMFS as interim and final reports.
8. Monitor compliance with the terms of the EFP.
9. Arrange for selection of vessels.

L. Analysis of Results. All data collected by the PI and sea samplers on vessels named on Vessel Designation Sheets submitted to NMFS for fishing under this permit are discloseable to the public, except for haul-specific catch data and vessel-specific fishing locations and other proprietary business information not relevant to the studies, which are otherwise treated consistent with confidentiality provisions under the Magnusen-Stevens Fishery Conservation Act. Data collected by NMFS observers during fishing under this EFP will be treated consistent with confidentiality provisions under the Magnusen-Stevens Fishery Conservation Act.

The PI will prepare an interim report that details RKC data collection under this EFP. The report will also include a summary of the project objectives, statistical areas fished, vessels used, a detailed description of activities including number of hauls for which censuses were conducted and number of RKC held onboard for the vitality study, any problems and successes, and how well the EFP objectives were accomplished. The interim report will be provided to NMFS by September 30, 2019. The PI will prepare and submit to NMFS by May 31, 2020, a final report summarizing: 1) the results of the comparison RKC census to estimates derived from observer samples collected under this

EFP, and 2) the analysis of factors which influence mortality of RKC PSC in the yellowfin and rock sole fisheries. The PI will present EFP results to the North Pacific Fishery Management Council.

- M. Violations/non-compliance.** A permit holder must immediately notify the NMFS Alaska Regional Office by contacting Bridget Mansfield (907-586-7642) and the owner of the designated vessel fishing under this permit if the vessel is not meeting EFP requirements. Failure of the permit holders, vessel crew, or the owners or operators of the designated vessels fishing under this EFP to comply with the terms and conditions of this permit, non-exempted provisions of 50 CFR parts 600 and 679, the Magnuson-Stevens Fishery Conservation and Management Act, or any other applicable regulations, may be cause for revocation, suspension, or modification of this permit as well as civil or criminal penalties under the Magnuson-Stevens Act.

**APPENDIX A—VESSEL DATA SHEET
EXEMPTED FISHING PERMIT: #2019-01**

DESIGNATED VESSEL

Name of Managing Company:

Vessel Name:

Federal Permit Number:

USCG Official Number:

Owner Name:

Owner Address:

Phone:

Email:

Length Overall:

Gross Tonnage:

Type of Vessel:

Homeport:

Name, phone number, and email of designated representative:

Signature(s) of Owner or Designated Representative(s):

Signature

Date signed

The signature(s) above confirm this information, but do not constitute a final commitment to participate in the exempted fishing operations.

Bmansfield 12/21/18; rev 1/29/19

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