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ALASKA DEPARTMENT OF FISH AND GAME

STAFF COMMENTS ON
COMMERCIAL, PERSONAL USE, SPORT, AND SUBSISTENCE
REGULATORY PROPOSALS
COMMITTEE OF THE WHOLE—GROUPS 1–3
FOR THE

STATEWIDE ALL SHELLFISH (EXCEPT PRINCE WILLIAM SOUND, SOUTHEAST, AND YAKUTAT) AND PRINCE WILLIAM SOUND SHRIMP ONLY

ALASKA BOARD OF FISHERIES MEETING
ANCHORAGE, ALASKA

March 26–April 2, 2022

Regional Information Report No. 5J22-01

The following staff comments were prepared by the Alaska Department of Fish and Game (department) for use at the Alaska Board of Fisheries (board) meeting, March 26–April 2, 2022, in Anchorage, Alaska. The comments are forwarded to assist the public and board. The comments contained herein should be considered preliminary and subject to change, as new information becomes available. Final department positions will be formulated after review of written and oral public testimony presented to the board.

Acronyms and Abbreviations

The following acronyms and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the following reports by the Divisions of Commercial Fisheries, Sport Fish, and Subsistence: All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

Weights and measures (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

all atomic symbols	
alternating current	AC
ampere	A
calorie	cal
direct current	DC
hertz	Hz
horsepower	hp
hydrogen ion activity (negative log of)	pH
parts per million	ppm
parts per thousand	ppt, ‰
volts	V
watts	W

General

Alaska Administrative Code	AAC
all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat or long
monetary symbols (U.S.)	$, ¢
months (tables and figures): first three letters	Jan,...,Dec
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	use two-letter abbreviations (e.g., AK, WA)

Acronyms

Acceptable Biological Catch	ABC
Alaska Board of Fisheries	board
Alaska Department of Fish and Game	department /ADF&G
Amount Necessary for Subsistence	ANS
Alaska Wildlife Troopers	AWT
Biological Escapement Goal	BEG
Central Gulf of Alaska	CGOA
Coded Wire Tag	CWT
Commercial Fisheries Entry Commission	CFEC
Cook Inlet Aquaculture Association	CIAA
Customary and Traditional	C&T
Department of Natural Resources	DNR
Demersal Shelf Rockfish	DSR
Emergency Order	EO
Guideline Harvest Level	GHL
Gulf of Alaska	GOA
Global Positioning System	GPS
Individual Fishing Quota	IFQ
Local Area Management Plan	LAMP
Lower Cook Inlet	LCI
Mean Low Water	MLW
Mean Lower Low Water	MLLW
No Data	ND
National Marine Fisheries Service	NMFS
National Oceanic and Atmospheric Administration	NOAA
Nick Dudiak Fishing Lagoon	NDFL
North Pacific Fishery Management Council	NPFMC
Optimum Escapement Goal	OEG
Pelagic Shelf Rockfish	PSR
Prince William Sound	PWS
Prior Notice of Landing	PNOL
Private Nonprofit Salmon Hatchery	PNP
River Mile	RM
Special Harvest Area	SHA
Sustainable Escapement Goal	SEG
Trail Lakes Hatchery	TLH
Upper Cook Inlet	UCI
Western Gulf of Alaska	WGOA

REGIONAL INFORMATION REPORT 5J22-01

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STAFF COMMENTS ON COMMERCIAL, PERSONAL USE, SPORT, AND SUBSISTENCE REGULATORY PROPOSALS COMMITTEE OF THE WHOLE—GROUPS 1–3 FOR THE

STATEWIDE ALL SHELLFISH (EXCEPT PRINCE WILLIAM SOUND, SOUTHEAST, AND YAKUTAT) AND PRINCE WILLIAM SOUND SHRIMP ONLY

ALASKA BOARD OF FISHERIES MEETING
ANCHORAGE, ALASKA

March 26–April 2, 2022

Alaska Department of Fish and Game
Division of Sport Fish, Research and Technical Services
333 Raspberry Road, Anchorage, AK 99518–1565

February 2022

ABSTRACT

This document contains Alaska Department of Fish and Game (department) staff comments on commercial, personal use, sport, and subsistence regulatory proposals for the Lower Cook Inlet finfish. These comments were prepared by the department for use at the Alaska Board of Fisheries meeting, March 26–April 2, 2022, in Anchorage, Alaska. The comments are forwarded to assist the public and board. The comments contained herein should be considered preliminary and subject to change, as new information becomes available. Final department positions will be formulated after review of written and oral public testimony presented to the board.

Keywords: Alaska Board of Fisheries (board), Alaska Department of Fish and Game (department), staff comments, regulatory proposals, fisheries, commercial, personal use, subsistence, sport, guide, salmon, king salmon, coho salmon, rockfish, king crab

This document should be cited as follows:

ADF&G (Alaska Department of Fish and Game). 2022. Alaska Department of Fish and Game staff comments on commercial, personal use, sport, and subsistence regulatory proposals, Committee of the Whole—Groups 1–3 for the Statewide All Shellfish (except Prince William Sound, Southeast, and Yakutat) and Prince William Sound shrimp only Alaska Board of Fisheries meeting, Anchorage, Alaska, March 26–April 2, 2022. Alaska Department of Fish and Game, Regional Information Report No. 5J22-01, Anchorage.

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SUMMARY OF DEPARTMENT POSITIONS ON REGULATORY PROPOSALS

Proposal No.	Department Position	Issue
234	O	Require inseason reporting of non-resident sport fish harvest and effort.
235	NA	Modify the definition of domicile and include in sport fishing regulations.
236	NA	Modify the definition of domicile and include in sport fishing regulations.
237	S	Provide department authority to deny eligibility to participate in the Prince William Sound noncommercial shrimp fishery.
238	N	Close the commercial and noncommercial shrimp fisheries in Prince William Sound.
239	O	Allow noncommercial vessels to have additional shrimp pots on board.
240	N, O	Modify PWS shrimp pot harvest strategy from a static split, between noncommercial and commercial, to a tiered percentage depending on the total allowable harvest level (TAH).
241	O	Define shrimp.
242	N	Establish a minimum threshold of Total Allowable Harvest (TAH) for spot shrimp before allowing a noncommercial fishery in Prince William Sound.
243	N	Amend commercial shrimp pot fishery closed waters boundaries.
244	N	Modify annual shrimp guideline harvest level based on fishery performance in the prior season.
245	N	Modify annual shrimp guideline harvest level based on fishery performance in the prior season.
246	O	Eliminate the commercial shrimp fishery minimum total allowable harvest threshold.
247	O	Establish a minimum pot limit to increase pace of the commercial pot shrimp fishery.
248	O	Establish an earlier start date for the commercial shrimp trawl fishery.
249	S	Clarify areas open to commercial pot shrimp fishing in the Prince William Sound Area.
250	N	Establish an earlier start date for the commercial shrimp pot fishery.
251	S	Establish permit and reporting requirements for shrimp floating processor vessels in the Prince William Sound Area (PWS; Registration Area E).
252	O	Allow vessels registered for the commercial shrimp fishery to also tender shrimp.
253	O	Increase pink shrimp harvest allowance in Prince William Sound.
254	O	Amend closed waters to allow use of beam trawl gear for the harvest of shrimp.
255	S	Close the harvest of littleneck clams and butter clams.
256	S	Modify razor clam bag and possession limit.
257	S	Create a management plan for east Cook Inlet sport and personal use fisheries.
258	S	Close the harvest of littleneck clams and butter clams.
259	S	Modify the razor clam bag and possession limit.
260	O	Establish a commercial Dungeness crab fishing season in Cook Inlet, modify lawful gear for Dungeness crab in the Southern District and establish lawful gear for Dungeness crab in Cook Inlet. establish Registration Area H as an exclusive registration area for Dungeness crab, and modify Registration Area H inspection points.

N = Neutral; S = Support; O = Oppose; NA = No Action, WS = Withdrawn Support

Proposal No.	Department Position	Issue
261	O	Allow use of a ropeless system with submerged buoy in the Dungeness crab fishery.
262	S	Reduce the bag limit in the Cook Inlet Area subsistence clam fishery.
263	S	Amend Registration Area J commercial shrimp fishery management regulations and allow for department permit authority.
264	S	Amend regulation requiring operation of Dungeness crab pot gear once within a 14-day period.
265	O	Repeal regulation requiring operation of Dungeness crab pot gear once within a 14-day period.
266	N	Establish Kodiak District Dungeness crab pot limits and restrict concurrent targeting of Dungeness crab and any other commercially harvested species.
267	N	Establish South Peninsula District Dungeness crab pot limits.
268	S	Adopt a new Tanner crab harvest strategy used to set annual harvest limits in the Kodiak, Chignik, and South Peninsula districts.
269	S, N, O	Amend regulatory thresholds and establish new management measures for Kodiak District Tanner crab.
270	N	Amend pot limits for Kodiak District Tanner crab.
271	S	Reduce size of stretched mesh escape webbing for C. bairdi Tanner crab pot gear in Registration Area J except in the Bering Sea District.
272	S	Adopt a new Eastern Aleutian District Tanner crab harvest strategy used to set annual harvest limits.
273	O	Allow longlining of pot gear for Registration Area K golden king crab.
274	S	Increase minimum training requirements needed for scallop trainee observer candidates.
275	S	Extend the observer certification expiration period from 12 months to 18 months.
281	S	Allow importation of live oysters from the Pacific Coast of North America for research purposes.
282	N	Modify South Unimak and Shumagin Islands June fishery.
283	N	Amend the Kenai River Late-Run King Salmon Management Plan to allow fishing with set gillnet gear within 600 feet of the mean high tide mark in the Upper Subdistrict when sonar passage of large late-run Kenai River king salmon exceeds 13,500 fish, and Kenai and Kasilof river sockeye salmon escapement objectives are being met.

N = Neutral; S = Support; O = Oppose; NA = No Action, WS = Withdrawn Support

COMMITTEE OF THE WHOLE—GROUP 1: MISCELLANEOUS SPORT, PERSONAL USE, AND SUBSISTENCE CLAMS (9 PROPOSALS)

Miscellaneous Sport (3 proposals)

PROPOSAL 234 – 5 AAC 75.XXX. New Section.

PROPOSED BY: Ketchikan Indian Community.

WHAT WOULD THE PROPOSAL DO? Require all nonresident sport anglers to record and report their sport catch and harvest of all species of finfish and shellfish.

WHAT ARE THE CURRENT REGULATIONS? Currently anglers are required to record harvest information for finfish with annual limits on a nontransferable harvest record for enforcement purposes. Anglers fishing for Tanner Crab or shrimp in the Prince William Sound or Cook Inlet – Resurrection Bay saltwater areas or shrimp in the Southeast Alaska area must obtain a permit and report their harvest and catch information to the department. Charter businesses and guides are required to record and report guided anglers saltwater harvest and catch for select species of finfish for each trip in a logbook.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would require implementation of a reporting system that would collect information currently collected by other department programs. The implementation of an additional system to monitor nonresident sport fish harvest would have a budgetary impact on the department due to the costs associated with producing a new reporting program and collecting and analyzing the data.

BACKGROUND: The major department programs that provide information and estimates related to nonresident fisheries effort, catch and harvest include (1) the Alaska Sport Fishing Survey, commonly called the Statewide Harvest Survey (SWHS), (2) the Statewide Saltwater Charter Logbook Program, and (3) specific creel survey programs. These programs were developed to gather information on a wide variety of species and are statewide or regional in scope. These programs collect information on all (resident and nonresident) fisheries. In addition to these major programs, there are occasional small-scale creel survey projects to collect specific information for specific areas or dates.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. A nonresident inseason reporting program would not provide more timely estimates than current programs such as the Saltwater Charter Logbook or creel survey programs. Sport fisheries are not managed solely on nonresident harvest, but on total harvest, and, in the case of anadromous species, achieving escapement goals or allocations. The department is currently evaluating the SWHS, and pending the results, is considering implementing electronic reporting to provide more timely harvest, effort, and catch data.

COST ANALYSIS: The adoption of this proposal is not expected to add any direct cost for a private person to participate in this fishery. Approval of this proposal would result in an additional cost to the department due to the expenses associated with implementing and managing a new reporting program.

PROPOSAL 235 & 236 – 5 AAC 39.975. Definitions; and 5 AAC 75.995. Definitions.

PROPOSED BY: East Prince of Wales Fish and Game Advisory Committee & Klawock Fish and Game Advisory Committee.

WHAT WOULD THESE PROPOSALS DO? This would require a person to meet the eligibility requirements for receiving an Alaska Permanent Fund Dividend in order to obtain a resident sport fishing license or participate in a subsistence or personal use fishery.

WHAT ARE THE CURRENT REGULATIONS? Under Alaska Statute 16.05.940 (11) a domicile is defined as "the true and permanent home of a person from which the person has no present intention of moving and to which the person intends to return whenever the person is away; domicile may be proved by presenting evidence acceptable to the boards of fisheries and game". Under General Provisions in 5 AAC 39.975 (30) the definition of domicile is the same as in Alaska Statute with an addition of outlining evidence of a person's domicile that may include, but is not limited to the following:

(A) statements made to obtain a license to drive, hunt, fish, or engage in an activity regulated by a government entity;

(B) affidavit of the person, or of other persons who may know of that person's domicile;

(C) place of voter registration;

(D) location of residences owned, rented, or leased;

(E) location of storage of household goods;

(F) location of business owned or operated;

(G) residence of spouse and minor children or dependents;

(H) governments to which taxes are paid;

(I) whether the person has claimed residence in another location for the purpose of obtaining benefits provided by the governments in that location.

Domicile is not defined under sport fishery regulation. Per Alaska Statute 16.05.940 (28), "'resident' means a person who for the 12 consecutive months immediately preceding the time when the assertion of residence is made has maintained the person's domicile in the state and who is neither claiming residency in another state, territory, or country nor obtaining benefits under a claim of residency in another state, territory, or country;…" "Residency" is further defined and explained in Alaska Statute 16.05.415 as: "(a) a person … is a resident if the person

(1) is physically present in the state with the intent to remain in the state indefinitely and to make a home in the state;

(2) has maintained the person's domicile in the state for the 12 consecutive months immediately preceding the application for a license;

(3) is not claiming residency in another state, territory, or country; and

(4) is not obtaining benefits under a claim of residency in another state, territory, or country.

(b) A person who establishes residency in the state under (a) of this section remains a resident during an absence from the state unless during the absence the person

(1) establishes or claims residency in another state, territory, or country; or

(2) performs an act, or is absent under circumstances, that are inconsistent with the intent required under (a) of this section."

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Assuming this complied with Alaska statutes referenced above, this would increase an individual's burden of proof to prove residency, likely causing some individuals currently receiving a resident sport

fishing license to obtain a nonresident sport fishing license. Some individuals would also become ineligible to participate in subsistence and personal use fisheries.

BACKGROUND: To obtain an annual resident sport fishing license or a Permanent Identification Card (PID) an individual must sign an affidavit certifying that they have read and understand the definition of Alaska "resident" under AS 16.05.415 and AS 16.05.940, that their license has not been suspended or revoked in any state, that any false statements are subject to criminal penalties under AS 11.56.210 and AS 16.05.420, and that all of the information that they provide is true and correct.

Sport fishing licenses are issued by license vendors, department offices, and the department online store. Licensing staff determine residency using the PFD database when applications for a PID are submitted, but this is not done for annual resident sport fishing licenses. Investigation of suspected false residency claims when obtaining a sport fishing license, PID, or participation in a subsistence or personal use fishery is conducted by the Alaska Wildlife Troopers (AWT). In 2019, 161,186 resident fishing licenses and 306,322 nonresident fishing licenses were sold.

The regulations that determine the eligibility for an individual to receive a State of Alaska Permanent Fund Dividend are outlined in AS 43.23.005 and below:

(a) An individual is eligible to receive one permanent fund dividend each year in an amount to be determined under AS 43.23.025 if the individual

(1) applies to the department;

(2) is a state resident on the date of application;

(3) was a state resident during the entire qualifying year;

(4) has been physically present in the state for at least 72 consecutive hours at some time during the prior two years before the current dividend year;

(5) is

(A) a citizen of the United States;

(B) an alien lawfully admitted for permanent residence in the United States;

(C) an alien with refugee status under federal law; or

(D) an alien that has been granted asylum under federal law;

(6) was, at all times during the qualifying year, physically present in the state or, if absent, was absent only as allowed in AS 43.23.008; and

(7) was in compliance during the qualifying year with the military selective service registration requirements imposed under 50 U.S.C. App. 453 (Military Selective Service Act), if those requirements were applicable to the individual, or has come into compliance after being notified of the lack of compliance.

Sec. 43.23.008. Allowable absences.

(a) Subject to (b) and (d) of this section, an otherwise eligible individual who is absent from the state during the qualifying year remains eligible for a current year permanent fund dividend if the individual was absent

(1) receiving secondary or postsecondary education on a full-time basis;

(2) receiving vocational, professional, or other specific education on a full-time basis for which, as determined by the Alaska Commission on Postsecondary Education, a comparable program is not reasonably available in the state;

(3) serving on active duty as a member of the armed forces of the United States or accompanying, as that individual's spouse, minor dependent, or disabled dependent, an individual who is

(A) serving on active duty as a member of the armed forces of the United States; and

(B) eligible for a current year dividend;

(4) serving under foreign or coastal articles of employment aboard an oceangoing vessel of the United States merchant marine;

(5) receiving continuous medical treatment recommended by a licensed physician or convalescing as recommended by the physician who treated the illness if the treatment or convalescence is not based on a need for climatic change;

(6) providing care for a parent, spouse, sibling, child, or stepchild with a critical life-threatening illness whose treatment plan, as recommended by the attending physician, requires travel outside the state for treatment at a medical specialty complex;

(7) providing care for the individual's terminally ill family member;

(8) settling the estate of the individual's deceased parent, spouse, sibling, child, or stepchild, provided the absence does not exceed 220 cumulative days;

(9) serving as a member of the United States Congress;

(10) serving on the staff of a member from this state of the United States Congress;

(11) serving as an employee of the state in a field office or other location;

(12) accompanying a minor who is absent under (5) of this subsection;

(13) accompanying another eligible resident who is absent for a reason permitted under (1), (2), (5) - (12), (16) or (17) of this subsection as the spouse, minor dependent, or disabled dependent of the eligible resident;

(14) serving as a volunteer in the federal peace corps program;

(15) because of training or competing as a member of the United States Olympic Team or a United States national team for an Olympic sport;

(16) participating for educational purposes in a student fellowship sponsored by the United States Department of Education or by the United States Department of State;

(17) for any reason consistent with the individual's intent to remain a state resident, provided the absence or cumulative absences do not exceed

(A) 180 days in addition to any absence or cumulative absences claimed under (3) of this subsection if the individual is not claiming an absence under (1), (2), or (4) - (16) of this subsection;

(B) 120 days in addition to any absence or cumulative absences claimed under (1) - (3) of this subsection if the individual is not claiming an absence under (4) - (16) of this subsection but is claiming an absence under (1) or (2) of this subsection; or

(C) 45 days in addition to any absence or cumulative absences claimed under (1) - (16) of this subsection if the individual is claiming an absence under (4) - (16) of this subsection.

(b) An individual may not claim an allowable absence under (a)(1) - (16) of this section unless the individual was a resident of the state for at least six consecutive months immediately before leaving the state.

(c) [Repealed, § 3 ch 33 SLA 2013.]

(d) After an individual has been absent from the state for more than 180 days in each of the five preceding qualifying years, the department shall presume that the individual is no longer a state resident. The individual may rebut this presumption by providing clear and convincing evidence to the department that

(1) the individual was physically present in the state for at least 30 cumulative days during the past five years; and

(2) the individual is a state resident as defined in AS 43.23.095.

(e) To determine whether an individual intends to return and remain in the state indefinitely, the department shall consider all relevant factors, including

(1) the length of time the individual was absent from the state compared to the length of time the individual was physically present in the state;

(2) the frequency and duration of voluntary return trips to the state during the past five years;

(3) whether the individual's intent to return to and remain in the state is conditioned on future events beyond the individual's control;

(4) the ties the individual has established with the state or another jurisdiction, as demonstrated by

(A) maintenance of a home;

(B) payment of resident taxes;

(C) registration of a vehicle;

(D) registration to vote and voting history;

(E) acquisition of a driver's license, business license, or professional license; and

(F) receipt of benefits under a claim of residency in the state or another jurisdiction;

(5) the priority that the individual gave the state on an employment assignment preference list, including a list used by military personnel.

(f) For purposes of (a)(7) of this section, "family member" means a person who is

(1) legally related to the individual through marriage or guardianship; or

(2) the individual's sibling, parent, grandparent, son, daughter, grandson, granddaughter, uncle, aunt, niece, nephew, or first cousin.

DEPARTMENT COMMENTS: The Department of Law has advised that the Board of Fisheries does not possess the authority to change statutory residency requirements established by the legislature.

COST ANALYSIS: The adoption of this proposal is not expected to add any direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

PROPOSAL 241 – 5 AAC 39.975. Definitions; and 5 AAC 75.995. Definitions.

PROPOSED BY: East Prince of Wales Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would define "shrimp" as a member of the order Decapoda and that in reference to bag and possession limits, a shrimp is a whole shrimp, not one that is de-headed.

WHAT ARE THE CURRENT REGULATIONS? Harvest limits for shrimp are set by pounds or gallons/quarts of whole or de-headed shrimp.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Bag and possession limits for shrimp would be standardized as whole shrimp. Harvest of shrimp could decrease in the sport, personal use and subsistence fisheries with harvest limits because bag and possession limits would be based on whole shrimp.

BACKGROUND: Harvest limits for shrimp are set by pounds or gallons/quarts. Given the difficulty of obtaining an accurate weight in the field a corresponding volumetric limit is set. To maximize harvest in shrimp fisheries with a harvest limit and to prevent spoilage, it is common practice for anglers to de-head their shrimp. Other anglers prefer to prepare their shrimp whole. The department receives many public inquiries on whether shrimp bag limits apply to whole or de-headed shrimp. The de-heading of shrimp before returning to port is allowed under current regulations and anglers are informed that shrimp can be whole or de-headed when assessing their bag limit.

The proposed order to identify shrimp Decapoda includes not only shrimp but crabs, crayfish, prawns, and lobsters. The following genus and species within the family Pandalidae that are typically harvested and likely represent the majority of the shrimp harvest in Alaska are: spot shrimp (*Pandalus platycerus*), coonstripe shrimp (*Pandalus hypsinotus*), dock shrimp (*Pandalus danae*), humpy shrimp (*Pandalus goniurus*), sidestripe or sidestriped shrimp (*Pandalopsis dispar*), and pink shrimp (*Pandalus jordani* or *Pandalus borealis*).

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Current shrimp limits set for sport, personal and subsistence fisheries account for the retention of whole or de-headed shrimp. Without a specific management or conservation need a reduction of harvest in these fisheries statewide is not warranted. Due to specific characteristics of shrimp and no species-specific shrimp limits, further regulatory definition of shrimp is not needed and would add unnecessary regulatory complexity. Defining a shrimp as a whole shrimp would not clearly prohibit the de-heading of shrimp. A regulation that prohibits a person from de-heading shrimp prior to recording their harvest would be more in alignment with the intent of the proposal. The board would also need to address if shrimp could be consumed or preserved on board.

COST ANALYSIS: The adoption of this proposal is not expected to add any direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

Personal Use and Subsistence Clams (5 proposals)

PROPOSAL 257 – 5 AAC 58.0XX and 5 AAC 77.5XX. East Cook Inlet Razor Clam Sport and Personal Use Fishery Management Plan.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would create a management plan for east Cook Inlet razor clam sport and personal use fisheries.

WHAT ARE THE CURRENT REGULATIONS? East Cook Inlet sport and personal use razor clam fisheries have the same regulations and clams may be taken year-round. From the mouth of the Kenai River to the southernmost tip of the Homer Spit, the razor clam bag limit is the first 60 clams harvested and the possession limit is 120 clams.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would add regulatory structure to manage these fisheries and create a limited razor clam fishery in east Cook Inlet, which would provide a small harvest opportunity while allowing the stock to rebuild. It would also provide structure to manage east Cook Inlet razor clam fisheries within two management areas based on adult razor clam abundances and stock productivity indices in each area.

BACKGROUND: In east Cook Inlet, razor clams are primarily found in a ~50 mile stretch of sandy intertidal beach between the Anchor and Kasilof rivers. East Cook Inlet razor clams have historically supported sport and personal use fisheries that constituted one of the largest noncommercial shellfish fisheries in Alaska, due largely to accessibility. The east Cook Inlet noncommercial razor clam fishery is comprised of concurrent sport and personal use fisheries; the two fisheries are identical except that only Alaska residents can participate in the personal use fishery. There are no management plans for the east Cook Inlet sport and personal use fisheries and there have been very few regulatory changes to these fisheries over time. These beaches are in the Anchorage-Matsu-Kenai Nonsubsistence Area. In 2018, the department proposed to eliminate the personal use fishery because the fishery was deemed redundant for residents. The board chose to maintain the personal use fishery to preserve the option of giving priority to residents if the fisheries reopen.

The east Cook Inlet sport and personal use razor clam fisheries have experienced a substantial decline over the last decade. Based on creel monitoring and SWHS data, the 1969–1999 average annual effort was approximately 30,000 digger-days and annual harvest averaged roughly 900,000 razor clams. While effort remained similar to the historical average, harvest declined through the 2000s and by 2012 was approximately 260,000 clams. Due to low abundance of adult clams, the department issued emergency orders in 2013 and 2014 to reduce the bag limits from 60 to 25 clams and have closed the fisheries by emergency orders annually since 2015.

Monitoring methods for the east Cook Inlet razor clam stock and the sport and personal use fisheries has been refined in recent years to improve stock assessment. Historically, monitoring

primarily occurred with three datasets: 1) estimates of harvest and effort by beach, 2) estimates of the razor clam age and length compositions by beach, and 3) periodic estimates of razor clam abundance at Ninilchik and Clam Gulch beaches. Harvest monitoring continued until the fishery was closed in 2015. Age and length composition sampling has continued annually on nine beaches. Razor clam abundance surveys were increased from periodic sampling to annual sampling at the Ninilchik south study area in 2011 and the Clam Gulch north study area in 2014. The Ninilchik north study area was still assessed periodically throughout this recent period. Sample sizes were also increased for these abundance surveys to improve the precision of the estimates. The surveys were also conducted early in the spring prior to when most harvest would occur, instead of throughout the summer during peak effort in these fisheries. With these improved methods, abundance estimates are able to provide information on recruitment and natural mortality of juvenile and adult razor clams.

Based on data from these monitoring efforts, the east Cook Inlet razor clam stock went through significant declines starting in the mid to late 2000s but has been rebuilding since 2016. Assessment of age and length compositions have shown decreasing trends at most East Cook Inlet beaches. In recent years, the samples have been comprised of fewer age classes and with average age shifting toward younger clams which has resulted in mostly smaller clams and very few large clams. This trend has continued through 2020. In the abundance surveys, low abundances of adult clams occurred at Ninilchik south study area in 2013 through 2016 but have increased annually since (Table 257-1). At Clam Gulch North, low abundances of adult clams were observed through 2019 but abundance increased in 2020. Overall, recruitment of juvenile clams to Ninilchik and Clam Gulch beaches has varied widely between beaches and years. Poor recruitment of juvenile clams occurred at Ninilchik South in 2011 through 2015. Large annual recruitments of juvenile clams occurred at both Ninilchik and Clam Gulch study areas in 2016 through 2018. Annual natural mortality rates of adult razor clams have also varied between the beaches and years but have mostly been above the assumed historical estimate of 20-30%. From 2011 to 2019 at the Ninilchik South study area, the annual natural mortality rate of adult clams has averaged approximately 50% and ranged from approximately 20% to 80%. Clam Gulch North has experienced higher adult natural mortality and has averaged approximately 70% and ranged from approximately 60% to over 80% from 2014 through 2020.

Implementing a management plan for east Cook Inlet razor clams would provide the department more regulatory structure to manage the sport and personal use fisheries with the stock assessment information. The plan would also create two management areas within east Cook Inlet that would provide ability to manage the fisheries in the two areas independently. Both historical and current data suggest that razor clam productivity differs between the Ninilchik and Clam Gulch areas which suggests that the plan may provide different harvest opportunities. Ideally, this plan would allow the department to conduct annual abundance surveys at Ninilchik and Clam Gulch prior to the fishery to assess abundance thresholds outlined in the plan.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. The productivity of east Cook Inlet razor clams has declined, but the stock is rebuilding and may be able to support a more limited harvest opportunity than the currently structured fisheries. It is not likely that this stock will recover to historical levels in the near future. Creating a management plan will allow for public and board input to structure sustainable razor clam fisheries.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

Table 257-1.–Adult and juvenile razor clam abundance estimates on Ninilchik South, Ninilchik North, and Clam Gulch North beaches, 1989-2020.

	Ninilchik South		Ninilchik North		Clam Gulch North	
Year	Juvenile	Adult	Juvenile	Adult	Juvenile	Adult
1989	ND	ND	2,633,810	754,907	864,303	1,720,120
1990	528,946	169,226	1,867,100	791,915	2,571,490	1,975,980
1991	46,392	302,457	87,150	2,977,230	ND	ND
1992	69,649	260,324	93,625	3,876,160	ND	ND
1998	37,297	239,093	551,871	771,279	ND	ND
1999	ND	ND	ND	ND	929,673	3,596,270
2001	279,655	253,806	590,084	1,348,840	ND	ND
2003	191,334	212,852	3,517,530	2,028,830	ND	ND
2005	482,038	544,966	986,460	1,846,770	ND	ND
2008	ND	ND	ND	ND	1,473,820	688,702
2011	150,232	1,275,610	176,228	2,812,690	ND	ND
2012	32,930	542,473	ND	ND	ND	ND
2013	7,439	78,821	ND	ND	ND	ND
2014	123,949	75,412	ND	ND	229,944	383,634
2015	32,431	68,889	73,066	191,452	350,427	218,640
2016	445,394	63,352	ND	ND	2,635,190	271,225
2017	813,708	111,268	ND	ND	4,646,150	226,967
2018	2,699,260	283,095	ND	ND	6,904,070	141,279
2019	1,493,620	306,822	2,861,150	677,320	12,678,000	216,805
2020	194,919	320,210	1,145,570	1,176,420	9,268,820	817,791
Averages						
1989-2012	202,053	422,312	1,167,095	1,912,069	1,459,822	1,995,268
2013-2020	726,340	163,484	1,359,929	681,731	5,244,657	325,192

PROPOSAL 256 – 5 AAC 77.518. Personal Use Clam fishery.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would create a personal use razor clam bag and possession limit of 10 gallons in the Cook Inlet Area outside of east Cook Inlet. The more well-known locations in this area outside of east Cook Inlet are from Polly Creek to the Crescent River bar, Chinitna Bay, Silver Salmon Creek, and Oil Bay.

WHAT ARE THE CURRENT REGULATIONS? From the mouth of the Kenai River to the southernmost tip of the Homer Spit, the razor clam bag limit is the first 60 clams harvested and the possession limit is 120 clams. In the remaining Cook Inlet Area, there are no bag or possession limits for razor clams.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This may reduce razor clam harvest by a small unknown amount. It will also reduce the wastage of unwanted clams by requiring diggers to keep all razor clams dug.

BACKGROUND: In the Cook Inlet area, razor clams primarily occur in the sandy intertidal beaches in east and west Cook Inlet. Unlike the east Cook Inlet beaches, razor clam beaches in west Cook Inlet are not continuous or well-documented. The more well-known locations are from Polly Creek to the Crescent River Bar, Chinitna Bay, Silver Salmon Creek, and Oil Bay. These beaches are in the Anchorage-Matsu-Kenai Nonsubsistence Area. West Cook Inlet razor clam beaches are difficult to access and require boating across Cook Inlet from Homer, Anchor Point, Deep Creek or Kenai, or landing a small aircraft on beaches.

There are no management plans for Cook Inlet commercial, sport and personal use razor clam fisheries. In east Cook Inlet, the sport and personal use razor clam fisheries are concurrent and have been closed by emergency order since 2015 due to low abundance of adult clams. Commercial razor clam fisheries in east Cook Inlet have been closed since 1959. West Cook Inlet still supports commercial, sport and personal use razor clam fisheries with approximately 95% of the razor clam harvest occurring in the commercial fishery. The west Cook Inlet commercial razor clam fishery is open from Redoubt Creek south to Crescent River with an annual harvest limit of 400,000 lb of whole weight razor clams. The commercial fishery is prosecuted under the guidelines of a commissioner's permit where annual limit and individual size limits (clams must be 4.5 in or larger) are established. The sport and personal use razor clam fisheries in west Cook Inlet primarily occur in the same area as the commercial fishery. Sport fish charters in Deep Creek offer diggers boat transportation to the Polly Creek and Crescent River Bar areas. Because clam diggers harvest clams unassisted, all harvest is considered unguided and the charter operators are not required to complete a logbook for the trip.

The west Cook Inlet razor clam stocks and fisheries are not as closely monitored as the east Cook Inlet beaches. West Cook Inlet sport and personal use fisheries assessment has primarily been through SWHS effort and harvest estimates but starting in 2013, age and length compositions of the harvest have been assessed through hand-dug samples collected by department staff. The 2017–2019 west Cook Inlet sport razor clam average harvest (16,099) was decreased from the

historical (1986–2016) average (39,509), although the average days fished remained similar (1,286 and 1,400, respectively). The commercial fishery data are limited to fish ticket data and age and length compositions of the harvest. From 2017 through 2019, the commercial fishery annual harvest averaged approximately 171,000 lb and has not reached the guideline harvest level since 2013. There were no commercial diggers registered to participate in the fishery in 2020 due to concerns with COVID-19. Fish ticket data have also provided some stock assessment information through annual CPUE (Figure 256-1). These CPUE data have shown a highly productive fishery from the early 2000s through 2016; CPUE has been steadily declining since but is within the historical range. Some declines in age and length compositions of the harvest have been observed in both the sport/personal use and commercial fisheries but harvests are still comprised of diversity of clams.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Implementing bag and possession limits for razor clams in the Cook Inlet area is a precautionary conservative measure. The limited west Cook Inlet razor clam data suggest that the stock in the Polly Creek to Crescent River area may be in decline.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

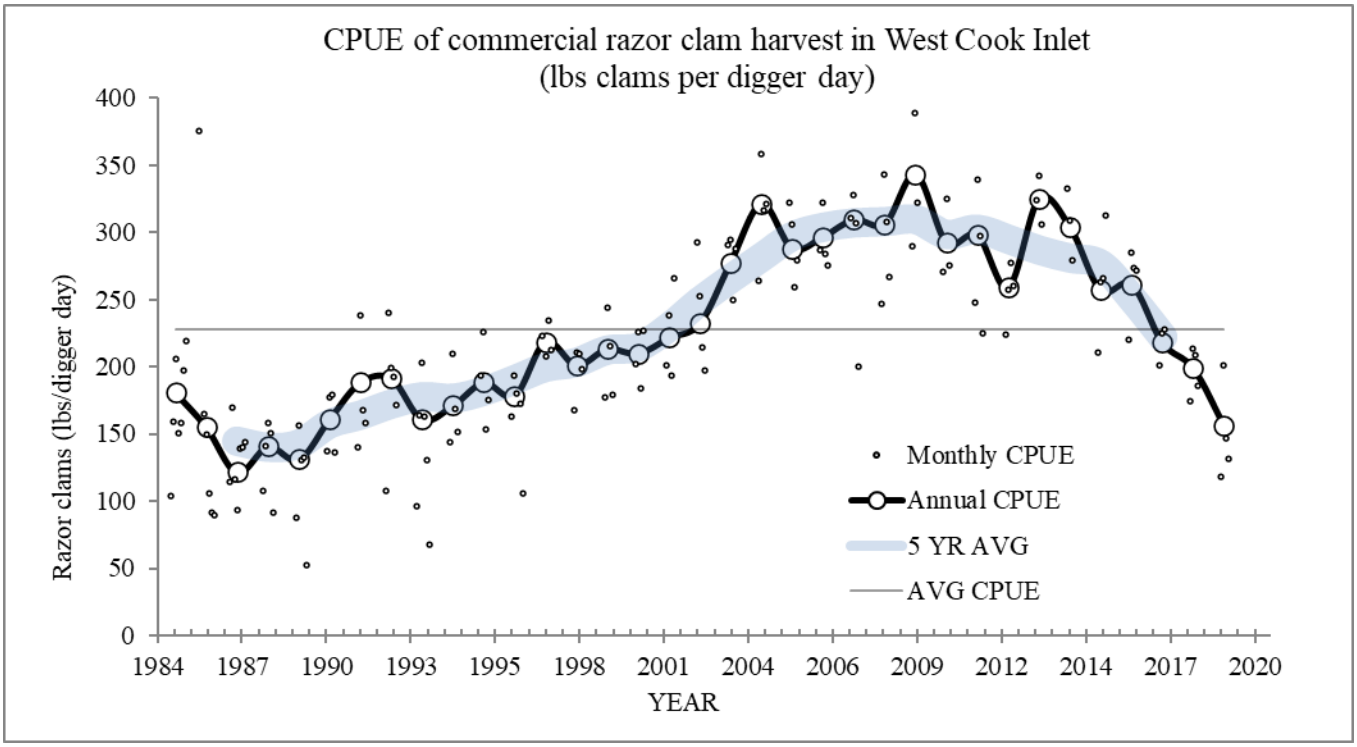

Figure 256-1.–Catch per unit effort (CPUE) of the commercial razor clam harvest in West Cook Inlet from fish ticket data, 1984-2020.

PROPOSAL 259 – 5 AAC 58.022. Waters; Seasons; bag, possession, annual, and size limits; and special provisions for Cook Inlet- Resurrection Bay Saltwater Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would create a sport razor clam bag and possession limit of 10 gallons in the Cook Inlet-Resurrection Bay Saltwater Area outside of east Cook Inlet.

WHAT ARE THE CURRENT REGULATIONS? From the mouth of the Kenai River to the southernmost tip of the Homer Spit, the razor clam bag limit is the first 60 clams harvested and the possession limit is 120 clams. In the remaining Cook Inlet Area, there are no bag or possession limits for razor clams.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This may reduce razor clam harvest by a small unknown amount. It will also reduce the wastage of unwanted clams by requiring diggers to keep all razor clams dug.

BACKGROUND: In the Cook Inlet-Resurrection Bay Saltwater Area, razor clams primarily occur in the sandy intertidal beaches in east and west Cook Inlet. Unlike the east Cook Inlet beaches, razor clam beaches in west Cook Inlet are not continuous or well-documented. The more well-known locations are from Polly Creek to the Crescent River Bar, Chinitna Bay, Silver Salmon Creek, and Oil Bay. These beaches, as well as the eastside beaches, are in the Anchorage-Matsu-Kenai Nonsubsistence Area. West Cook Inlet razor clam beaches are difficult to access and require boating across Cook Inlet from Homer, Anchor Point, Deep Creek or Kenai, or landing a small aircraft on beaches.

There are no management plans for Cook Inlet commercial, sport and personal use razor clam fisheries. In east Cook Inlet, the sport and personal use razor clam fisheries are concurrent and have been closed by emergency order since 2015 due to low abundance of adult clams. Commercial razor clam fisheries in east Cook Inlet have been closed since 1959. West Cook Inlet still supports commercial, sport and personal use razor clam fisheries with approximately 95% of the razor clam harvest occurring in the commercial fishery. The west Cook Inlet commercial razor clam fishery is open from Redoubt Creek south to the Crescent River with an annual harvest limit of 400,000 lb of whole weight razor clams. The commercial fishery is prosecuted under the guidelines of a commissioner's permit where annual limit and individual size limits (clams must be 4.5 in or larger) are established. The sport and personal use razor clam fisheries in west Cook Inlet primarily occur in the same area as the commercial fishery. Sport fish charters in Deep Creek offer diggers boat transportation to the Polly Creek and Crescent River Bar areas. Because clam diggers harvest clams unassisted, all harvest is considered unguided and the charter operators are not required to complete a logbook for the trip.

The west Cook Inlet razor clam stocks and fisheries are not as closely monitored as the east Cook Inlet beaches. West Cook Inlet sport and personal use fisheries assessment has primarily been through SWHS effort and harvest estimates but starting in 2013, age and length compositions of the harvest have been assessed through hand-dug samples collected by department staff. The

2017–2019 west Cook Inlet sport razor clam average harvest (16,099) was decreased from the historical (1986–2016) average (39,509), although the average days fished remained similar (1,286 and 1,400, respectively). The commercial fishery data are limited to fish ticket data and age and length compositions of the harvest. From 2017 through 2019, the commercial fishery annual harvest averaged approximately 171,000 lb and has not reached the guideline harvest level since 2013. There were no commercial diggers registered to participate in the fishery in 2020 due to concerns with COVID-19. Fish ticket data have also provided some stock assessment information through annual CPUE (Figure 256-1). These CPUE data have shown a highly productive fishery from the early 2000s through 2016; CPUE has been steadily declining since but is within the historical range. Some declines in age and length compositions of the harvest have been observed in both the sport/personal use and commercial fisheries but harvests are still comprised of diversity of clams.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Implementing bag and possession limits for razor clams in the Cook Inlet area is a precautionary conservative measure. The limited west Cook Inlet razor clam data suggest that the stock in the Polly Creek to Crescent River area may be in decline.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

PROPOSAL 255 – 5 AAC 77.518. Personal Use Clam fishery.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would close the personal use harvest of hardshell clams in the Cook Inlet Area.

WHAT ARE THE CURRENT REGULATIONS? The hardshell clam bag, possession, and size limits in the Cook Inlet Area are the same for subsistence, personal use, and sport fisheries. The bag and possession limits are 80 legal sized littleneck and butter clams in combination. The minimum size for littleneck clams is 1.5 in across the widest part of the shell and the minimum size for butter clams is 2.5 in across the widest part of the shell.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would eliminate any potential harvest effect and may allow hardshell clam stocks to rebuild.

BACKGROUND: Hardshell clams (Pacific littleneck and butter clams) are found in rocky intertidal areas throughout Cook Inlet and the North Gulf Coast but are primarily harvested in Kachemak Bay. Since 1997, noncommercial (sport, personal use, and subsistence) and commercial hardshell clam fisheries in Kachemak Bay have been managed by the *Southern District Hardshell Clam and Mussel Fishery Management Plan* (5 AAC 38.318). The plan limits the annual noncommercial and commercial harvests to 160,000 pounds and 40,000 pounds, respectively. In 2007, the Alaska Board of Fisheries (board) made a positive customary and traditional use finding for shellfish in the portion of Cook Inlet outside the Anchorage–Matanuska-Susitna–Kenai Nonsubsistence Area. The amount reasonably necessary for subsistence uses of hardshell clams is 6,800–10,200 pounds (round weight). Commercial hardshell clam fisheries have been closed in the Southern District since 2009.

The noncommercial hardshell clam fisheries in Cook Inlet and the North Gulf Coast have been restricted by gear, legal sizes, and bag and possession limits. Statewide regulations restrict gear in these fisheries to rakes, shovels, manually operated clam guns, or by hand. Size restrictions were established for Pacific littleneck and butter clams to allow them to reach maturity prior to being available for harvest. From 1997 through 2010, the sport and personal use fisheries were restricted to a bag limit of 1,000 Pacific littleneck and 700 butter clams. In response to the hardshell clam declines in Kachemak Bay, the department issued an emergency order to restrict the hardshell clam bag and possession limit to 80 clams in combination in 2011. In 2012, the board adopted a department proposal to restrict all noncommercial hardshell clam fisheries to a bag and possession limit of 80 clams in combination.

Sport and personal use annual harvests of hardshell clams have been estimated since 1981 by the Statewide Harvest Survey (SWHS). The SWHS harvest was estimated in gallons from 1981 through 2010 and in number of clams since 2011. The composition (proportions of Pacific littleneck and butter clam) of the harvest is unknown. The hardshell clam harvest in Kachemak Bay noncommercial fisheries has historically ranged from 3,562 gal in 2008 to 26,597 gal in 1988. From 2011 through 2015, the Kachemak Bay annual harvest averaged approximately 26,000 clams but has steadily declined since to an annual harvest of 663 clams in 2019. Hardshell clam harvest

in the remainder of Cook Inlet has had a similar harvest trend to Kachemak Bay. Hardshell clam harvest in the North Gulf Coast is assumed to be low based on the low response rate with the SWHS. In all but one year from 2011 through 2019, there was no reported hardshell clam harvest and in 2012 the harvest was 2,508 clams.

The department conducted annual hardshell clam abundance surveys throughout Kachemak Bay from the mid-1990s through 2010 with more long-term monitoring occurring in three subareas (Jakolof Bay, China Poot Bay, and Chugachik Island). Overall, these surveys indicated a substantial decline in the density of legal-sized hardshell clams in all locations (Table 255–1). The density of sublegal hardshell clams in these surveys suggested poor recruitment of Pacific littleneck clams but little change in recruitment of butter clams. The causes of these declines in abundance and recruitment were unknown. In 2018 and 2019, surveys were conducted once in each of the three subareas. This monitoring found that densities of legal-sized hardshell clams have declined 94% to 100% from their historical densities in all subareas. Additionally, the recent observed densities of sublegal-sized hardshell clams in these subareas suggests poor recruitment and that these stocks will not likely recover soon especially considering the current abundance of sea otters in Kachemak Bay The sea otter population in Kachemak Bay has increased in size over the last 2 decades which has caused a range expansion to Upper Cook Inlet. Sea otter pits were observed at all three subareas in 2018 and 2019.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Legal-size hardshell clam densities have declined 94% to 100% from their historical densities in Kachemak Bay subareas and are not likely to recover in the near future. In Kachemak Bay, the 2019 sport/personal use hardshell clam harvest was 663 clams, which is a 98% decline since 2011. Closing the fishery would eliminate any potential harvest effect during this period of low abundances.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

Table 255-1.–Pacific littleneck and butter clams density per square meter by size at Kachemak Bay survey beach locations, 1999-2019.

	Jakolof Bay				China Poot Bay				Chugachik Island			
	Littleneck		Butter		Littleneck		Butter		Littleneck		Butter	
Year	Sublegal	Legal	Sublegal	Legal	Sublegal	Legal	Sublegal	Legal	Sublegal	Legal	Sublegal	Legal
1999	-	-	-	-	60.6	41.9	27.2	40.9	8.8	42	4.3	5.7
2000	-	-	-	-	85.1	44.2	19	44.2	12.9	44.5	2.4	3.2
2001	7.5	20.6	1.1	3	32.6	21.1	28.8	43.8	12.6	49.6	3.4	2.8
2002	-	-	-	-	56.7	28.9	26.8	42.3	13.4	30.9	2.4	2
2003	9.5	17.3	1.3	1.7	8.2	5.2	31.1	43.2	14.3	31.1	3.5	3.7
2004	-	-	-	-	-	-	-	-	5.9	19.8	4.8	2.3
2005	1.6	7.1	0.7	0.8	2.5	3.1	24.9	36	5.1	12.1	6.8	2.1
2006	-	-	-	-	-	-	-	-	3.5	10.9	5.7	4
2007	-	-	-	-	-	-	-	-	-	-	-	-
2008	1	4.8	0.9	1.1	-	-	-	-	4.7	13.6	6.4	3.3
2009	-	-	-	-	2.2	2.9	19.2	19.9	-	-	-	-
2010	0.6	3.4	1.3	1.1	-	-	-	-	-	-	-	-
2018 & 2019	0.4	0.8	1	0.2	0	0	0.7	1	0.9	0.9	9.7	0.1

PROPOSAL 258 – 5 AAC 58.022. Waters; Seasons; bag, possession, annual, and size limits; and special provisions for Cook Inlet- Resurrection Bay Saltwater Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would close the sport harvest of hardshell (Pacific littleneck and butter clams) clams in the Cook Inlet- Resurrection Bay Saltwater Area.
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WHAT ARE THE CURRENT REGULATIONS? The hardshell clam bag, possession, and size limits in the Cook Inlet-Resurrection Bay Saltwater Area are the same for subsistence, personal use, and sport fisheries. The bag and possession limits are 80 legal-sized Pacific littleneck and butter clams in combination. The minimum size for littleneck clams is 1.5 in across the widest part of the shell and the minimum size for butter clams is 2.5 in across the widest part of the shell.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would eliminate any potential harvest effect and may allow hardshell clam stocks to rebuild.

BACKGROUND: Hardshell clams (Pacific littleneck and butter clams) are found in rocky intertidal areas throughout Cook Inlet and the North Gulf Coast but are primarily harvested in Kachemak Bay. Since 1997, noncommercial (sport, personal use, and subsistence) and commercial hardshell clam fisheries in Kachemak Bay have been managed by the Southern District Hardshell Clam Fishery Management Plan (5 AAC 38.318). The plan limits the annual noncommercial and commercial harvests to 160,000 pounds and 40,000 pounds, respectively. In 2007, the board made a positive customary and traditional use finding for shellfish in the portion of Cook Inlet outside the Anchorage–Matanuska-Susitna–Kenai Nonsubsistence Area. The amount reasonably necessary for subsistence uses of hardshell clams is 6,800–10,200 pounds (round weight). Commercial hardshell clam fisheries have been closed in the Southern District since 2009.

The noncommercial hardshell clam fisheries in Cook Inlet and the North Gulf Coast have been restricted by gear, legal sizes, and bag and possession limits. Statewide regulations restrict gear in these fisheries to rakes, shovels, manually operated clam guns, or by hand. Size restrictions were established for Pacific littleneck and butter clams to allow them to reach maturity prior to being available for harvest. From 1997 through 2010, the sport and personal use fisheries were restricted to a bag limit of 1,000 Pacific littleneck and 700 butter clams. In response to the hardshell clam declines in Kachemak Bay, the department issued an emergency order to restrict the hardshell clam bag and possession limit to 80 clams in combination in 2011. In 2012, the board adopted a department proposal to restrict all noncommercial hardshell clam fisheries to a bag and possession limit of 80 clams in combination.

Sport and personal use annual harvests of hardshell clams have been estimated since 1981 by the Statewide Harvest Survey (SWHS). The SWHS harvest was estimated in gallons from 1981 through 2010 and in number of clams since 2011. The composition (proportions of Pacific littleneck and butter clam) of the harvest is unknown. The hardshell clam harvest in Kachemak Bay noncommercial fisheries has historically ranged from 3,562 gal in 2008 to 26,597 gal in 1988. From 2011 through 2015, the Kachemak Bay annual harvest averaged approximately 26,000 clams

but has steadily declined since to an annual harvest of 663 clams in 2019. Hardshell clam harvest in the remainder of Cook Inlet has had a similar harvest trend to Kachemak Bay. Hardshell clam harvest in the North Gulf Coast is assumed to be low based on the low response rate with the SWHS. In all but one year from 2011 through 2019, there was no reported hardshell clam harvest and in 2012 the harvest was 2,508 clams.

The department conducted annual hardshell clam abundance surveys throughout Kachemak Bay from the mid-1990s through 2010 with more long-term monitoring occurring in three subareas (Jakolof Bay, China Poot Bay, and Chugachik Island). Overall, these surveys indicated a substantial decline in the density of legal-sized hardshell clams in all locations (Table 255–1). The density of sublegal hardshell clams in these surveys suggested poor recruitment of Pacific littleneck clams but little change in recruitment of butter clams. The causes of these declines in abundance and recruitment are unknown. In 2018 and 2019, surveys were conducted once in each of the three subareas. This monitoring found that densities of legal-sized hardshell clams have declined 94% to 100% from their historical densities in all subareas. Additionally, the recent observed densities of sublegal-sized hardshell clams in these subareas suggests poor recruitment and that these stocks will not likely recover soon especially considering the current abundance of sea otters in Kachemak Bay The sea otter population in Kachemak Bay has increased in size over the last 2 decades which has caused a range expansion to Upper Cook Inlet. Sea otter pits were observed at all three subareas in 2018 and 2019.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Legal-size hardshell clam densities have declined 94-100% from their historical densities in Kachemak Bay subareas and are not likely to recover in the next ten years. In Kachemak Bay, the 2019 sport/personal use hardshell clam harvest was 663 clams, which is a 98% decline since 2011. Closing the fishery would eliminate any potential harvest effect during this period of low abundances.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

Subsistence (1 proposal)

PROPOSAL 262 – 5 AAC 02.310. Subsistence miscellaneous shellfish fishery.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Reduce the bag limit in the Cook Inlet Area subsistence clam fishery from 80 to 40 hardshell clams (Pacific littleneck and butter clams) of either species or in combination.

WHAT ARE THE CURRENT REGULATIONS? In the Cook Inlet Area subsistence clam fishery, the bag and possession limit for hardshell clams (Pacific littleneck and butter clams) is 80 clams of either species or in combination (5 AAC 02.310 (b)(2)). Legal sizes are established of 1.5 inches for littleneck and 2.5 inches for butter clams.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Fewer hardshell clams may be harvested in the Cook Inlet Area subsistence shellfish fishery, and there may be an impact to reasonable opportunity to harvest shellfish for subsistence uses.

BACKGROUND: Since 1997, sport, personal use, and commercial hardshell clam fisheries have been managed by the *Southern District Hardshell Clam Fishery Management Plan* (5 AAC 38.318). The plan limits the annual noncommercial (sport, personal use, and subsistence) and commercial harvests to 160,000 lb and 40,000 lb, respectively. The noncommercial bag and possession limits of 1,000 littleneck clams and 700 butter clams was believed to be restrictive enough to facilitate enforcement of commercial closures by preventing noncommercial harvest from entering commercial markets. In 2007, the board made a positive customary and traditional (C&T) use finding for shellfish in the portion of the Cook Inlet Area outside the Anchorage-Matsu-Kenai Nonsubsistence Area, established an amount reasonably necessary for subsistence (ANS) uses of hardshell clams outside the nonsubsistence area, and required a harvest permit for participation in subsistence clam fisheries. The most recent year that a comprehensive subsistence survey was conducted in Cook Inlet was 2003, when 450 gallons of hardshell clams were harvested by residents of Nanwalek and Port Graham, or a total of 1,350 lb of hardshell clams (Table 255-1). Between 2008 and 2011, a total of 39 permits were issued. Ten harvest reports were returned, seven reported no harvest effort, and three reported a total harvest of 26 gallons of butter clams from Jakolof and Kasitsna bays. In 2010, department staff received reports from Nanwalek residents that hardshell clams were difficult to find locally and residents had to travel outside the area to find clams. Between 2010 and 2015, ~ 25 permits were sent to Port Graham and Nanwalek but harvest information was never returned. After 2015, and collaborating with area subsistence staff, permits were discontinued through the present.

Hardshell clams (Pacific littleneck and butter clams) have declined to historical low abundances throughout Kachemak Bay. Recent monitoring in three subareas (Jakolof Bay, China Poot Bay, and Chugachik Island) has found that densities of legal-sized hardshell clams have declined 94% to 100% from their historical densities in all subareas. Additionally, the recent observed densities of sublegal-sized hardshell clams in these subareas suggests that these stocks will not likely recover soon (Table 255-1).

See Proposal 255 for additional background information.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. The department has also submitted proposals to close personal use and sport fisheries for hardshell clams to be considered at this meeting.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area?

   A portion of this stock is in the Anchorage-Matsu-Kenai Nonsubsistence Area, defined at 5 AAC 99.015(a)(3).

2. Is this stock customarily and traditionally taken or used for subsistence?

   Yes. There is a positive customary and traditional use finding for shellfish stocks in the Cook Inlet Area outside the nonsubsistence area (5 AAC 02.311(a)).

3. Can a portion of the stock be harvested consistent with sustained yield?
   Yes.

4. What amount is reasonably necessary for subsistence uses?

   The board has found that 850–1,275 gallons or 6,800–10,200 pounds (round weight) of hardshell clams are reasonably necessary for subsistence uses in that portion of the Cook Inlet Area that is from the easternmost point of Jakolof Bay to Point Pogibshi. The board has also found that 350–525 gallons or 2,800–4,200 pounds (round weight) of hardshell clams are reasonably necessary for subsistence uses in the remainder of the Cook Inlet Area (5 AAC 02.311(b)(1–2)).

5. Do the regulations provide a reasonable opportunity for subsistence uses?
   This is a board determination.

6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses?
   This is a board determination.

COMMITTEE OF THE WHOLE—GROUP 2: SHRIMP (18 Proposals)

PROPOSAL 237 – 5 AAC 55.055. Prince William Sound noncommercial shrimp fishery management plan.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Provide the department the authority to deny a Prince William Sound (PWS) noncommercial shrimp permit to a permit holder if the permit holder fails to meet the reporting requirement of the permit. This would also provide an appeal process for a permit holder that is denied a permit due to a failure to report the required information.

WHAT ARE THE CURRENT REGULATIONS? Currently the department does not have the authority to deny a permit to PWS shrimp noncommercial permit holders that fail to report their harvest.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This should increase compliance with the reporting requirement which would result in increased accuracy of harvest estimates from the noncommercial fishery. Currently the department estimates the amount of harvest that goes unreported. This would preclude members of the public who did not comply with the reporting requirement from participating in the fishery the following year.

BACKGROUND: Before 2001, there were no regulatory restrictions on the noncommercial shrimp fishery in PWS. In March 2000, the board adopted regulations to restrict the noncommercial fishery (effective January 2001). The regulations required a shrimp permit for all noncommercial users (sport, personal use, and subsistence, effective during the 2002–2005 seasons), established pot limits of no more than five pots per person, with a limit of five pots per vessel that may be used to take shrimp, and established a fishing season from April 15 through September 15. Noncommercial permit holders participating in the sport fishery are required to have a valid sport fishing license and provide their license number on the permit. Participants in the subsistence fishery must be Alaska residents and do not need a sport fishing license. All participants fishing in the Valdez Nonsubsistence Area are also required to have a valid sport fishing license and provide their license number on the permit. Shrimp have a positive customary and traditional use finding in the Prince William Sound Area, and the amount reasonably necessary for subsistence determined by the board is 9,000 - 15,000 pounds of usable weight (5 AAC 02.208). Prince William Sound noncommercial shrimp permits are available online from ADF&G. All noncommercial permit holders are currently required to submit their harvest report at the end of the season.

Data from the SWHS and occasional household surveys were used from 2006 to 2008 to estimate noncommercial harvests during a time when no PWS commercial fisheries targeting shrimp were prosecuted. In March 2009, the board adopted a *Prince William Sound noncommercial shrimp fishery management plan (5 AAC 55.055)* allowing for the possibility of a commercial shrimp pot fishery if the total allowable harvest (TAH) exceeds 110,000 lb (5 AAC 31.214). Data collected during the annual department shrimp pot survey as well as commercial

and noncommercial harvest information are used in a surplus production model to estimate the TAH and guideline harvest levels (GHLs). As part of the management plan, 40% of the TAH is allocated to commercial users and 60% to noncommercial users. To more effectively manage the noncommercial fishery allocation in a given year, a noncommercial shrimp fishery permit was reinstituted beginning in 2009. Prior to 2016, permits were only available for pick up in person and harvest reporting forms needed to be delivered in person or mailed. Permits have been available online since 2016 and harvest reporting online has been available since 2018. The number of unreported permits includes all noncommercial permits issued for which no information was reported to the department. In an attempt to improve reporting compliance, the department sends out annual postseason reminder emails and two reminder letters to permit holders. The amount of shrimp harvest from unreported noncommercial shrimpers is unknown so it is estimated annually. The percent of shrimp harvest permits that are not reported ranges from 8% to 14% annually (Table 237-1).

Subsistence shellfish permits (5 AAC 02.015) as well as other similar permits issued by the department have language removing the permit-holder's ability to participate the following year if reporting requirements are not met. It is also common for these permits to have an appeal process to allow for extenuating circumstances.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

Table 237-1.–Annual number and percent by type of noncommercial shrimp permits issued and percent of permits that are not reported, 2009-2020.

Year	Total Permits Issued	% PU and Sport	% Subsistence	# Not Reported	% Not Reported
2009	2,733	99%	1%	301	11%
2010	3,181	99%	1%	318	10%
2011	3,309	99%	1%	397	12%
2012	3,098	98%	2%	403	13%
2013	3,101	97%	3%	341	11%
2014	3,134	94%	6%	439	14%
2015	3,033	93%	7%	403	13%
2016*	3,592	98%	2%	334	9%
2017*	3,441	98%	2%	275	8%
2018**	3,810	99%	1%	385	10%
2019**	4,211	95%	5%	505	12%
2020**	4,501	91%	9%	507	11%

*Permits available online.
**Permits and reporting available online.

PROPOSAL 238 – 5 AAC 55.055. Prince William Sound noncommercial shrimp fishery management plan; 5 AAC 31.210. Shrimp pot fishing seasons for Registration Area E; 5 AAC 31.211. Shrimp trawl fishing seasons for Registration Area E; and 5 AAC 02.210. Subsistence shrimp fishery.

PROPOSED BY: James Eule.

WHAT WOULD THE PROPOSAL DO? Modify the season dates for the Prince William Sound Area (PWS) noncommercial and commercial shrimp pot fishing season and commercial shrimp trawl fishing season to open midsummer or later; season closure dates were not defined in the proposal.

WHAT ARE THE CURRENT REGULATIONS? In PWS, Registration Area E, under 5 AAC 31.210 (a), in the waters of the Inside District described, shrimp may be taken in a commercial fishery by pot gear from April 15 through September 15, as established by emergency order (EO).

In PWS, under 5 AAC 55.022 (b)(5)(A), 5 AAC 55.055 (a)(3)(A), and 5 AAC 02.210 (5) shrimp may be taken in the noncommercial fishery by pot gear from April 15 through September 15.

The commercial shrimp trawl fishery in PWS has a split season, open April 15 through August 15 and from October 1 through December 31 (5AAC 31.211).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? For the commercial and noncommercial shrimp pot fisheries, this would delay the fishery to an unknown date in midsummer or later, while maintaining the current regulatory closure date of September 15. A shorter season could reduce harvest opportunity for commercial and sport shrimp fishers, and reasonable opportunity for subsistence for subsistence shrimp fishers. For the commercial shrimp trawl fishery, the effect could be a shortened season or a season shift.

BACKGROUND: Please refer to proposals 240 and 253 for background information.

Timing of the fishery avoids fishing on gravid females. Department staff queried the PWS pot shrimp fishery participants for the past three seasons after the first opening starting April 15, and the participants interviewed had observed less than 5% females with eggs. Shifting the season later in the year could increase fishing when females have eggs. Of the females caught during the shrimp pot survey in October from 1992 through 2020, 94% of the females sampled had eggs (Table 238-1).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal but **OPPOSES** limiting harvest opportunity, when there are no supporting biological or conservation concerns, and overlapping with reproductive portions of the year. The PWS noncommercial and commercial shrimp pot fisheries have been managed consistent with the management plan since 2010. The TAH of 110,000 lb provides a conservative component of the plan, allowing for the maintenance of abundance and fishery sustainability of spot shrimp in PWS.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area?
   The Valdez Nonsubsistence Area is comprised of the following: within Unit 6D, as defined by 5 AAC 92.450(6)(D), and all waters of Alaska in the Prince William Sound Area as defined by 5 AAC 24.100, within the March 1993 Valdez City limits (5 AAC 99.015(a)(5)). The board may not permit subsistence fishing in a nonsubsistence area (AS 16.05.258(c)).
2. Is this stock customarily and traditionally taken or used for subsistence?
   Yes, shrimp have a positive customary and traditional use finding in the Prince William Sound Area outside the Valdez Nonsubsistence Area.
3. Can a portion of the stock be harvested consistent with sustained yield?
   Yes.
4. What amount is necessary for subsistence uses?
   The amount reasonably necessary for subsistence determined by the board is 9,000 - 15,000 pounds of usable weight of shrimp (5 AAC 02.208).
5. Do the regulations provide a reasonable opportunity for subsistence uses?
   This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses?
   This is a board determination.

Table 238-1.–Prince William Sound Area shrimp pot survey sex composition and percent of females with eggs from 1992–2020, conducted annually in October.

Year	Percent male	Percent female	Percent of females w/ eggs
1992	88.2	11.8	96.8
1993	80.6	19.4	97.7
1994	95.1	4.9	95.5
1995	95.7	4.3	NA
1996	NA	NA	NA
1997	94.1	5.9	NA
1998	94.6	5.4	99.2
1999	94.3	5.7	97.8
2000	95.1	4.9	96.9
2001	92.7	7.3	99.6
2002	91.0	9.0	98.2
2003	92.0	8.0	99.6
2004	91.5	8.5	97.3
2005	95.0	5.0	95.0
2006	91.6	8.4	89.9
2007	94.2	5.8	83.7
2008	93.4	6.6	80.9
2009	86.2	13.8	88.0
2010	81.8	18.2	93.5
2011	75.1	24.9	99.1
2012	84.7	15.3	90.8
2013	85.7	14.3	87.1
2014	89.2	10.8	85.4
2015	91.7	8.3	98.3
2016	87.0	13.0	98.8
2017	92.9	7.1	98.6
2018	94.8	5.2	94.3
2019	93.6	6.4	96.8
2020	86.6	13.4	94.1
Average 1992-2020	90.3%	9.7%	94.3%

NA – information not available

PROPOSAL 239 – 5 AAC 55.055. Prince William Sound noncommercial shrimp fishery management plan. and 5 AAC 02.210. Subsistence Shrimp Fishery.

PROPOSED BY: David Neetz.

WHAT WOULD THE PROPOSAL DO? This would add additional regulatory language to current regulations that already allow noncommercial users to transport additional shrimp pots on their vessel over the limit allowed to be fished.

WHAT ARE THE CURRENT REGULATIONS? Currently, in the Prince William Sound (PWS) noncommercial shrimp fishery no more than 5 pots can be used to take shrimp, however, an unlimited number of additional pots may be carried onboard the vessel.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would add additional regulatory language with no effect on existing regulations.

BACKGROUND: Before 2001, there were no regulatory restrictions on the noncommercial shrimp fishery in PWS. In March 2000, the board adopted regulations to restrict the noncommercial fishery (effective January 2001). The regulations required a shrimp permit for all users (sport, personal use, and subsistence, effective during the 2002–2005 seasons), established pot limits of no more than five pots per person, with a limit of five pots per vessel that may be used to take shrimp, and established a fishing season from April 15 through September 15.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. This would add unnecessary language to existing regulations which currently allow an unlimited number of additional pots to be carried onboard vessels participating in the PWS noncommercial shrimp fishery. The department has modified the 2021 Southcentral Regulations Summary booklet to increase clarity of this regulation letting the public know that having spare pots on board their vessel is allowed.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area?
   The Valdez Nonsubsistence Area is comprised of the following: within Unit 6D, as defined by 5 AAC 92.450(6)(D), and all waters of Alaska in the Prince William Sound Area as defined by 5 AAC 24.100, within the March 1993 Valdez City limits (5 AAC 99.015(a)(5)). The board may not permit subsistence fishing in a nonsubsistence area (AS 16.05.258(c)).
2. Is this stock customarily and traditionally taken or used for subsistence?
   Yes, shrimp have a positive customary and traditional use finding in the Prince William Sound Area outside the Valdez Nonsubsistence Area.
3. Can a portion of the stock be harvested consistent with sustained yield?
   Yes.

4. What amount is necessary for subsistence uses?
   The amount reasonably necessary for subsistence determined by the board is 9,000 - 15,000 pounds of usable weight of shrimp (5 AAC 02.208).
5. Do the regulations provide a reasonable opportunity for subsistence uses?
   This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

PROPOSAL 240 – 5 AAC 31.214. Shrimp pot guideline harvest level for Registration Area E.

PROPOSED BY: Joseph Person.

WHAT WOULD THE PROPOSAL DO? Modify Prince William Sound Area (PWS) shrimp pot harvest strategy from a static split, between noncommercial and commercial, to a tiered percentage depending on the level of total allowable harvest (TAH). If the TAH is less than 110,000 lb of spot shrimp, the commercial fishery would be allocated 30% of the TAH; if the TAH is between 110,000 and 200,000 lb, the commercial fishery would be allocated 40% of the TAH; and if the TAH is higher than 200,000 lb, the commercial fishery would be allocated 50% of the TAH.

WHAT ARE THE CURRENT REGULATIONS? Current regulations provide for a PWS commercial shrimp pot fishery if the estimated TAH in the PWS waters described in 5 AAC 31.210 (a) is more than 110,000 pounds of spot shrimp (5 AAC 31.214). The guideline harvest level (GHL) for the commercial pot gear fishery in these waters is 40% of the TAH, and the GHL for the noncommercial (sport, personal use and subsistence) pot gear fishery is 60% of the TAH. The commercial fishery is managed so that no more than 50% of the commercial GHL may be taken from any one statistical area and there is a triennial rotation of fishing area (Areas 1, 2, and 3; Figure 240-1).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would eliminate the TAH trigger to open the commercial shrimp pot fishery and create a tiered commercial fishery allocation system based on TAH levels. If a commercial fishery is opened when the TAH is less than 110,000 lb, this could increase the overall harvest of shrimp in that year. At higher biomass levels, when TAH is greater than 200,000 lb, 10% of harvest currently allocated to the noncommercial sector would be shifted to the commercial sector, a 16.7% decrease in allocation for the noncommercial sector and 25% increase in allocation for the commercial sector.

BACKGROUND: Prior to 1982, commercial shrimp seasons were open year-round; from 1982 to 1984, seasons were shortened to April 1 through November 30. Beginning in 1985, the board established a split season of March 15 through June 30 and August 15 through December 15. The split season was intended to reduce harvests during the egg-bearing periods. Harvest declines beginning in 1988 indicated potential stock conservation problems. In 1990, the spring season was shortened to an opening date of May 1 through June 30. The fishery was closed from 1992 through 2009. Although a department damage assessment study following the *Exxon Valdez* oil spill concluded that PWS spot shrimp may have declined as a result of overfishing, environmental conditions may have also been instrumental in both the decline and slow recovery of spot shrimp in PWS and other shellfish populations throughout the Gulf of Alaska.

There is a positive customary and traditional use finding for shrimp in the Prince William Sound Area, outside of the Valdez Nonsubsistence Area, and an amount reasonably necessary for subsistence of 9,000–15,000 pounds usable weight. Before 2001, there were no regulatory restrictions on the noncommercial shrimp fishery in PWS. In March 2000, the board adopted regulations to restrict the noncommercial fishery (effective January 2001). The new regulations

required a shrimp permit for all noncommercial users (sport, personal use, and subsistence, effective during the 2002–2005 seasons), established maximum pot limits of no more than five pots per person, with a maximum of five pots per vessel, and established a fishing season from April 15 through September 15. In March 2009, the board adopted the *Prince William Sound Noncommercial Shrimp Fishery Management Plan* (5 AAC 55.055) providing for a commercial shrimp pot fishery if the total allowable harvest (TAH) exceeds 110,000 lb (5 AAC 31.214). Data collected during the annual department shrimp pot survey, and commercial and noncommercial harvest information, are used in a surplus production model to estimate the TAH and GHLs. More details regarding the model are presented in a supporting management report (Rumble et. al, 2021). As part of the management plan, the board allocated 40% of the TAH to commercial users and 60% to noncommercial users. In order to manage the noncommercial fishery for an allocation, it was necessary to reinstitute the noncommercial fishery shrimp permit beginning in 2009.

Since the management plan was adopted in 2009 and implemented in 2010, the TAH exceeded the 110,000 lb threshold to allow for a commercial shrimp pot fishery each year. The TAH ranged between 117,653 lb in 2016 to 170,209 lb in 2020, the highest since the fishery reopened (Table 240-1). From 2017-2020, the TAH has been between 167,000 and 170,209 lb. Due to harvest in the noncommercial fishery exceeding the GHL, the TAH was exceeded by 28% in 2016, 17% in 2018, and 24% in 2020 (Table 240-1). Catch per unit effort (CPUE) from the commercial fishery and from the fishery-independent department survey indicate healthy populations (Tables 240-2, 240-3 and 240-4). Commercial fishery CPUE has exceeded 2 lb per pot during the past two years when fishing occurred in Area 1 (2019) and Area 2 (2020) (Figure 240-2).

When the commercial fishery reopened in 2010, a triennial rotation of fishing areas was established (Areas 1, 2, and 3; Figure 240-1), commencing in Area 1, and the season was aligned with the noncommercial fishery season dates of April 15 through September 15, unless closed earlier by EO. The length of the commercial season has varied, with the earliest closure occurring during the most recent 2020 season on May 9, resulting in the shortest season duration of just over 18 fishing days (Table 240-2). The longest commercial seasons in 2010, 2013, and 2015 lasted until the regulatory closure of September 15 (with closures between fishing periods to calculate harvest and effort). However, 2018 had the most fishing days even though the season closed on August 16, due to there being only two fishing periods, and therefore more total fishing days. It is also noted that in 2012, when the fishery was first prosecuted in Area 3, the season was closed early on July 15, not because the GHL was achieved, but due to low catch per unit effort (CPUE). Since 2016, the commercial GHL has been within 3% of the GHL (Table 240-1), and the season has been shorter in Areas 1 and 2 than in Area 3.

Commercial harvest has ranged from 35% to 103% of the GHL since the fishery reopened in 2010. Commercial harvest has been highest in Area 2 with an average of 64,583 lb for the four seasons the fishery has been open in that area, with 100-103% of the GHL achieved. Area 1 had an average harvest of 56,091 lb for the four seasons the fishery has been open there, with 82-103% of the GHL achieved. Area 3 has only been open three seasons between 2010 and 2020 and has had the lowest average harvest of 37,358 lb, with 35-100% of the GHL achieved. In 2018, for the first time since the reopening of the commercial fishery, the GHL in Area 3 was achieved (67,375 lb). CPUE in the fishery has ranged from a low of 1.10 lb/pot in Area 3 (2012) to a high of 2.52 lb/pot in Area 1 (2010; Table 240-2).

The PWS shrimp pot survey has been conducted annually since 1992. Currently, 10 areas are surveyed in PWS; Site 6, Green Island, is no longer surveyed, and Site 11, Valdez, is auxiliary and not used to calculate TAH (Figure 240-1). The shrimp pots used in the survey are designed to catch a wide range of sizes of shrimp in order to evaluate small shrimp and potential recruitment, along with larger more marketable shrimp. These survey pots do not fit the regulatory guidelines of commercial pot gear; therefore, survey CPUE cannot be directly compared with commercial fishery CPUE (Tables 240-2, 240-3, and 240-4; Figures 240-2 and 240-3). Between 2010 and 2020, in the survey, Area 1 and Area 2 had average CPUEs above 3.0 lb/pot, 3.11 lb/pot and 3.29 lb/pot, respectively (Table 240-4 and Figure 240-3). This was more than double the historical average (1992-2009) before the fishery reopened, both Areas 1 and 2 had an average CPUE of 1.36 lb/pot for that time period. Area 3, which has historically been less productive, averaged 1.48 lb/pot from 2010 to 2020, which was also higher than the 1992 through 2009 average of 0.78 lb/pot (Table 240-4).

Participation in the PWS shrimp pot fishery has been highest in the beginning of the season when salmon fisheries have not yet opened. From 2010 through 2020, the average number of vessels making landings in April was 41 and dropped to an average of 28 vessels making landings in May (Table 240-5).

There are a variety of season opening and closing dates for shrimp pot fisheries in Alaska. The Southeastern Alaska (Area A) shrimp pot fishing season is open from October 1 through February 28 unless closed by emergency order. There are three shrimp pot seasons in Registration Area D (Yakutat): the season is May 1 through February 28 in an area described in 5 AAC 31.160 (1); October 1 through February 28 in an area described in 5 AAC 31.160 (2); and January 1 through December 31 in all other areas in the Yakutat District. According to the Kodiak and Chignik district shrimp pot management plans in Area J (Westward), shrimp may be taken from May 1 through February 28, unless closed by emergency order.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal and **OPPOSES** opening the commercial fishery with a TAH of less than 110,000 lb. The current TAH threshold provides a conservation component of the plan, keeping the commercial fishery closed at lower abundance levels, allowing for the maintenance of abundance and fishery sustainability of spot shrimp in PWS.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

Table 240-1.–Prince William Sound Area total allowable harvest (TAH), guideline harvest level (GHL), harvest, and percent of GHL in commercial and noncommercial shrimp pot fisheries, 2010–2020.

		GHL (lb)		Shrimp Harvest (lb)					
Year	TAH (lb)	Noncommercial	Commercial	Noncommercial	Commercial	Total	% of TAH	Noncommercial % of GHL	Commercial % of GHL
2010	137,500	82,200	55,000	87,699[a]	45,349	133,048	97%	107%	82%
2011	131,900	79,200	52,760	59,182[a]	52,550	111,732	85%	75%	100%
2012	128,100	76,860	51,240	55,765[a]	21,561	77,326	60%	73%	42%
2013	165,750	99,500	66,300	85,988[b]	61,644	147,632	89%	86%	93%
2014	166,500	100,000	66,600	89,155[b]	68,464	157,619	95%	89%	103%
2015	167,000	100,000	67,000	92,071[b]	23,138	115,209	69%	92%	35%
2016	117,653	70,500	47,061	102,785[b]	48,423	151,208	128%	146%	103%
2017	167,000	100,000	67,000	91,827[b]	67,421	159,248	95%	92%	101%
2018	168,000	100,800	67,200	128,860[b]	67,375	196,235	117%	128%	100%
2019	170,200	102,100	68,100	102,919[b]	68,947	171,866	101%	101%	101%
2020	170,209	102,109	68,100	140,488[b]	69,898	210,386	124%	138%	103%

[a] Calculated with 2.4 lb spot shrimp/gallon conversion.

[b] Calculated with 3.89 lb spot shrimp/gallon conversion.

Table 240-2.–Prince William Sound Area commercial shrimp pot fishery GHL, number vessels fished, pot lifts, open and closing pot gear limits, fishing days, harvest and catch per unit effort (CPUE), 2010–2020.

			Effort		Gear limits				CPUE
Year	Area	GHL (lb)	Vessels fished	Pot lifts	Open	Close	Fishing days	Harvest	(lb/pot)
2010	1	55,000	75	18,025	20	20	117	45,349	2.52
2011	2	52,760	45	29,580	40	40	96	52,550	1.78
2012	3	51,240	35	19,644	50	50	91	21,561	1.10
2013	1	66,300	45	34,804	30	50	114	61,644	1.77
2014	2	66,600	32	41,670	40	50	110	68,464	1.64
2015	3	67,000	30	20,004	60	60	115	23,138	1.16
2016	1	47,061	57	27,360	30	30	27	48,423	1.77
2017	2	67,000	54	45,261	40	40	41	67,421	1.49
2018	3	67,200	45	41,351	50	50	118	67,375	1.63
2019	1	68,100	72	34,094	25	25	34	68,947	2.02
2020	2	68,100	73	32,679	30	30	18	69,898	2.14

Table 240-3.–Prince William Sound commercial shrimp pot fishery harvest, number of pot pulls, and catch per unit effort (CPUE, lb/pot) by year in Areas 1, 2, and 3 from 2010–2020.

Area 1					
Year	2010	2013	2016	2019	Average
Harvest	45,349	61,644	48,423	68,947	56,091
# Pot pulls	18,025	34,804	27,360	34,094	28,571
CPUE	2.52	1.77	1.77	2.02	1.96
Area 2					
Year	2011	2014	2017	2020	Average
Harvest	52,550	68,464	67,421	69,898	64,583
# Pot pulls	29,580	41,670	45,261	32,679	37,298
CPUE	1.78	1.64	1.49	2.14	1.73
Area 3					
Year	2012	2015	2018	2021	Average
Harvest	21,561	23,138	67,375	TBD	37,358
# Pot pulls	19,644	20,004	41,351	TBD	27,000
CPUE	1.10	1.16	1.63	TBD	1.38

Note: TBD - to be determined.

Table 240-4.–Prince William Sound commercial shrimp survey average catch per unit effort (CPUE, lb/pot) by year in Areas 1, 2, and 3 from 1992–2020.

	Survey CPUE (lb/pot)[a]		
Year	Area 1	Area 2	Area 3
1992	0.86	0.62	0.75
1993	0.69	0.48	0.19
1994	0.40	0.41	0.41
1995	0.67	0.61	0.55
1996	0.58	0.53	0.49
1997	0.50	0.40	0.39
1998	0.22	0.38	0.19
1999	0.23	0.73	0.34
2000	0.40	0.77	0.73
2001	1.14	1.19	0.71
2002	0.77	1.99	0.65
2003	0.61	1.75	0.80
2004	3.12	1.82	0.71
2005	1.66	1.92	0.89
2006	2.85	1.84	1.08
2007	3.58	3.23	1.49
2008	3.46	3.17	1.87
2009	2.79	2.67	1.75
2010	1.87	1.63	0.77
2011	3.64	2.19	0.61
2012	2.94	2.32	1.12
2013	1.79	2.55	1.35
2014	1.98	2.73	1.03
2015	1.84	2.48	0.46
2016	3.38	3.61	1.26
2017	3.87	5.59	2.33
2018	3.72	4.50	3.20
2019	3.92	4.00	2.03
2020	5.21	4.53	2.13
Avg. 1992–2009	1.36	1.36	0.78
Avg. 2010–2020	3.11	3.28	1.48

[a] All size shrimp are included.

Table 240-5.–Number of vessels that made landings from April through September in the Prince William Sound commercial shrimp pot fishery, 2010–2020.

Year	April	May	June	July	August	September
2010[a]	72	9	6	2	3	7
2011[b]	34	18	15	14	closed	closed
2012[c]	27	16	11	5	closed	closed
2013[a]	36	30	13	8	8	4
2014[b]	22	25	17	7	6	0
2015[c]	10	18	10	8	5	5
2016[a]	48	36	1	closed	closed	closed
2017[b]	44	41	14	closed	closed	closed
2018[c]	32	29	17	9	closed	closed
2019[b]	67	49	1	closed	closed	closed
2020[a]	60	49	closed	closed	closed	closed
Average 2010-2020	41	28	13	8	6	4

[a] Area 1 was open for commercial fishing.

[b] Area 2 was open for commercial fishing.

[c] Area 3 was open for commercial fishing.

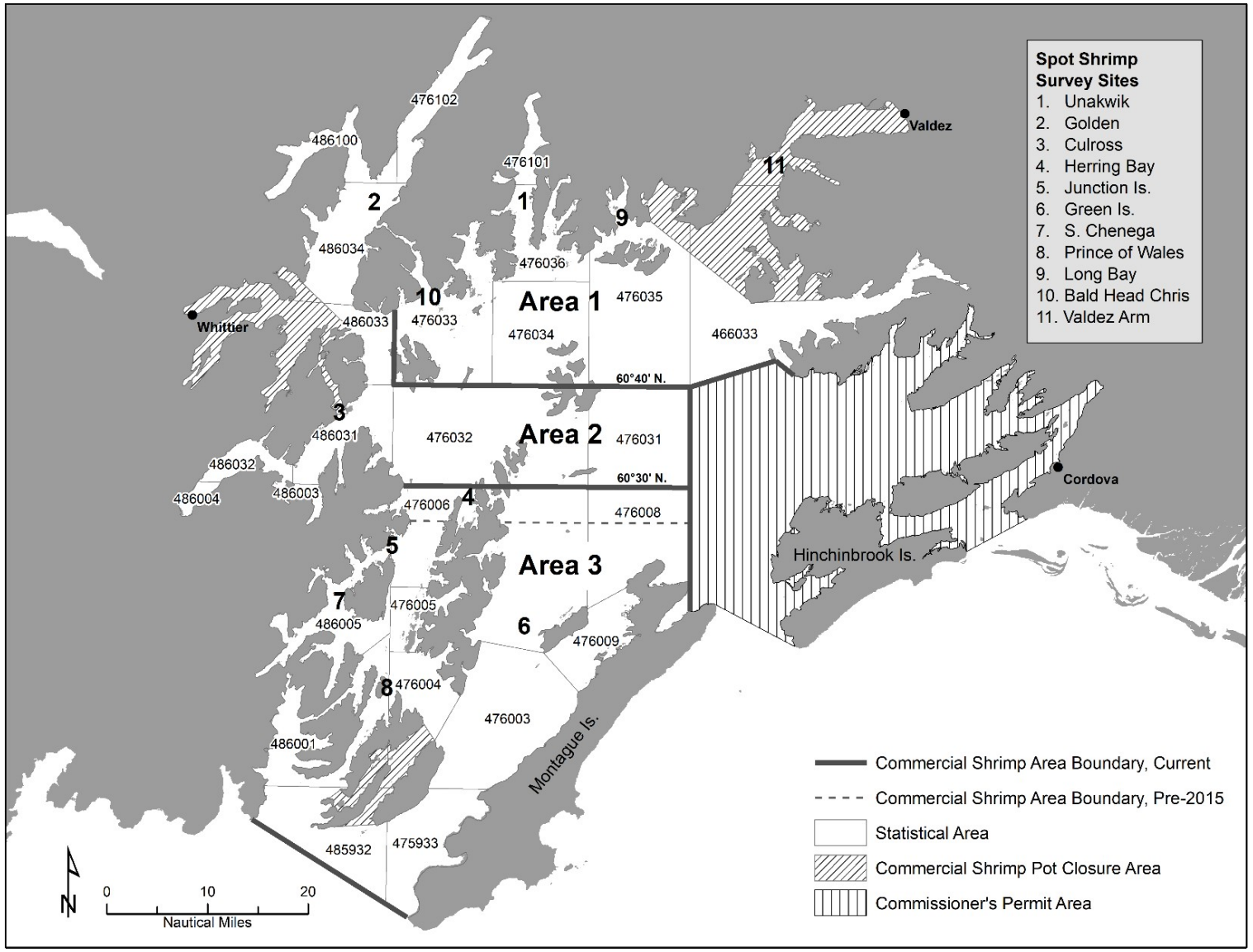

Figure 240-1.–Prince William Sound shrimp pot survey sites and commercial harvest areas.

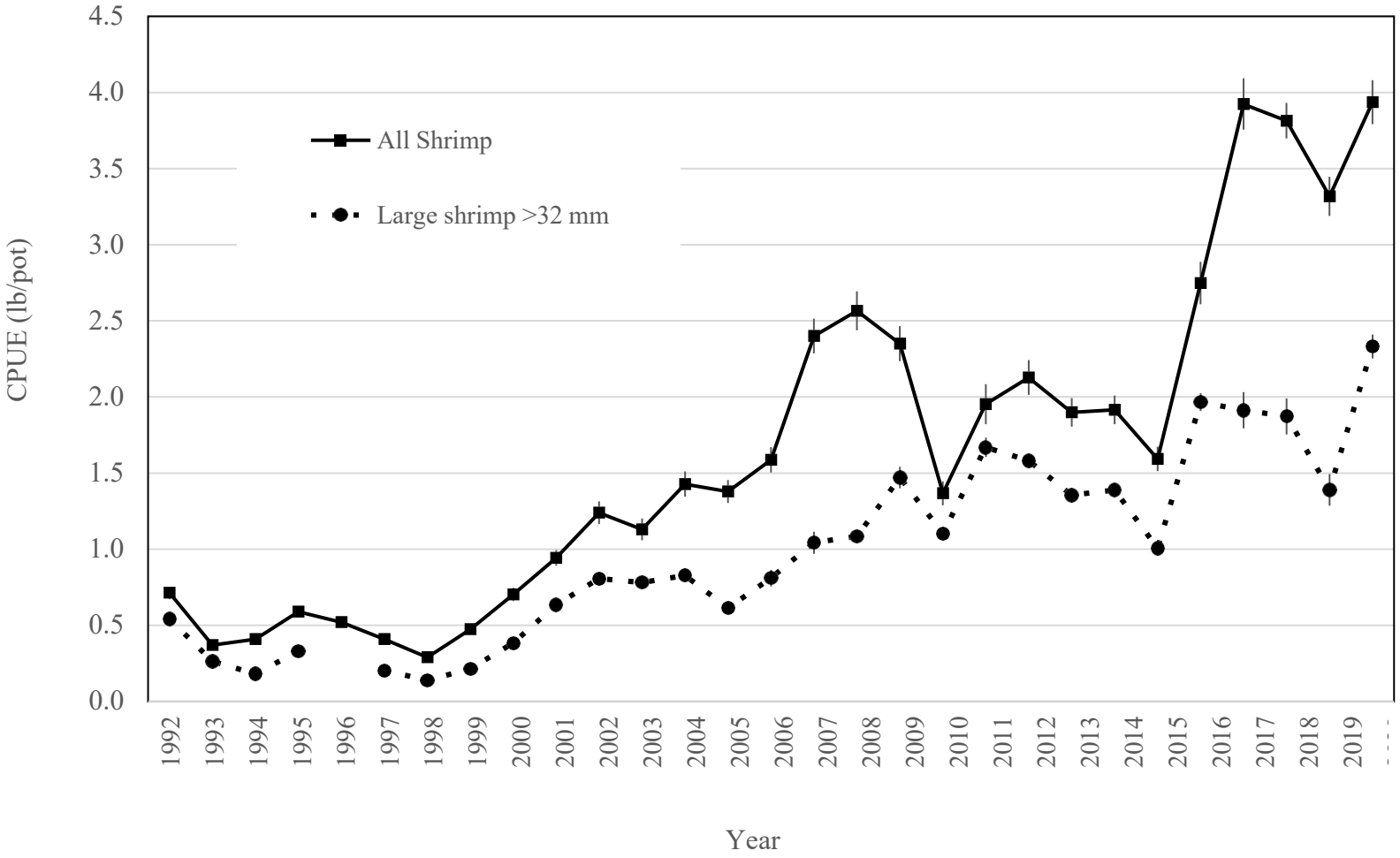

Figure 240-2.–Prince William Sound spot shrimp survey average catch per unit effort (CPUE) for all spot shrimp and large spot shrimp (those equal to or greater than 32 mm in carapace length), 1992–2020.

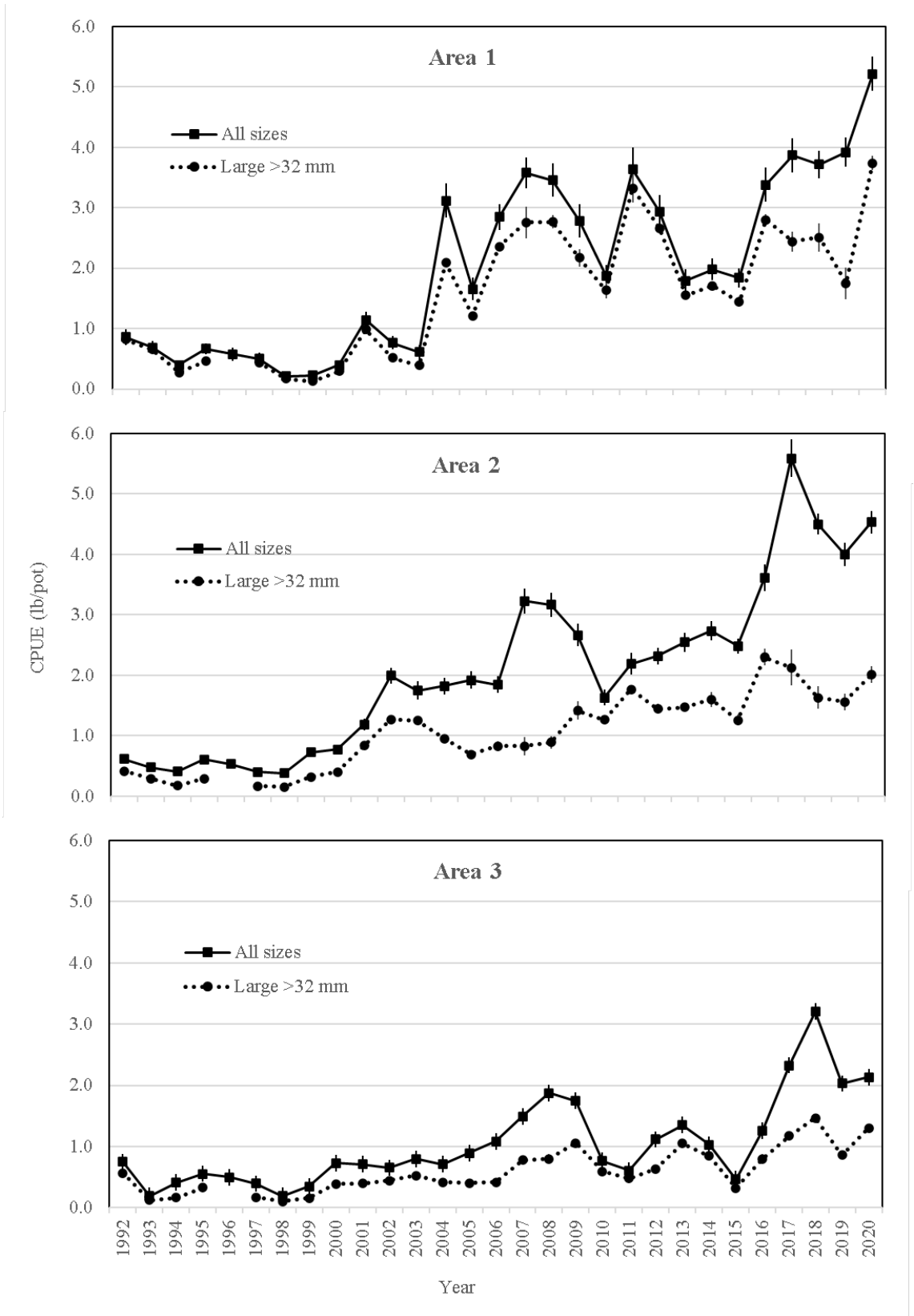

Figure 240-3.– Prince William Sound spot shrimp survey average catch per unit effort (CPUE) for all spot shrimp and large shrimp (>32 mm carapace length) in the three management areas 1, 2, and 3.

PROPOSAL 242 – 5 AAC 55.055. Prince William Sound noncommercial shrimp fishery management plan. and 5 AAC 02.210. Subsistence Shrimp Fishery.

PROPOSED BY: Brett Wilbanks.

WHAT WOULD THE PROPOSAL DO? This would create a minimum threshold of Total Allowable Harvest (TAH) for the noncommercial shrimp fishery in Prince William Sound (PWS) to open.

WHAT ARE THE CURRENT REGULATIONS? Currently there is no minimum TAH threshold for the noncommercial fishery to open. The noncommercial shrimp fishery is open to harvest from April 15 – September 15 with no bag, possession, or size limits. No more than five pots per vessel may be used to take shrimp. The guideline harvest level (GHL) for shrimp harvested by the noncommercial shrimp fisheries is calculated as 60 percent of the TAH.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If the TAH is less than 110,000 lb then the noncommercial fishery, which includes all subsistence and sport users, would be closed. This proposal would have no effect at current shrimp biomass levels where TAH is well above 110,000 lb. If shrimp biomass decreases, and the TAH dips below 110,000 lb, closing the noncommercial fishery may or may not allow the biomass level to rebuild to the TAH of 110,000 lb, but the department does not have sufficient information to quantify this or estimate rate of stock recovery. There would be no effect on the commercial fishery.

BACKGROUND: Before 2001, there were no regulatory restrictions on the noncommercial shrimp fishery in PWS. In March 2000, the board adopted regulations to restrict the noncommercial fishery (effective January 2001). The regulations required a shrimp permit for all users (sport, personal use, and subsistence, effective during the 2002–2005 seasons), established pot limits of no more than 5 pots per person, with a limit of 5 pots per vessel that may be used to take shrimp, and established a fishing season from April 15 through September 15.

Data from the SWHS and occasional household surveys were used from 2006 to 2008 to estimate noncommercial harvests during a time when no PWS commercial fisheries targeting shrimp were prosecuted. In March 2009, the board adopted a *Prince William Sound noncommercial shrimp fishery management plan (5 AAC 55.055)* allowing for the possibility of a commercial shrimp pot fishery if the TAH exceeds 110,000 lb (5 AAC 31.214). To more effectively manage the noncommercial fishery allocation in a given year, a noncommercial fishery shrimp permit was reinstituted beginning in 2009. In 2010, an emergency order (EO) was issued in the noncommercial shrimp fishery to increase the pot limit from five to eight pots per vessel and, as a result, effort and harvest increased that year (Table 242-1). Since 2010, the pot limit per vessel has not been liberalized. In 2016, 2017, and 2018, due to high anticipated effort (pot-days) and a lower GHL, EOs were issued in an effort to stay within the GHL by reducing the legal number of pots allowed to be fished per person and per vessel to four. In 2019 and 2020, EOs were issued to decrease the legal number of pots allowed to be fished per person and per vessel to three.

Data collected during the annual department shrimp pot survey as well as commercial and noncommercial harvest information, are used in a surplus production model to estimate the TAH

and GHLs. This is a simple biomass removal model that uses survey catch-per-unit-effort (CPUE) in concert with harvested amounts from the previous year's commercial and noncommercial fisheries to estimate what biomass of spot shrimp can be harvested in the upcoming year's fisheries. The maximum sustainable yield (MSY) of a fishery is theoretically stated as the point where 50% of a population is harvested. The lower 90% confidence interval of MSY is used from the surplus production model to provide a conservative but sustainable harvest level in the PWS shrimp fisheries. As part of the management plan, 40% of the TAH is allocated to commercial users and 60% to noncommercial users. Since 2010, the TAH has never been less than 110,000 lb (Table 242-1).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. The board should determine whether adoption of this proposal continues to provide a normally diligent participant with a reasonable expectation of success in harvesting shrimp for subsistence uses. For example, adoption of a noncommercial threshold that excludes the subsistence fishery may continue to provide a reasonable opportunity for subsistence.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area?
   The Valdez Nonsubsistence Area is comprised of the following: within Unit 6D, as defined by 5 AAC 92.450(6)(D), and all waters of Alaska in the Prince William Sound Area as defined by 5 AAC 24.100, within the March 1993 Valdez City limits (5 AAC 99.015(a)(5)). The board may not permit subsistence fishing in a nonsubsistence area (AS 16.05.258(c)).
2. Is this stock customarily and traditionally taken or used for subsistence?
   Yes, shrimp have a positive customary and traditional use finding in the Prince William Sound Area outside the Valdez Nonsubsistence Area.
3. Can a portion of the stock be harvested consistent with sustained yield?
   Yes.
4. What amount is necessary for subsistence uses?
   The amount reasonably necessary for subsistence determined by the board is 9,000 - 15,000 pounds of usable weight of shrimp (5 AAC 02.208).
5. Do the regulations provide a reasonable opportunity for subsistence uses?
   This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

Table 242-1.–Prince William Sound total allowable harvests (TAH), guideline harvest levels (GHL), harvests in commercial and noncommercial shrimp pot fisheries, and percentage of total allowable harvest (TAH), 2010–2020.

		GHL (lb)		Shrimp harvest (lb)					
Year	TAH (lb)	Non-commercial	Commercial	Non-commercial	Commercial	Total	% of TAH	Non-commercial % of GHL	Commercial % of GHL
2010	137,500	82,200	55,000	87,699[a]	45,349	133,048	97%	107%	82%
2011	131,900	79,200	52,760	59,182[a]	52,694	111,876	85%	75%	100%
2012	128,100	76,860	51,240	55,765[a]	21,561	77,326	60%	73%	42%
2013	165,750	99,500	66,300	85,988[b]	61,644	147,632	89%	86%	93%
2014	166,500	100,000	66,600	89,155[b]	68,464	157,619	95%	89%	103%
2015	167,000	100,000	67,000	92,072[b]	23,138	115,209	69%	92%	35%
2016	117,653	70,500	47,061	102,785[b]	48,346	151,131	128%	146%	103%
2017	167,000	100,000	67,000	91,827[b]	67,421	159,248	95%	92%	101%
2018	168,000	100,800	67,200	128,860[b]	67,375	196,235	117%	128%	100%
2019	170,200	102,100	68,100	102,919[b]	68,947	171,866	101%	101%	101%
2020	170,209	102,109	68,100	140,488 [b]	69,898	210,389	123%	137%	103%

[a] Calculated with 2.4 lb spot shrimp/gallon conversion.

[b] Calculated with 3.89 lb spot shrimp/gallon conversion.

PROPOSAL 243 – 5 AAC 31.235. Closed waters in Registration Area E.

PROPOSED BY: Brett Wilbanks.

WHAT WOULD THE PROPOSAL DO? Amend Prince William Sound Area (PWS) commercial shrimp pot fishery closed waters boundary to increase the area that is available to commercial shrimp pot fishing by 55 square miles.

WHAT ARE THE CURRENT REGULATIONS? Current regulations define areas that are closed to the taking of shrimp with commercial pot gear in PWS (5 AAC 31.235 (b)). There are three areas closed to the commercial taking of shrimp with pot gear encompassing waters near Whittier, Chenega, and Valdez Arm (Figure 240-1).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would potentially increase the commercial harvest of shrimp by an unknown amount and possibly reduce noncommercial harvest in this area (Figure 243-1).

BACKGROUND: In 2009, when the commercial shrimp pot fishery harvest strategy was proposed and adopted into regulation, three areas were set aside for noncommercial users by closing them to the commercial fleet. These areas were chosen to align with populations centers: Whittier, which is a port used by anglers traveling from Anchorage, Mat-Su Valley, and the Kenai Peninsula; Valdez, which is on the road system; and Chenega which is a community in the Southwest portion of PWS. In Alaska, it has been common to have areas set aside for noncommercial shellfish fishing and examples exist around the state.

The proposed expansion of the commercial shrimp pot fishing area includes waters bordering the Columbia Glacier which is receding and will likely provide more shrimp habitat in the future. According to the PWS Regional Citizen Advisory Council, the glacier is losing mass faster than almost any glacier in the state, and since the early 1980s, the glacier has retreated more than 10.5 miles and lost 50 percent of its volume.

See general shrimp fishery background, tables and figures found in Proposal 240.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

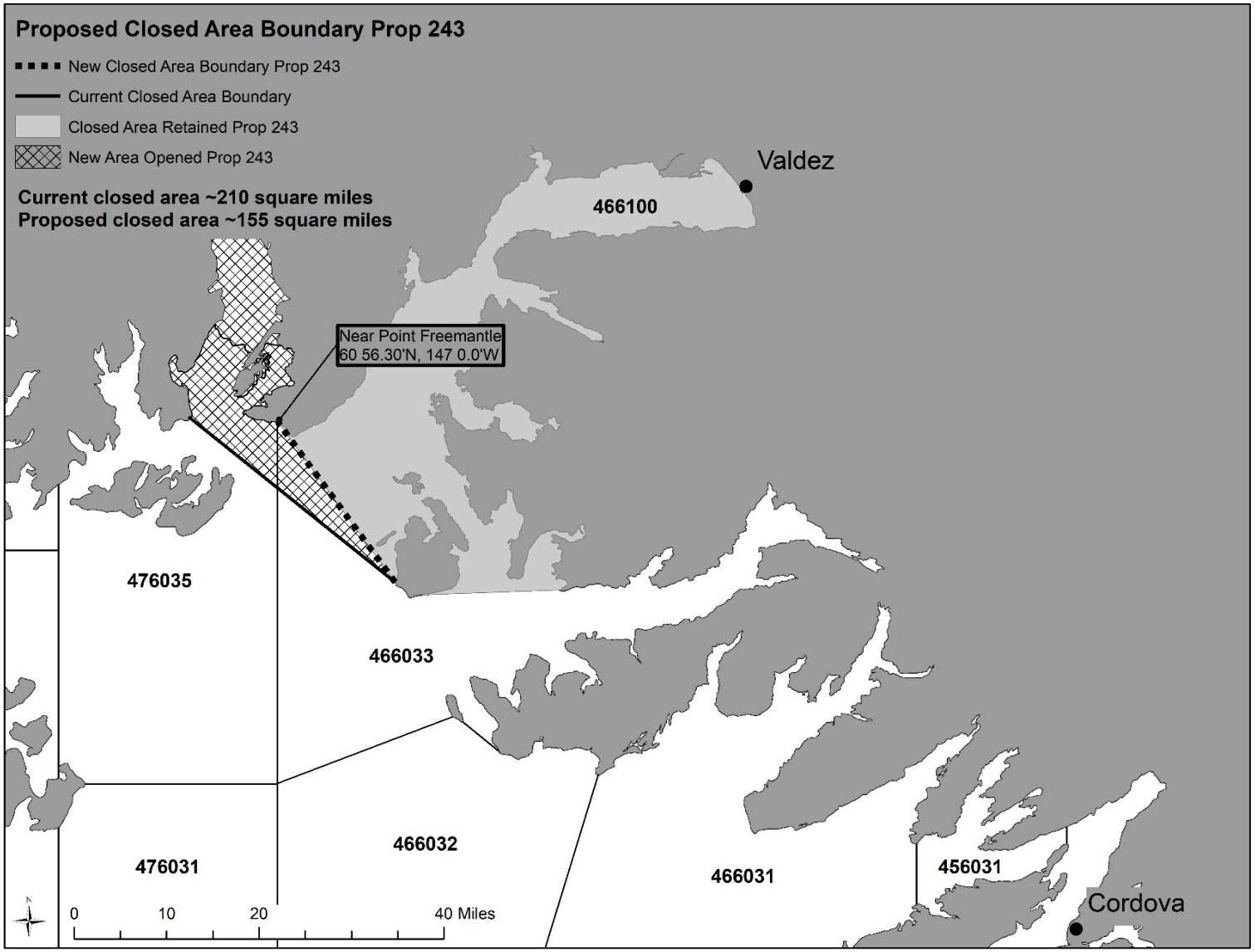

Figure 243-1.–Prince William Sound Area commercial shrimp pot closure area near Valdez and potential boundary change.

PROPOSALS 244 and 245 – 5 AAC 31.214. Shrimp pot guideline harvest level for Registration Area E.

PROPOSED BY: Gordon Scott.

WHAT WOULD THESE PROPOSALS DO? Modify the Prince William Sound Area (PWS) shrimp pot fishery harvest strategy by amending the annual total allowable harvest (TAH) and corresponding guideline harvest levels (GHLs) for noncommercial and commercial fisheries, based on the previous year's harvest.

WHAT ARE THE CURRENT REGULATIONS? Current regulations provide for a PWS commercial shrimp pot fishery if the estimated TAH in the waters described in 5 AAC 31.210 (a) is more than 110,000 lb of spot shrimp (5 AAC 31.214). The GHL for the commercial pot gear fishery in these waters is 40% of the total allowable harvest of spot shrimp for the area. The GHL for the noncommercial (sport and subsistence) pot gear fishery is 60% of the TAH, as defined in the *Prince William Sound noncommercial shrimp fishery management plan* (5 AAC 55.055). The commercial fishery is managed so that no more than 50% of the commercial GHL may be taken from any one statistical area.

WHAT WOULD BE THE EFFECT IF THE PROPOSALS WERE ADOPTED? Increase or decrease noncommercial and commercial fishery GHLs annually using the previous year's harvest. If the annual harvest exceeds the TAH, the harvest level could be reduced the following year. If the annual harvest is below the TAH, the harvest level could be increased the following year.

BACKGROUND: TAH is calculated annually with a surplus production model (Table 240-1). This model uses the previous year's harvest, commercial and noncommercial, and the results of the annual PWS department shrimp pot survey (Table 240-4, Figures 240-2 and 240-3).

Since the reopening of the commercial shrimp pot fishery in 2010, commercial shrimp fishermen have harvested between 35% and 103% of the GHL and noncommercial fishers have harvested between 73% and 146% of the GHL (Table 240-1). Commercial fishery managers annually use mandatory management tools to target the GHL. These tools include: a preseason registration deadline, call-in requirements before fishing and when landing shrimp, and fish tickets documenting harvest and area. Noncommercial fishery managers rely on permit reporting by users, with harvest and effort analyzed postseason, and adjustment of pot limits made for the following season as necessary to target the noncommercial GHL. Due to the noncommercial fishery GHL being exceeded, the TAH has been exceeded three times during the eleven years since the commercial fishery reopened: in 2016, 2018, and 2020. Harvest has been below or at the TAH from 2010 to 2015 and in 2017 and 2019.

See general shrimp fishery background, tables and figures found in Proposal 240.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of these proposals. The department is **OPPOSED** to increasing commercial or noncommercial GHL based on harvest in the prior year. The PWS spot shrimp population is assessed annually and GHLs are based on estimates of harvestable surplus in the current year; therefore, adjustments from the previous season are not conservative or biologically responsible. The TAH threshold of 110,000

lb provides a conservative component of the plan, allowing for the maintenance of spot shrimp biomass and fishery sustainability in PWS; annual harvest has only exceeded the TAH three times since the commercial fishery reopened 11 years ago.

COST ANALYSIS: Approval of these proposals is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of these proposals is not expected to result in an additional direct cost for the department.

PROPOSAL 246 – 5 AAC 31.214. Shrimp pot guideline harvest level for Registration Area E.

PROPOSED BY: Gordon Scott.

WHAT WOULD THE PROPOSAL DO? Eliminate the total allowable harvest (TAH) threshold of 110,000 lb, which must be exceeded for a commercial shrimp pot fishery to be prosecuted in the Prince William Sound Area (PWS).

WHAT ARE THE CURRENT REGULATIONS? Current regulations provide a PWS commercial shrimp pot fishery if the estimated TAH in the waters described in 5 AAC 31.210 (a) is more than 110,000 lb of spot shrimp (5 AAC 31.214). The GHL for the commercial pot gear fishery in these waters is 40% of the TAH of spot shrimp for the area, and the GHL for the noncommercial (sport and subsistence) pot gear fishery is 60% of the TAH (5 AAC 55.055). The commercial fishery is managed so that no more than 50% of the commercial GHL may be taken from any one statistical area.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The commercial shrimp pot fishery could open without the TAH exceeding 110,000 lb and potentially increase its harvest rate above sustainable levels in low biomass years.

BACKGROUND: The TAH is calculated annually with a surplus production model. This model uses the previous year's harvest, both commercial and noncommercial, and the results of the annual department PWS shrimp pot survey (Table 240-1, Figure 240-2). This model and TAH threshold were chosen to be conservative because of the long closure of the commercial fishery from 1992 through 2009.

See general shrimp fishery background, tables and figures found in Proposal 240.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Since the reopening of the commercial fishery, the regulations that were adopted have provided the department reliable tools to manage the fishery sustainably. Commercial and noncommercial harvest, combined with the results from the department survey, provide evidence of a healthy spot shrimp population and the TAH threshold is an important component of the management plan.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

PROPOSAL 247 – 5 AAC 31.223. Lawful shrimp pot gear for Registration Area E.

PROPOSED BY: Cordova District Fisherman United.

WHAT WOULD THE PROPOSAL DO? Establish a minimum number of pots (50) a vessel may fish in the Prince William Sound Area (PWS) commercial shrimp pot fishery and require the department to manage the fishery so that most of the guideline harvest level (GHL) is harvested within the first two weeks after the fishery opens.

WHAT ARE THE CURRENT REGULATIONS? The department will announce annually, before the opening of the commercial shrimp pot fishery, the number of pots that may be operated from a vessel in that season, not to exceed 100 shrimp pots per vessel (5 AAC 31.223). When deciding the pot limit, the department will consider the total number of registered vessels, estimated catch per unit of effort (CPUE), and the magnitude of the GHL. In PWS, in the waters of the Inside District, shrimp may be taken in a commercial fishery by pot gear from April 15 through September 15, as established by emergency order (5 AAC 31.210).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The department would be required to set the pot limit between 50 and 100 pots per vessel for the commercial shrimp pot fishery; larger vessels that could carry more pot gear would have an advantage. Participants would most likely harvest shrimp faster, which could be more challenging for fishery managers to target the GHL. The fresh market, which has been developed since the commercial fishery reopened, would not last long and buyers would not be able to purchase fresh shrimp into the summer. This could decrease the value of the fishery; frozen product is generally worth less per lb than fresh.

BACKGROUND: Since the commercial shrimp pot fishery reopened in 2010, the department has used management tools to help set the pot limit during the season. For the first opening, the pot limit has ranged between 20 (2010) and 60 (2015) with an average of about 40 pots (Table 240-2). The fishery has developed to service a fresh, local market with much positive feedback from the participants and Alaskan customers. For the past 3 years, 80% of the participants have landed their shrimp as catcher/sellers, which is a purchased permit, which allows them to sell fresh shrimp themselves locally to individuals and restaurants. In addition, there has been one consistent tender that has purchased shrimp on the grounds. The company that operates the tender purchases shrimp from an annual average of 8 vessels and provides fresh shrimp to markets in Alaska. Over the last five years, the fleet has become more active with management, and trust has formed between participants and commercial fishing managers. The core fleet provides input on season pot limits and fishing periods that are conducive to the Alaskan market that they have developed and fostered. For the past two seasons, preseason meetings have provided a forum for managers and participants to develop plans for the upcoming season. This relationship in concert with fishery requirements has made it possible to closely target the GHL.

The core fleet has also encouraged the department to provide fishing periods and pot limits to allow them to provide their buyers with fresh product for an extended period. Closures between commercial fishing periods allow the department to analyze harvest and effort and evaluate if inseason management actions are needed. These closed periods also provide some opportunity for noncommercial shrimpers to fish in the absence of commercial pot gear.

Pot limits have been set at a higher level of 50-60 pots for Area 3 (2012, 2015, and 2018), which is in the southwest portion of PWS with historically less effort (Tables 240-2 and 240-3; Figure 240-1). Travel time and lower CPUE influenced setting a higher pot limit. For all other years, when fishing has occurred in Areas 1 or 2, the pot limit has been set at 40 pots or fewer at the start of the season in order for managers to assess the pace of fishing, since there is a certain proportion of people that register vessels for the fishery but do not participate (Table 247-2). Because this is an open access fishery, it is hard to predict participation, and therefore pot limit is an important tool for fishery managers, especially in the first part of the season, which generally has the most participation. The 2020 season lasted 18 fishing days, the lowest number of days since the fishery reopened in 2010; and the past four seasons that occurred in Areas 1 and 2 (2016, 2017, 2019, and 2020) also represented the shortest seasons since 2010, ranging from 18 to 41 fishing days in duration (Table 240-2).

See general shrimp fishery background, tables and figures found in Proposal 240.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The current flexibility for setting pot limits of 100 pots or fewer allows fishery managers to target the GHL closely and provide maximum opportunity due to a controlled harvest rate that extends the season. Establishing a minimum gear requirement may create a burden to new entrants in this fishery. Requiring the majority of the harvest to occur in the first two weeks will also make it more difficult to closely target the GHL and may negatively impact existing fresh shrimp markets.

COST ANALYSIS: Approval of this proposal is expected to result in an additional direct cost for a private person to participate in this fishery. Additional costs would be incurred in order to participate in the fishery if the minimum pot limit was 50. Approval of this proposal is not expected to result in an additional direct cost for the department.

Table 247-2.–Prince William Sound Area commercial shrimp pot fishery CFEC permits purchased, participated, and percent participation; and vessels registered, participated, and percent participation, 2010–2020.

	Permits			Vessels			
Year	Purchased	Participated	% participation	Registered	Participated	% participation	Landings
2010	195	82	42%	156	75	48%	233
2011	182	48	26%	91	45	49%	183
2012	158	40	25%	83	35	42%	105
2013	148	46	31%	89	45	51%	214
2014	129	33	26%	65	32	49%	214
2015	112	29	26%	56	30	54%	107
2016	131	52	40%	86	57	66%	219
2017	122	61	50%	85	54	64%	349
2018	112	48	43%	74	44	59%	249
2019	143	74	52%	100	72	72%	284
2020	128	74	58%	92	73	79%	226
Average 2010-2020	142	53	38%	89	51	58%	217

PROPOSAL 248 – 5 AAC 31.211. Shrimp trawl fishing seasons for Registration Area E.

PROPOSED BY: Cordova District Fisherman United.

WHAT WOULD THE PROPOSAL DO? Change the spring opening date of the Prince William Sound Area (PWS) shrimp trawl fishery from April 15 to March 15.

WHAT ARE THE CURRENT REGULATIONS? In PWS, shrimp may be taken with trawls from April 15 through August 15 and from October 1 through December 31 (5 AAC 31.211).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The harvest and participation in the PWS shrimp trawl fishery may increase by an unknown amount with an additional month of fishing.

BACKGROUND: For the PWS shrimp trawl fishery, three GHLs are established for the Wells, Central/Southwest combined, and Northwest sections. During the recent ten years, 2011-2020, the GHLs have not significantly changed (Table 248-1, Figure 248-1). Since 2011, the GHL was not achieved in any section with two exceptions: the Wells Section in 2013 and 2014. Harvest information is confidential from 2007 to 2018 because the number of participants was fewer than three. Total PWS shrimp harvest by trawl gear in 2019 was 63,917 lb by three vessels; harvest data cannot be reported by section due to confidentiality. During the recent ten years, some or all of the sections have been open until the regulatory closure.

During the recent 20 years, 2000-2019, there have been four years with effort in the fall/winter portion of the fishery with 2019 being one of those years. The percentage of total harvest occurring in the fall/winter portion of the season was 9% in 2007, 2017, and 2019, and 2% in 2008.

The department does not conduct annual stock assessment surveys to estimate sidestripe shrimp (the fishery target) abundance. Limited fishery sampling has been done during the spring/summer fishery. Annual catch per unit effort (CPUE) information indicates that the fishery is sustainable; CPUE information is confidential from 2007 to 2018 because annual participation has been fewer than three vessels; CPUE in 2019 was approximately 102 lb of shrimp per tow hour.

Timing of this fishery, along with other shrimp trawl fisheries around the state, is designed to avoid fishing on shrimp populations during the egg-bearing and egg-hatch periods.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The timing of this fishery is designed to avoid fishing on shrimp during the egg-hatch period.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

Table 248-1.–Prince William Sound Area shrimp trawl fishery GHLs by section, 2011–2020.

	GHL(lb) by Section		
Year	Wells	Central/Southwest	Northwest
2011	67,649	33,000	18,500
2012	65,957	33,000	18,500
2013	61,928*	33,000	14,000
2014	60,300*	33,000	14,000
2015	60,300	33,000	14,000
2016	69,500	33,000	14,000
2017	65,950	33,000	14,000
2018	65,950	33,000	14,000
2019	65,950	33,000	14,000
2020	65,950	33,000	14,000

*GHL achieved

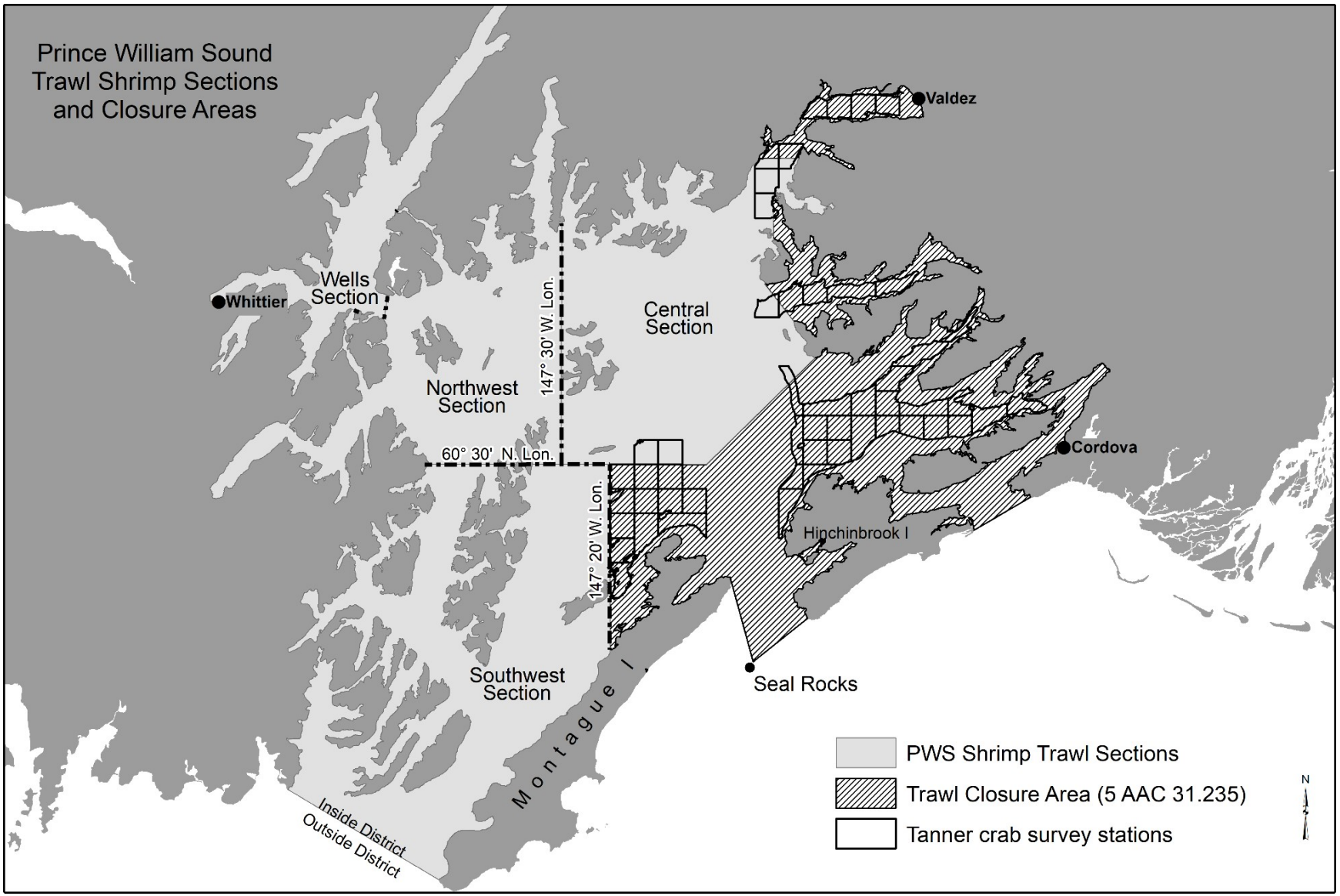

Figure 248-1.–Prince William Sound Area shrimp trawl sections, closed areas, and large mesh trawl survey stations.

PROPOSAL 249 – 5 AAC 31.210. Shrimp pot fishing seasons for Registration Area E.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Clarify areas open to commercial shrimp pot fishing in the Prince William Sound Area (PWS).

WHAT ARE THE CURRENT REGULATIONS? The commercial shrimp pot fishery in PWS is divided into three areas opened on a triennial basis (5 AAC 31.210; Figure 240-1):

(1) The waters north 60° 40.00′ N. lat. and east of 148° W. long.;
(2) The waters south of those waters described in (1) of this subsection and north and west of a line from 60° 30.00′ N. lat., 147° 57.70′ W. long. to 147° W. long;
(3) The waters south of 60° 30.00′ N. lat.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would clearly define PWS waters for Areas 2 and 3 that are open to commercial shrimp pot fishing triennially by defining waters of Kings Bay and Port Nellie Juan as part of Area 2 (Figure 249-1).

BACKGROUND: Most of the area in Kings Bay and Port Nellie Juan are a part of Area 2 for the PWS commercial pot shrimp fishery. However, the current regulation assigns a small, southern portion of the bay and port that are south of 60° 30.00′ N. lat. to Area 3. This proposal seeks to clarify in regulation that all of Kings Bay and Port Nellie Juan are part of Area 2, which was the intent when these Areas were established (Figure 249-1).

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

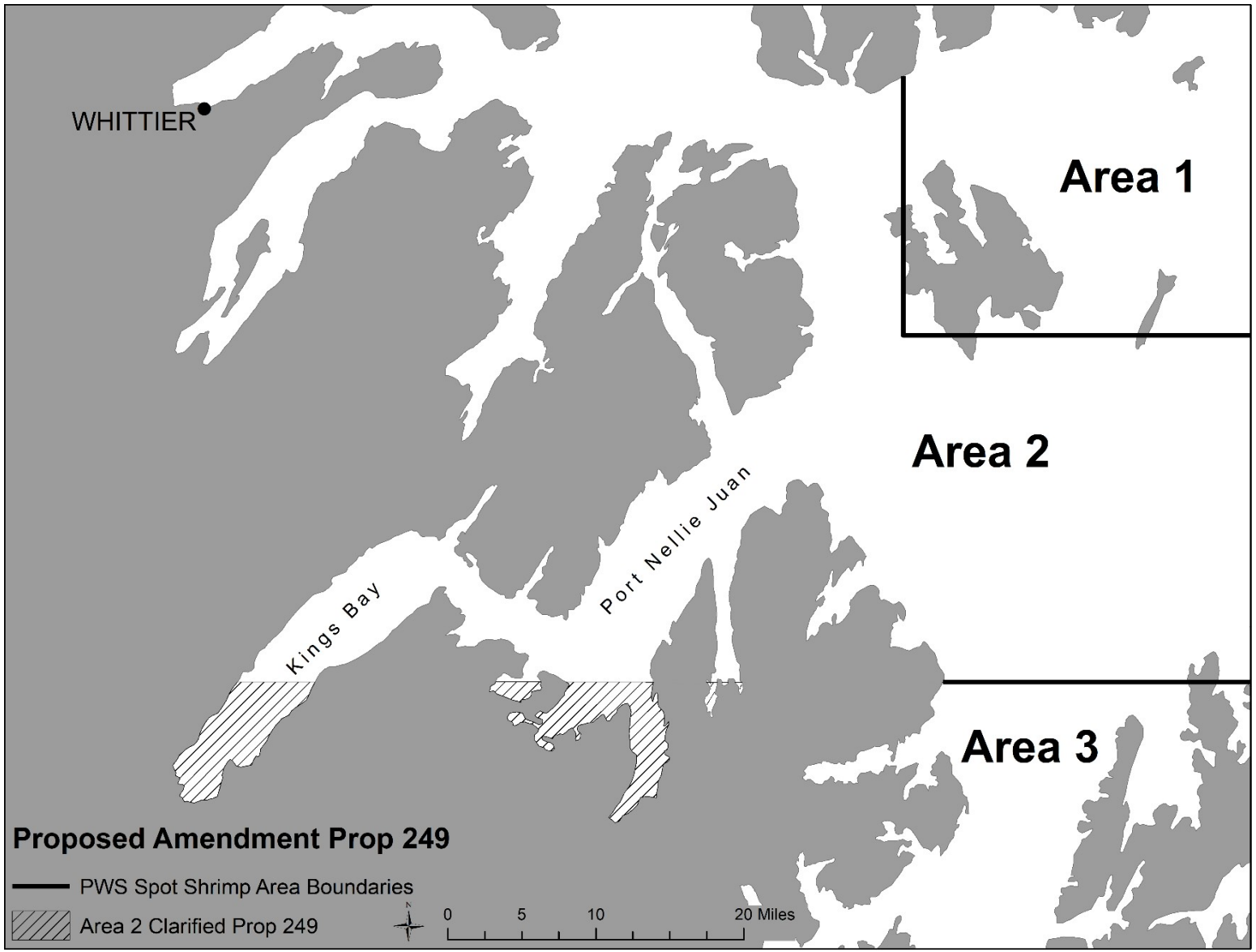

Figure 249-1.–Prince William Sound Area commercial shrimp pot Areas with proposed amendment.

PROPOSAL 250 – 5 AAC 31.210. Shrimp pot fishing seasons for Registration Area E.

PROPOSED BY: Cordova District Fisherman United.

WHAT WOULD THE PROPOSAL DO? Change the opening date of the Prince William Sound Area (PWS) commercial shrimp pot fishery from April 15 to March 15.

WHAT ARE THE CURRENT REGULATIONS? In PWS, Registration Area E, under 5 AAC 31.210 (a), in the waters of the Inside District described, shrimp may be taken in a commercial fishery by pot gear from April 15 through September 15, as established by emergency order.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The commercial shrimp pot season would open one month earlier on March 15. Since the guideline harvest level is often harvested within the first couple of months of the season, and the season has closed by emergency order when the GHL was achieved prior to the regulatory closure date since 2016, the proposal would most likely only alter the start date. Also, if the start date of the commercial fishery is March 15, then it will not align with the noncommercial fishery start date, which is April 15; this could reduce conflict between the noncommercial and commercial fisheries, at least in the first month, which could also have an impact on reasonable opportunity for harvesting shrimp for subsistence users. This could also reduce the amount of shrimp available to noncommercial users in localized areas resulting in noncommercial users having to travel farther or to different areas. This would likely increase the amount of egg bearing shrimp to be harvested. This change in timing could also increase participation because of less overlap with other fisheries.

Opening the fishery earlier could result in the loss of pot gear. In March and early April, there is still ice in the heads of some of the bays, where gear has been historically set to catch shrimp. Anecdotally, participants have noted that setting gear near ice can be problematic and result in the loss of gear because of the movement of ice.

BACKGROUND: See general shrimp fishery background, tables and figures found in Proposal 240.

Spring survey information from 1989 found shrimp starting to hatch around the middle of March. Literature indicated that shrimp are egg-bearing into late March or early April.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal but notes that this fishery has developed with current regulations, including start date, over the past 11 years, and has been managed sustainably, with the shortest season duration of only 18 days occurring in 2020. Additionally, aligning commercial and noncommercial opening dates for the shrimp pot fishery was board intent when new regulations governing the commercial fishery were adopted in 2009.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

PROPOSAL 251 – 5 AAC 31.2XX. New section.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Establish permit and reporting requirements for shrimp floating processor vessels participating in commercial shrimp fisheries in the Prince William Sound Area (PWS; Registration Area E). It would also limit the activity of a floating processor to purchasing or processing shrimp from other vessels in PWS and would not allow a floating processor to operate gear in the shrimp fishery.

WHAT ARE THE CURRENT REGULATIONS? Participants in the PWS shrimp pot fishery have specific reporting requirements (5 AAC 31.245), including mandatory call-in reports prior to fishing and before landing shrimp; information that must be transmitted to the department is specified in regulation. In addition, logbooks are distributed to registrants: it is mandatory that logs are filled out on the grounds and then submitted with corresponding fish ticket(s) to the department within seven days of the landing. In addition, during periods of high fishing effort, the department can require information at other times during the fishery.

Under 5 AAC 31.033, a vessel used to tender shrimp may not have shrimp gear or equipment on board and may not be used to fish for shrimp.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Harvest of shrimp by vessels delivering to floating processors could be tracked closely by the department in order to target guideline harvest levels (GHLs). Floating processors would be able to purchase and process shrimp from other vessels participating in PWS shrimp fisheries but would not be allowed to operate gear in these shrimp fisheries.

BACKGROUND: There is increasing interest from floating processors to participate in the shrimp pot and trawl fisheries in PWS. The GHLs in PWS commercial shrimp fisheries are modest and targeted by the department by monitoring landings from each vessel. Floating processors may buy shrimp from multiple catcher vessels, and, therefore, the department needs a mechanism for inseason reporting of landings. The floating processor can freeze shrimp which allows them to remain at sea for extended periods of time, and potentially hold large amounts of shrimp without returning to port. Daily reporting requirements will aid the department in targeting the GHL in these small fisheries.

The statewide definition of "floating processor" in 5 AAC 39.130 (o)(12) is interpreted to allow a catcher-processor to also operate as a floating processor and be the first purchaser from other vessels. However, in 5 AAC 39.130 (o)(3) "catcher-processor" is defined as a commercial fisherman who sells or attempts to sell processed or unprocessed fish that were legally taken only by the catcher-processor. By statewide regulation 5 AAC 31.033, a vessel used to tender shrimp may not have shrimp gear or equipment on board and may not be used to fish for shrimp. This proposal would specify allowable activity by a floating processor in PWS.

A similar regulation exists for the shrimp fishery in Registration Area A, Southeast Alaska, with a definition of floating-processor (5 AAC 31.144); catcher-processor is also defined by Southeast

area regulation (5 AAC 31.143). The definition of floating processor in this proposal for PWS clarifies allowable activities.

See general shrimp fishery background, tables and figures found in Proposal 240.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Reporting requirements in this fishery have allowed the department to provide maximum opportunity while generally constraining commercial harvest to below or very close to the GHL.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

PROPOSAL 252 – 5 AAC 31.033. Tenders for shrimp.

PROPOSED BY: Cordova District Fishermen United.

WHAT WOULD THE PROPOSAL DO? Allow vessels registered to commercially fish in shrimp pot fisheries to also operate as tenders.

WHAT ARE THE CURRENT REGULATIONS? Under statewide regulations for the commercial shrimp fishery, a vessel used to tender shrimp may not have shrimp gear or equipment on board and may not be used to fish for shrimp (5 AAC 31.033). Vessels operating as tenders must also register with the department.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The pace of shrimp pot fisheries across the state could increase, resulting in shorter seasons, fewer pots, etc. This change could also have enforcement issues because of the mixing of shrimp from multiple vessels on one vessel. Harvest accounting from vessels, which is required and important for management, could become more difficult.

BACKGROUND: See general shrimp fishery background, tables and figures found in Proposal 240.

A vessel may act as a tender in commercial shrimp fisheries and accept deliveries of shrimp from multiple vessels for transport to port; the tender is required to comply with fish ticket reporting requirements (5 AAC 39.130) and may not participate as a catcher vessel in the shrimp fishery. Annually, there have been one or two vessels who have registered as tenders in the Prince William Sound shrimp pot fishery in the past five years. Managers have daily communication with tenders to track harvest, since they have multiple landings from shrimp pot fishery participants each day.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Successful management of this fishery has included a clear delineation between fishery participants and tender vessels.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

PROPOSAL 253 – 5 AAC 31.243. Trawl shrimp harvest and reporting requirements in Registration Area E.

PROPOSED BY: Cordova District Fishermen United.

WHAT WOULD THE PROPOSAL DO? Increase the pink shrimp allowance in the Prince William Sound Area (PWS) shrimp trawl fishery.

WHAT ARE THE CURRENT REGULATIONS? No more than 20 percent, by weight, of the shrimp onboard a vessel may be pink shrimp or other pandalid species of shrimp.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This may increase the amount of pink shrimp that are harvested in the PWS trawl shrimp fishery. This would also increase the amount of other pandalid shrimp species, including spot shrimp *Pandalus platyceros* and coonstripe shrimp *Pandalus hypsinotis*, that could be retained as bycatch due to pink shrimp no longer contributing to the existing bycatch allowance.

BACKGROUND: Historical PWS shrimp trawl landings date to the early 1970s but the fishery did not develop until the late 1970s, when several vessels harvested northern (pink) shrimp *Pandalus borealis* from Icy Bay and adjacent waters of southwest PWS. Harvest and effort in the fishery peaked in 1984, with approximately 1.3 million lb and 14 vessels, before declining to under 250,000 lb and three vessels in 1986. As the fishery for pink shrimp declined due to low abundance, reduced exvessel value, and limited processing capabilities, a fishery targeting sidestripe shrimp *Pandalopsis dispar* began to develop. Commercial harvests of sidestripe shrimp were first documented in 1983 from Icy Bay and southwest PWS waters, but subsequent effort focused on Port Wells and Wells Passage in northwest PWS (Figure 248-1). Sidestripe shrimp harvests increased in 1985 as markets developed for a fleet of small vessels fishing in previously unfished areas; harvest grew from less than 100,000 lb to almost 250,000 lb landed by seven vessels in 1993. Following the rapid expansion, effort decreased to an average of three vessels between 1995 and 2006. Between 2007 and 2018, harvest and effort are confidential since participation declined to less than three vessels, until 2019.

Since 1998, pink shrimp have comprised between 5% and 22% of the total shrimp harvested in the PWS shrimp trawl fishery. In 2018 and 2019, the percentage has been the highest and above the regulatory bycatch limit (20%), at 22% and 21%, respectively (Table 253-1). There has been recent interest by commercial users to market pink shrimp; however, since 1998, most pink shrimp harvest has been reported as deadloss (includes discards at sea) while targeting sidestripe shrimp (Table 253-1). There have been minimal forays into a whole pink shrimp market in 2003, 2004, and 2007; and there were attempts at marketing pink shrimp tails in 2013 and 2014.

In Southeast Alaska and Kodiak shrimp trawl fisheries, pink and sidestripe shrimp may be targeted simultaneously (5 AAC 31.116 and 5 AAC 31.510), except for a limited exception in Southeast Alaska (5 AAC 31.112). There is an established market for pink shrimp in Southeast Alaska.

Please refer to Proposal 248 for additional background information on the PWS shrimp trawl fishery.

DEPARTMENT COMMENTS: The department **OPPOSES** increasing the amount of other pandalid shrimp species, including spot shrimp *Pandalus platyceros* and coonstripe shrimp *Pandalus hypsinotis*, that could be retained as bycatch due to pink shrimp no longer contributing to the existing bycatch allowance. There is an existing directed fishery in PWS for spot shrimp using pot gear.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

Table 253-1.–Prince William Sound Area shrimp trawl fishery percent of harvest by pink, sidestripe, and spot shrimp species and percentage of pink shrimp discarded as deadloss, 1996-2019.

	% of harvest (lb, by species)		
Year	Pink	Sidestripe	Spot
1996	0%	100%	0%
1997	0%	83%	0%
1998	6%	94%	0%
1999	5%	95%	0%
2000	7%	93%	0%
2001	10%	90%	0%
2002	10%	89%	0%
2003	11%	89%	0%
2004	15%	85%	0%
2005	12%	88%	0%
2006	10%	90%	0%
2007	15%	85%	0%
2008	18%	82%	0%
2009	10%	90%	0%
2010	11%	89%	0%
2011	6%	94%	0%
2012	11%	89%	0%
2013	20%	80%	0%
2014	16%	84%	0%
2015	5%	95%	0%
2016	12%	88%	0%
2017	19%	81%	0%
2018	22%	78%	0%
2019	21%	79%	0%

PROPOSAL 254 – 5 AAC 31.235. Closed waters in Registration Area E.

PROPOSED BY: Ezekiel Brown.

WHAT WOULD THE PROPOSAL DO? Allow the use of beam trawl to harvest shrimp in waters that are currently closed to harvesting shrimp with all trawl gear.

WHAT ARE THE CURRENT REGULATIONS? As defined in 5 AAC 31.235 (a), there are four areas closed by regulation in the Prince William Sound Area (PWS) to commercial shrimp trawling (Figure 248-1).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This could increase shrimp harvest and Tanner crab bycatch by an unknown amount and potentially negatively affect Tanner crab populations.

BACKGROUND: The current closure areas for shrimp trawling were adopted into regulation in 1985 to protect depressed king and Tanner crab stocks by minimizing indirect fishing mortality in key production areas. Further regulations for shrimp trawling in northwestern PWS were adopted in 1986 and included seasons and gear specifications. Shrimp trawling regulations were restructured in 1994 when the board adopted open season dates of April 15 through August 15 and October 1 through December 31, amended gear requirements, and created the Northwest Shrimp Trawl Fishing District (NSTFD). In 2003, the board adopted regulations that restructured shrimp trawl management areas. The NSTFD was repealed and the new sections created by this action were the Northwest, Wells, Southwest, and Central sections (Figure 248-1).

Currently, there are still concerns about king and Tanner crab populations in PWS. A Tanner crab subsistence fishery is open but commercial fishing for Tanner crab was closed from 1989 through 2017 because of low abundance of Tanner crab estimated in department surveys. The PWS (Registration Area E) Tanner Crab Harvest Strategy (5 AAC 35.308) was adopted by the board in 2017 and opens commercial and sport fisheries if survey estimates of legal male Tanner crab abundance are above 200,000 crab. Estimates of legal male Tanner crab from the PWS trawl survey have not surpassed this threshold in the past four years. However, also in 2017, the board adopted provisions to allow for a commissioner's permit fishery in the Western and Eastern districts (Figure 254-1), which had not been part of department surveys (until 2020), except for a small portion of the Western District on the northern end of Montague Island. The commissioner's permit fishery has been prosecuted for three years, 2018-2020, with some statistical area closures inseason because of concerns about localized depletion. The closed area defined in 5 AAC 31.235 encompasses the majority of PWS trawl survey stations (Figure 248-1); the survey assesses Tanner crab in areas with concentrated Tanner crab abundance.

Bottom trawling can be a source of physical disturbance to the marine floor and benthic communities, removing some infaunal and epifaunal species (Kaiser and Spencer, 1996). Beam trawl contact with the seabed can also resuspend sediment into the water column (Depestele, J, et al., 2016). Research has speculated that the use of beam trawls could make long term changes to the benthic fauna. Anecdotally, trawl fishers have indicated that beam trawls could have less impact on the bottom of the ocean than otter trawls. The weight of the beam, which does not contact the bottom, may allow the foot rope on a beam trawl to be lighter than on an otter trawl,

although an otter trawl can also be modified to be fished pelagically with no bottom contact (Figures 254-2 and 254-3).

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal because of continued concerns regarding Tanner and king crab population status in PWS and the potential for increased crab bycatch mortality associated with this proposal.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

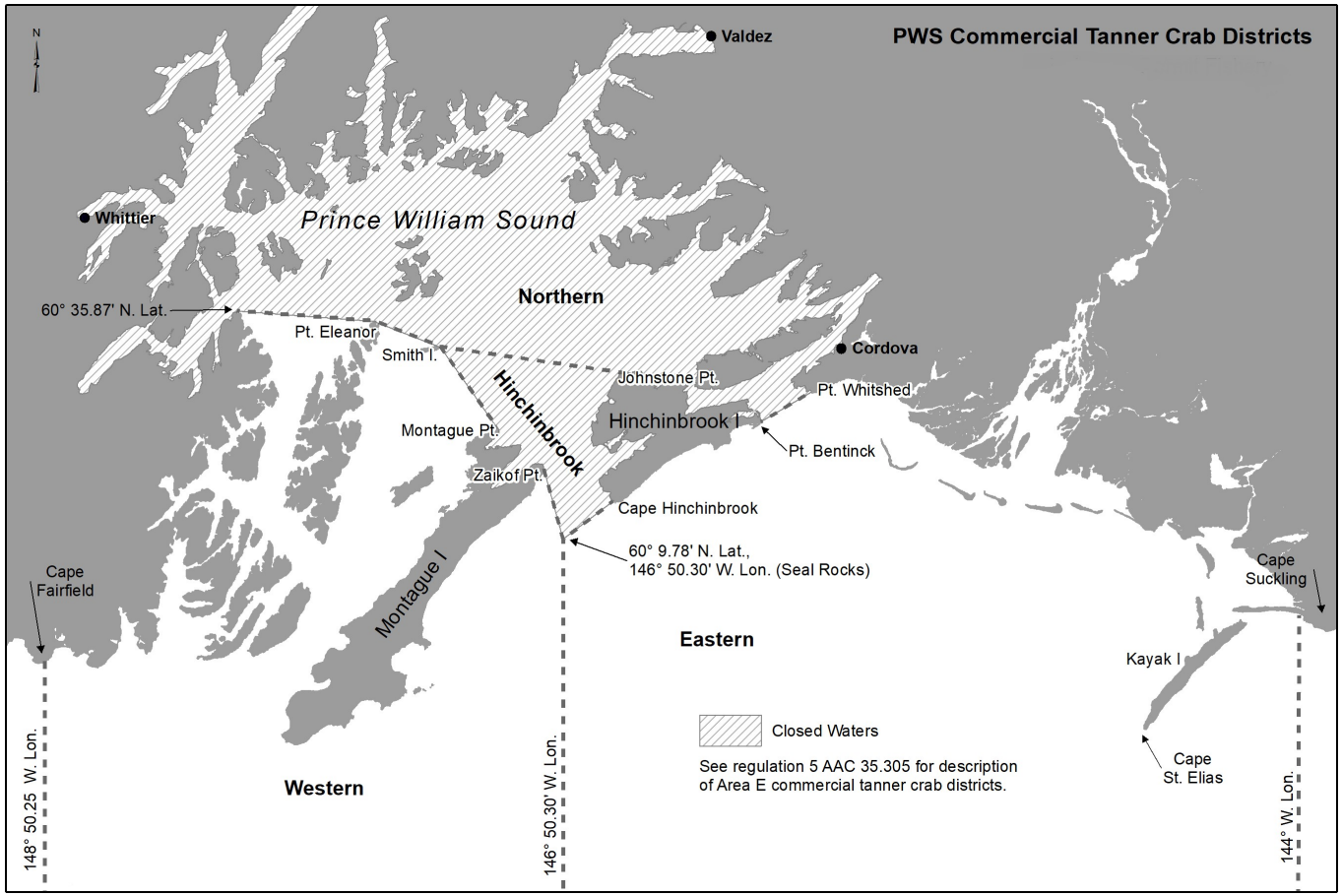

Figure 254-1.–Prince William Sound commercial Tanner crab districts.

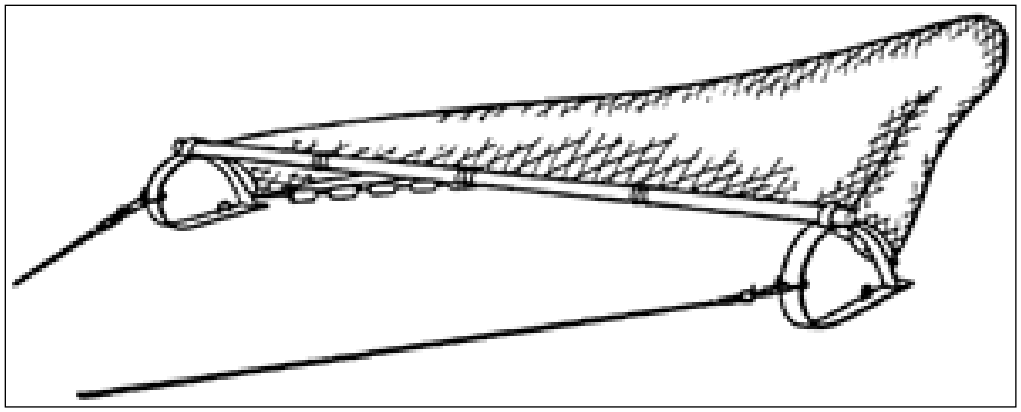

Figure 254-2.– Diagram of a beam trawl.

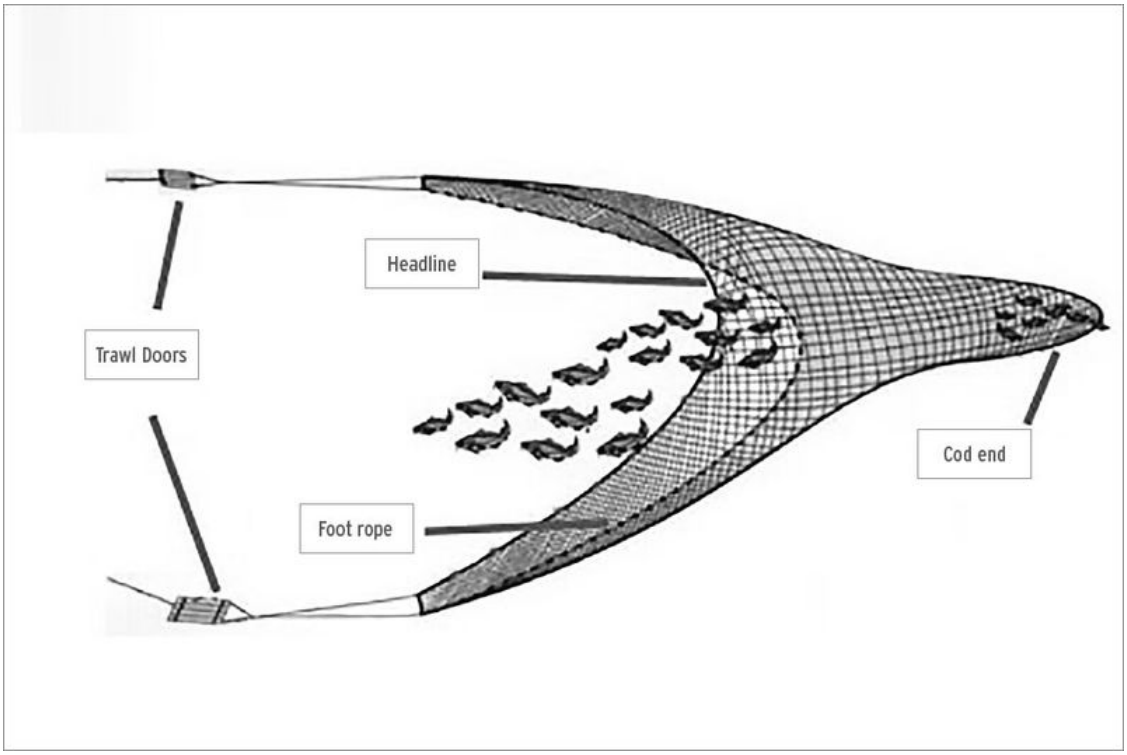

Figure 254-3.– Diagram of an otter trawl.

PROPOSAL 263 – 5 AAC 31.510. Fishing seasons for Registration Area J.; 5 AAC 31.525. Lawful gear for Registration Area J.; 5 AAC 31.540. Registration Area J inspection points.; 5 AAC 31.590. Kodiak District Pot Shrimp Fisheries Management Plan.; 5 AAC 31.592. Chignik District Pot Shrimp Fisheries Management Plan.; and 5 AAC 31.595. Reporting requirements for shrimp catcher-processor vessels.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Simplify or repeal most existing Registration Area J shrimp regulations and implement a new fishery strategy guided by a single June 1–February 28 season date for all districts, sections, and gear types and provide the department commissioner permit authority to establish annual fisheries based on best available science. Commissioner permit authority includes specifying annual harvest and vessel trip limits, fishing area, gear limits, reporting and biological sampling requirements, and other conditions necessary for conservation or management.

WHAT ARE THE CURRENT REGULATIONS? Registration Area J shrimp may be taken with pot or trawl gear. Trawl gear may be configured as beam or otter trawl and must be equipped with a finfish excluder device (FED; 5 AAC 31.525). Depending on district, section, and gear type, Registration Area J commercial shrimp seasons are either open year-round, only open from early summer (May–June) through February, or only open by emergency order. Pot gear shrimp management plans for the Kodiak and Chignik Districts outline guideline harvest ranges, season dates, logbook requirements, and gear storage for pot gear fisheries.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Provide the department flexibility to allow exploratory shrimp fishing opportunity in the absence of a regular shrimp stock assessment survey and provide access to a resource currently unavailable due to an outdated management structure. Total harvest levels are anticipated to remain relatively unchanged although some vessels may have improved access and flexibility. The department will also have added opportunity to develop the fishery through cooperative research or data gathering with fishery participants in the absence of dedicated survey funding.

BACKGROUND: Current Registration Area J commercial shrimp regulations reflect a period of high shrimp abundance that no longer exists, and fishery opening threshold requirements are, in part, based on an annual stock abundance survey that is no longer conducted.

Shrimp fisheries developed through the 1960s, peaked in the mid-1970s then declined rapidly. No commercial effort has occurred in the Chignik or South Peninsula District since the early 1980s and Kodiak District harvest has been generally low and sporadic (Table 263-1). Historically, most shrimp were harvested using otter trawls, although some pot gear effort occurred. Pink shrimp were the primary target and represented approximately 95% of historical catch.

Beginning in 1971, the department began conducting shrimp trawl surveys to assess shrimp abundance in the Kodiak, Chignik, and South Peninsula Districts. Survey abundance estimates were compared to section minimum abundance biomass estimates (MABIs) to determine if commercial openings were appropriate. The comprehensive survey was discontinued in 2015 due to lack of funding. Since 2015, the department has continued to survey a small subset of historically important survey stations allowing for some annual index monitoring of shrimp abundance. Recent survey results show shrimp abundance has been relatively stable since the fisheries collapsed in the 1980s. With sporadic survey availability and abundance estimates far below historical MABIs,

a new harvest strategy is needed to allow commercial shrimp fishing opportunity consistent with current stock status.

After collapse of the shrimp stock, low levels of effort and harvest have occurred in the Kodiak District during most years. Preferred gear shifted to beam trawl (96% of total shrimp harvest) followed by pot (3%), and otter trawl gear (1%; Table 263-1). Most harvest occurs in Shelikof Strait which is one of the few shrimp sections open annually under the current management plan. The department annually sets conservative GHLs targeting 1–3% of the most recent survey abundance estimates for pink and sidestripe shrimp in Shelikof Strait. Since 2000, annual harvest has been well below GHLs and the fishery remained open for the entire regulatory season. Sidestripe shrimp has recently accounted for a more significant portion Kodiak District shrimp harvest than it did historically. Most harvest is sold direct to consumers off the vessel.

The proposed commissioner permit authority would allow the department to expand the current management approach used in Shelikof Strait to other areas that are currently closed but support limited commercial removals (e.g., Marmot Bay). Consistent with Shelikof Strait, the department would establish conservative annual GHLs based on the most recent survey data, or small exploratory GHLs if no survey data are available. Areas with known high densities of crab or other commercially important species would remain closed due to bycatch concerns. The commissioner permit would require vessel operators to provide the department with fishing logbooks and catch samples. These data provide information on fishery performance, harvest location, and biological characteristics of the harvest, useful for informing management decisions in the absence of regular surveys.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost to the department.

Table 263-1.–Kodiak District commercial shrimp trawl gear effort, harvest in pounds, by year, 1958–2019/20.

Season	Number			Season	Number		
	Vessels	Landings	Pounds		Vessels	Landings	Pounds
1958	NA	NA	31,886	1983/84	14	63	2,779,030
1959	NA	NA	2,861,900	1984/85	13	59	2,942,922
1960	11	94	3,197,985	1985/86	6	26	1,145,980
1961	12	203	11,083,500	1986/87	2	10	455,468
1962	11	204	12,654,027	1987/88	1	2	CF
1963	NA	NA	10,118,472	1988/89–1992/93	No commercial fishing effort		
1964	6	NA	4,339,114	1993/94	3	3	1,704
1965	11	320	13,823,061	1994/95–1995/96	No commercial fishing effort		
1966	17	551	24,097,141	1996/97	1	1	CF
1967	23	NA	38,267,856	1997/98	1	1	CF
1968	16	NA	34,468,713	1998/99	5	8	12,724
1969	26	935	41,353,461	1999/00	3	4	4,325
1970	18	1,024	62,181,204	2000/01	1	5	CF
1971	49	1,746	82,153,724	2001/02	1	2	CF
1972	63	1,398	58,352,319	2002/03	1	10	CF
1973	50	1,283	70,511,477	2003/04	2	3	CF
1973/74	63	1,029	56,203,992	2004/05	No commercial fishing effort		
1974/75	75	1,100	58,235,982	2005/06	1	2	CF
1975/76	58	884	49,086,591	2006/07–2012/13	No commercial fishing effort		
1976/77	62	762	46,712,083	2013/14	1	13	CF
1977/78	58	653	26,409,366	2014/15	1	18	CF
1978/79	50	328	20,506,021	2015/16	1	4	CF
1979/80	37	242	12,863,536	2016/17	2	12	CF
1980/81	67	462	27,101,218	2017/18	No commercial fishing effort		
1981/82	55	298	19,112,367	2018/19	1	2	CF
1982/83	40	224	10,391,207	2019/20	1	9	CF

Note: CF = confidential data

COMMITTEE OF THE WHOLE—GROUP 3: COMMERCIAL SHELLFISH (16 proposals)

PROPOSAL 260 – 5 AAC 32.310. Fishing Seasons for Registration Area H; 5 AAC 32.325. Lawful Gear for Registration Area H; 5 AAC 32.306. Area H Registration; and 5 AAC 32.340. Registration Area H Inspection Points.

PROPOSED BY: Wes Humbyrd.

WHAT WOULD THE PROPOSAL DO? Establish a commercial Dungeness crab fishing season in the Cook Inlet Area (Registration Area H), modify lawful gear for Dungeness crab in the Southern District and establish lawful gear for Dungeness crab in the Cook Inlet Area to allow for a 50 pot limit (and 25 pots in Subdistrict 1), establish Registration Area H as an exclusive registration area for Dungeness crab, and modify Registration Area H inspection points.

WHAT ARE THE CURRENT REGULATIONS? There is no open fishing season for Dungeness crab in the Cook Inlet Area (32.310). Registration Area H has two subdistricts for Dungeness crab in the Southern District defined as Subdistricts 1 and 2 with the boundary inside Kachemak Bay (5 AAC 32.305). Registration Area H is a nonexclusive registration area (5 AAC 32.306). Inspection points for this fishery include Homer, Seldovia, and Seward and other locations that may be specified by the commissioner (5 AAC 32.340). Gear limit is 150 Dungeness crab pots per vessel and no more than 50 pots may be operated in Subdistrict 1 (5 AAC 32.325).

There is a positive customary and traditional use finding for shellfish in the Cook Inlet Area outside the Anchorage-Matsu-Kenai Nonsubsistence Area (5 AAC 02.311); however, Dungeness crab subsistence (5 AAC 02.315) fisheries are closed in the Cook Inlet Area. In addition, Dungeness crab sport fisheries are also closed (5 AAC 58.022 (c)(10)).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The department could open a Dungeness crab commercial fishery, allowing harvest by an unknown amount on the currently unassessed population of Dungeness crab in the Cook Inlet Area, with potential negative impacts on the stock as well as implications for the statutory subsistence priority.

BACKGROUND: Commercial and noncommercial Dungeness crab fishing in the Cook Inlet Area is closed. The commercial fishery in the Southern District was closed by EO beginning in 1991, although other districts remained open until 1996. The noncommercial fishery was closed in 1998. The commercial Dungeness crab fishery was developed in the Southern District during the late 1970s, driven by improved market opportunities caused by fluctuating catches in the Northwest Pacific. The highest annual harvest was 2.1 million lb in 1979 and the highest number of participants was 108 in 1982 (Table 260-1). Harvests were above 1.0 million lb from 1978 to 1981 but declined in 1990 to 29,502 lb in the Southern District, the last year of the fishery in that district. Although the fishery was closed in the Southern District in 1991, a limited entry program establishing 101 pot and two ring net permits was established in 1992. Participation was minimal from 1992 to 1996 with small amounts of crab landed from districts other than the Southern District; harvest and effort are confidential due to fewer than three participants.

The Dungeness crab fishery was developed before any abundance levels were determined by a fishery-independent survey. The department conducted annual (except 1999) pot surveys targeting Dungeness crab from 1990 to 2000. The survey area in Kachemak Bay covered east and west of the Homer spit. The survey was discontinued because of the dramatic decrease in survey catch and the closure of the fishery; the last year of the survey yielded nine total Dungeness crabs, one of them a legal male.

After discontinuing the pot survey, the Kachemak Bay trawl survey was used to monitor any recovery of Dungeness crab abundance. There has been no indication of recovery and Dungeness crab levels have remained low. No directed surveys are planned for the near future. More detailed research information about directed Dungeness crab surveys may be found in Trowbridge and Goldman (2006).

In 2008, Dungeness crab were reported as nontargeted catch in the noncommercial Tanner crab fishery in Kachemak Bay. This prompted the department to conduct a pot survey for Dungeness crab in 2009. The Dungeness pot survey was conducted from August 10 to August 13, 2009. In Mud Bay near the Homer boat harbor mouth, 90 pots were set in the historical survey area and 15 pots were set in the deep trench in Kachemak Bay. The catch in the historical survey area was 10 legal male, 55 sublegal males, and one female Dungeness crab. The 15 pots fished in the deep trench caught seven female and one sublegal male Dungeness crab. The pot survey indicated that the abundance of Dungeness crab in Kachemak Bay had not rebounded sufficiently to support a harvest (Rumble et al. 2016).

No targeted surveys have been conducted since 2008, but large-mesh trawl surveys have noted minimal Dungeness crab in their catch.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The department does not believe a harvestable surplus of Dungeness crab exists in Cook Inlet and is concerned with opening a Dungeness crab commercial fishery without assurance that a harvestable surplus is available. Currently, the department does not have a Dungeness crab assessment program, which would be needed to supply evidence of a harvestable surplus. The department would have expected to see an increase of Dungeness crab in the Kachemak Bay trawl survey if there was an increase in Dungeness crab abundance. In addition, subsistence, personal use, and sport fisheries for Dungeness crab in Cook Inlet have been closed since 1998 and the board should consider reopening the subsistence fishery prior to reopening the commercial fishery.

COST ANALYSIS: Approval of this proposal would result in an additional direct cost for a private person to participate in a Dungeness crab fishery in Cook Inlet, for gear, and for operating a vessel in the fishery. Approval of this proposal will result in additional costs to the department if a fishery occurs, including those costs associated with management of the fishery, sampling the harvest, and sending department observers aboard participating vessels.

Table 260-1.–Commercial Dungeness crab harvest and effort in Cook Inlet Management Area, 1961–2020.

Year	Vessels	Landings	Harvest (lb)
1961	12	189	193,683
1962	15	269	530,770
1963	50	1,360	1,677,204
1964	22	341	423,041
1965	14	105	74,211
1966	5	28	129,560
1967	2	13	7,168
1968	7	224	487,859
1969	9	41	49,894
1970	10	50	209,819
1971	22	136	97,161
1972	24	206	38,930
1973	54	625	310,048
1974	38	619	721,243
1975	34	402	362,815
1976	19	123	119,298
1977	18	94	74,705
1978	49	668	1,215,779
1979	72	1,485	2,130,963
1980	54	1,183	1,875,281
1981	88	2,047	1,850,977
1982	108	2,310	818,885
1983	71	1,194	747,419
1984	102	1,687	800,208
1985	106	1,768	1,402,402
1986	83	1,069	563,862
1987	100	1,377	793,176
1988	84	1,305	719,275
1989	43	455	178,064
1990	23	112	29,502
1991	0	0	0
1992	[a]		[a]
1993	[a]		[a]
1994	[a]		[a]
1995	[a]		[a]
1996	[a]		[a]
1997–2020	Closed by regulation		

[a] Confidential data.

PROPOSAL 261 – 5 AAC 32.050. Lawful gear for Dungeness crab.

PROPOSED BY: Tyler McKinney.

WHAT WOULD THE PROPOSAL DO? This would allow commercial Dungeness crab pots to be configured with a 'pop-up on demand or ropeless' buoy arrangement whereby rope and buoy are affixed to submerged crab pots and released after a code is received from a transmitter. This is essentially a new gear type – submerged pot gear.

WHAT ARE THE CURRENT REGULATIONS? Each Dungeness crab pot or ring net must have at least one buoy attached. The buoy must be legibly marked with the permanent ADF&G number of the vessel operating the gear. In Southeast Alaska, where a pot limit is in effect for the Dungeness crab fishery, each Dungeness crab pot must have a tag issued by the department attached to the main buoy or to the trailer buoy if more than one buoy is attached to the pot. In addition, Dungeness crab pots must be configured with rings allowing sublegal crab to escape and biodegradable twine that reduces ghost fishing effects of lost pots.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Use of pop-up on demand buoys in the Dungeness crab fishery will make it difficult for individuals to know where commercial Dungeness crab pot gear is set unless they have obtained software that allows gear owners to share location of gear. This could lead to conflicts between commercial and non-commercial Dungeness crab fishers as well as between commercial Dungeness crab fishers and participants in other commercial fisheries such as the salmon purse seine and drift gillnet fisheries. These conflicts could result in increased gear loss and damage. In Southeast Alaska, the department documents location of Dungeness crab pot gear through aerial survey, and this would be hindered by the use of pop-up on demand gear. Enforcement efforts would be made more difficult because concentrations of gear would not be readily apparent to Alaska Wildlife Troopers, and additional time would be needed to trigger release of buoys and for repacking the pop-up mechanism when gear is returned to the water after enforcement inspection. This may reduce compliance with gear marking and pot limit regulations. Fishermen would not know if they were setting a pot on top of another fisherman's pots, which could lead to the pop-up mechanism to fail resulting in increased gear loss and entanglement.

BACKGROUND: Floating buoys attached to Dungeness crab pots provide not only a convenient means for individuals to set and retrieve pot gear, they also provide a highly visible record of who owns the gear, location of gear concentrations, and are a means to display tags used for compliance with pot limits in areas where pot limits are in effect. Visible buoys are important indicators for enforcement and management staff, other crab harvesters, and other fishers that use bottom tending gear or gear that may touch bottom in shallow, near-shore waters where the commercial Dungeness crab fishery takes place.

In waters of Alaska, commercial Dungeness crab pot gear has not been documented as a source of whale entanglement as it is off the Washington, Oregon, and California coast.

The department seeks to minimize gear loss in the Dungeness crab fishery and believes the best way to do that is through requirements that pot gear be operated at regular intervals and not be left unattended for exceptionally long periods of time.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The Alaska commercial Dungeness crab fishery is not plagued by pervasive gear theft, loss, or whale entanglement issues that occur in other jurisdictions where pop-up on demand buoy arrangements

are authorized. Before allowing use of this new gear type in Alaska, testing should take place under conditions encountered in the Alaska fishery to ensure the technology works, and a working group comprised of managers, enforcement personnel, and fishery participations should meet to discuss whether this gear type is appropriate for use in Alaskan fisheries, which is the approach that has been taken in other jurisdictions.

COST ANALYSIS: Use of this gear type would require purchase of receiver and release mechanisms for each crab pot as well as an acoustic transmitter for each vessel participating in the fishery. Alaska Wildlife Troopers and the department would also need to configure each vessel involved in monitoring the Dungeness crab fishery with an acoustic transmitter. The deck box acoustic transmitter costs between $4,000 and $8,000 each, and acoustic releases are $810 each with one being required per pot.

PROPOSAL 264 – 5 AAC 32.415. Operation of pot gear for Registration Area J.

PROPOSED BY: Randy Blondin.

WHAT WOULD THE PROPOSAL DO? Increase time vessel operators can leave baited gear unattended from 14 to 30 days during Registration Area J commercial Dungeness crab fisheries.

WHAT ARE THE CURRENT REGULATIONS? Vessel operators actively participating in Registration Area J commercial Dungeness crab fisheries are required to lift their pots at least once every 14 days or remove all bait and bait containers and secure doors fully open. All commercial Dungeness crab pots must include a biodegradable escape mechanism as described in 5 AAC 39.145.

Registration Area J commercial Dungeness crab fisheries are open access fisheries. There are no vessel length restrictions or pot gear limits. Fisheries are managed by regulating sex, size, and season ("3-S" management). Only male crab with a 6.5-inch carapace width or greater may be retained during the open season. In the Chignik, Alaska Peninsula, and Aleutian Districts, as well as the northern portion of the Kodiak District, the commercial Dungeness crab season is open from May 1 through October 31. The southern portion of the Kodiak District is open from June 15 through October 31. The North Peninsula District is open from May 1 through October 18.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Increasing the amount of time vessel operators can leave baited gear unattended on the fishing grounds may provide vessel operators added flexibility to plan fishing operations around weather, delivery schedules, and participation in other fisheries. Leaving gear untended in the water longer also increases risk of gear loss, gear conflict, and ghost fishing mortality.

BACKGROUND: In response to increased reports of abandoned commercial Dungeness crab pots, and concerns about associated ghost fishing mortality on commercially important crab species, the department submitted Proposal 209 for the March 2018 Miscellaneous Shellfish meeting. The proposal was adopted and requires commercial Dungeness crab pots in the Kodiak, Chignik, Alaska Peninsula, and Aleutian Islands Districts (Registration Area J) be removed from the water at least once every 14 days or require removal of all bait and bait containers removed and open doors. The department proposed a 14-day time period because it mirrored a similar subsistence fishery king crab gear tending provision already in regulation for Registration Area J (5 AAC 02.420(a)(2)). Gear tending provisions are not in regulation for recreational or subsistence Dungeness crab fisheries given the low levels of permissible gear (5 pots per person, maximum of 10 pots per vessel).

Regional Dungeness crab fisheries are generally characterized by low effort, high volumes of gear, and long soak times. Vessel operators frequently register large compliments of gear. From 2012 to 2021, the total number of pots registered for the Kodiak District fishery ranged from 2,160 to 17,720 pots, with an average of 7,170 pots per year or 635 pots per vessel per year (Table 264-1). In the Alaska Peninsula District, 1,600 to 12,240 pots were registered for the fishery with an average total of 3,700 pots per year (507 pots per vessel per year; Table 264-2). Dungeness crab fishing effort in Chignik, North Peninsula, and Aleutian Districts is sporadic, and most harvest data are confidential. Most fishery participants also participate in other commercial salmon or groundfish/halibut fisheries during open Dungeness crab fishing seasons.

Requiring vessel operators to regularly tend their gear or leave pots open and unbaited is intended to reduce gear loss, ghost fishing mortality, and gear conflicts. Pots that are not regularly lifted and

maintained have a greater likelihood of becoming lost. Pot loss is typically associated with gear conflicts and environmental conditions. Gear conflicts occur when more than one fishery is prosecuted in the same area during the same time resulting in pots being dragged out of the area or buoy lines purposefully or accidentally severed. Environmental conditions include storms and waves that bury pots in sediment as well as buoys/buoy lines that break, entangle, or sink due to extensive algal growth. Unattended pots with long soak periods are more likely to be lost. Although all pots must be equipped with biodegradable escape mechanisms, these mechanisms often only perform as intended when pots are well maintained and have lids that spring open when the escape mechanism (generally cotton twine) releases. Further, biodegradable escape mechanisms are designed to release after 30 days, at which point the pot is functionally derelict. Gear tending regulations are designed to prevent derelict gear. Aligning the proposed 30-day gear tending regulation with the already established 30-day escape mechanism regulation serves a limited purpose.

From 2012 to 2021, participation in the Kodiak District fishery ranged from 3 to 29 vessels with an average of 11 vessels annually. Average CPUE was 4 legal crab retained per pot lift (Table 264-1). From 2012 to 2021, participation in the Alaska Peninsula District fishery ranged from 2 to 26 vessels with an average of 7 vessels annually. Average CPUE was 7 legal crab retained per pot lift (Table 264-2). In recent years, both Kodiak and Alaska Peninsula Districts saw substantial increases in Dungeness effort and harvest largely in response to strong harvests observed in 2019 and 2020 and below average returns or closures of other regionally important commercial fisheries.

From 2016 to 2020, 69% of the Kodiak District Dungeness crab harvest was taken from 3 statistical areas, Trinity Islands (545601), Alitak Bay (545632), and Ugak Bay (525701), and 57% of Alaska Peninsula District Dungeness crab harvest was taken from 3 statistical areas, Pavlof and Volcano Bays (615508), Beaver Bay (605506) and Balboa Bay (605533), resulting in highly localized fishing effort and dense aggregations of gear (Tables 264-3 and 264-4). Although there are no estimates of Dungeness crab gear loss rates specific to Registration Area J, gear loss estimates from other west coast and Alaska Dungeness crab fisheries range from 3 to 23%. Applying these estimates to the 10-year average number of annually registered pots indicates up to 1,650 pots in the Kodiak District and 850 pots in the Alaska Peninsula District could be lost each year. Lost or irretrievable pots are known to increase Dungeness, Tanner, and king crab mortality through ghost fishing, particularly when pots are concentrated in a small area.

Studies from SE Alaska, British Columbia, and Puget Sound estimate Dungeness crab ghost-fishing mortality due to lost pots at 2–7% of the annual Dungeness crab harvest. Applying these estimates to the 10-year average harvest for the Kodiak District (295,000 crab) equates to an estimated annual ghost-fishing mortality of 5,900–20,650 Dungeness crab. A study in Women's Bay near the City of Kodiak published in 2014 additionally estimated 16–37% of smaller sized red king crab (60mm) present in the study area were killed annually due to ghost fishing during the study period (1991–2008).

Prior to adoption of the 14-day gear tending regulation in 2018, the department received and confirmed reports of vessels deploying baited Dungeness crab gear in the Kodiak District then leaving the district entirely to participate in other fisheries. Following closure of the 2017 season, Alaska Wildlife Troopers (AWT) removed 170 derelict commercial Dungeness crab pots from a small portion of the Kodiak District in a 1-week period. Observations from AWT indicate many of the recovered pots contained crab or were in fishing condition despite signs the gear had been in the water for long periods of time. Due to the large volume of gear being deployed annually, the

issue of lost Dungeness crab gear is most acute in the Kodiak District and in the Alaska Peninsula District during more recent years. The extent of untended gear in other Registration Area J districts is largely unknown but the potential exists for high gear loss and ghost fishing mortality.

Some fishery participants have communicated that the current 14-day gear tending period is too restrictive and disrupts historical fishing practices. Since this regulation was adopted in 2018, subsequent ACR and emergency petition requests were submitted and denied although department staff remain committed to balancing conservation and industry needs. This proposal is first time this issue will be addressed in-cycle since the regulation was first adopted.

DEPARTMENT COMMENTS: Gear tending regulations aimed at reducing Dungeness crab gear loss continue to be warranted. However, the department recognizes the complexity of individual commercial fishing operations and **SUPPORTS** a compromise of amending the regulation from 14 to 21 days to allow vessel operators additional flexibility. Studies examining the effects of confinement/starvation on crab show that mortality is directly related to duration of confinement/starvation and that delayed mortality occurs even after crab are released and allowed to resume feeding. While increased mortality has been observed in as little as 14 days, the department believes that allowing vessel operators 21 days to lift their pots is not likely to substantially increase crab mortality overall.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

Table 264-1.–Kodiak District commercial Dungeness crab effort, harvest in pounds, CPUE, and exvessel value, by year, 2012–2021.

			Number			Avg.	Exvessel
Year	Vessels	Pots/vessel	Pots[a]	Pot lifts	Pounds	CPUE[b]	value
2012	7	703	4,922	27,061	97,000	2	$ 257,051
2013	3	720	2,160	19,597	69,001	2	$ 184,923
2014	6	664	3,985	35,960	223,773	3	$ 660,130
2015	7	664	4,650	35,041	193,223	3	$ 579,666
2016	8	636	5,087	46,466	273,617	3	$ 872,838
2017	5	740	3,700	28,296	183,769	3	$ 496,176
2018	7	667	4,670	52,258	647,396	6	$ 2,019,876
2019	16	480	7,685	76,807	1,511,864	9	$ 4,157,626
2020	29	591	17,125	198,603	2,786,897	6	$ 5,115,759
2021	25	682	17,720	204,362	1,987,304	5	$ 8,446,042
Average	11	635	7,170	72,445	797,384	4	$ 2,279,009

[a] Number of pots registered by vessels that made landings.

[b] Catch per unit effort (number of legal crab retained per pot lift).

Table 264-2.–Alaska Peninsula District commercial Dungeness crab effort, harvest in pounds, CPUE, and exvessel value, by year, 2012–2021.

			Number			Avg.	Exvessel
Year	Vessels	Pots/vessel	Pots[a]	Pot lifts	Pounds	CPUE[b]	value
2012	5	779	3,895	18,405	126,630	3	$284,918
2013	3	868	2,605	6,947	75,679	5	$182,386
2014	3	533	1,600	10,936	76,813	4	$207,395
2015	4	600	2,400	6,175	98,373	8	$285,282
2016	4	505	2,018	10,241	118,107	5	$354,321
2017	2	940	1,880		Confidential		
2018	4	481	1,923	18,509	440,576	12	$1,321,728
2019	6	500	3,000	25,891	450,712	9	$1,194,387
2020	16	340	5,435	63,662	1,411,947	11	$2,470,907
2021	26	471	12,240	109,639	1,753,320	8	$6,837,948
Average[c]	7	507	3,700	30,045	505,795	7	$1,459,919

Notes: Data are confidential when fewer than 3 vessels participated.

[a] Number of pots registered by vessels that made landings.

[b] Catch per unit effort (number of legal crab retained per pot lift).

[c] 2012–2021, excluding 2017 confidential harvest.

Table 264-3.–Kodiak District average commercial Dungeness crab harvest in pounds, by statistical area, 2016–2020.

Statistical Area	Pounds[a]	Percent of harvest
545601	410,041	38.0%
545632	220,244	20.4%
525701	111,830	10.4%
545602	78,689	7.3%
535635	49,277	4.6%
535633	34,020	3.2%
535705	28,686	2.7%
535703	26,626	2.5%
535706	25,532	2.4%
535707	24,575	2.3%
525703	15,938	1.5%
535701	13,194	1.2%
535702	12,422	1.2%
535631	11,411	1.1%
Other[b]	15,755	1.5%
Total	1,078,239	100%

[a] 5-year average harvest, 2016–2020.

[b] 14 statistical areas combined, each with <1% of total harvest.

Table 264-4.–Alaska Peninsula District average commercial Dungeness crab harvest in pounds, by statistical area, 2016–2020.

Statistical Area	Pounds[a]	Percent of harvest
615508	128,622	26.0%
605506	87,839	17.7%
605533	64,800	13.1%
635502	42,651	8.6%
625502	41,295	8.3%
625501	33,859	6.8%
595533	30,044	6.1%
615531	28,328	5.7%
605532	11,649	2.4%
605531	9,667	2.0%
605503	5,151	1.0%
Other[b]	11,717	2.4%
Total	495,621	100%

[a] 5-year average harvest, 2016–2020.

[b] 11 statistical areas combined, each with <1% of total harvest.

PROPOSAL 265 – 5 AAC 32.415. Operation of pot gear for Registration Area J.

PROPOSED BY: Jim Smith.

WHAT WOULD THE PROPOSAL DO? Remove gear tending requirements for vessel operators actively participating in Registration Area J commercial Dungeness crab fisheries.

WHAT ARE THE CURRENT REGULATIONS? Vessel operators actively participating in Registration Area J commercial Dungeness crab fisheries are required to lift their pots at least once every 14 days or remove all bait and bait containers and secure doors fully open. All commercial Dungeness crab pots must include a biodegradable escape mechanism as described in 5 AAC 39.145.

Registration Area J commercial Dungeness crab fisheries are open access fisheries. There are no vessel length restrictions or pot gear limits. Fisheries are managed by regulating sex, size, and season ("3-S" management). Only male crab with a 6.5-inch carapace width or greater may be retained during the open season. In the Chignik, Alaska Peninsula, and Aleutian Districts, as well as the northern portion of the Kodiak District, the commercial Dungeness crab season is open from May 1 through October 31. The southern portion of the Kodiak District is open from June 15 through October 31. The North Peninsula District is open from May 1 through October 18.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Increasing the amount of time vessel operators can leave baited gear unattended on the fishing grounds may provide vessel operators added flexibility to plan fishing operations around weather, delivery schedules, and participation in other fisheries. Leaving gear untended in the water longer also increases risk of gear loss, gear conflict, and ghost fishing mortality.

BACKGROUND: In response to increased reports of abandoned commercial Dungeness crab pots, and concerns about associated ghost fishing mortality on commercially important crab species, the department submitted Proposal 209 for the March 2018 Miscellaneous Shellfish meeting. The proposal was adopted and requires commercial Dungeness crab pots in the Kodiak, Chignik, Alaska Peninsula, and Aleutian Islands Districts (Registration Area J) be removed from the water at least once every 14 days or require removal of all bait and bait containers removed and open doors. The department proposed a 14-day time period because it mirrored a similar subsistence fishery crab gear tending provision already in regulation for Registration Area J (5 AAC 02.420(a)(2)). Gear tending provisions are not in regulation for recreational or subsistence Dungeness crab fisheries given the low levels of permissible gear (5 pots per person, maximum of 10 pots per vessel).

Regional Dungeness crab fisheries are generally characterized by low effort, high volumes of gear, and long soak times. Vessel operators frequently register large compliments of gear. From 2012 to 2021, the total number of pots registered for the Kodiak District fishery ranged from 2,160 to 17,720 pots, with an average of 7,170 pots per year or 635 pots per vessel per year (Table 264-1). In the Alaska Peninsula District, 1,600 to 12,240 pots were registered for the fishery with an average total of 3,700 pots per year (507 pots per vessel per year; Table 264-2). Dungeness crab fishing effort in Chignik, North Peninsula, and Aleutian Districts is sporadic, and most harvest data are confidential. Most fishery participants also participate in other commercial salmon or groundfish/halibut fisheries during open Dungeness crab fishing seasons.

Requiring vessel operators to regularly tend their gear or leave pots open and unbaited is intended to reduce gear loss, ghost fishing mortality, and gear conflicts. Pots that are not regularly lifted and

maintained have a greater likelihood of becoming lost. Pot loss is typically associated with gear conflicts and environmental conditions. Gear conflicts occur when more than one fishery is prosecuted in the same area during the same time resulting in pots being dragged out of the area or buoy lines purposefully or accidentally severed. Environmental conditions include storms and waves that bury pots in sediment as well as buoys/buoy lines that break, entangle, or sink due to extensive algal growth. Unattended pots with long soak periods are more likely to be lost. Although all pots must be equipped with biodegradable escape mechanisms, these mechanisms often only perform as intended when pots are well maintained and have lids that spring open when the escape mechanism (generally cotton twine) releases. Further, biodegradable escape mechanisms are designed to release after 30 days, at which point the pot is functionally derelict. Gear tending regulations are designed to prevent derelict gear. Aligning the proposed 30-day gear tending regulation with the already established 30-day escape mechanism regulation serves limited purpose.

From 2012 to 2021, participation in the Kodiak District fishery ranged from 3 to 29 vessels with an average of 11 vessels annually. Average CPUE was 4 legal crab retained per pot lift (Table 264-1). From 2012 to 2021, participation in the Alaska Peninsula District fishery ranged from 2 to 26 vessels with an average of 7 vessels annually. Average CPUE was 7 legal crab retained per pot lift (Table 264-2). In recent years, both Kodiak and Alaska Peninsula Districts saw substantial increases in Dungeness effort and harvest largely in response to strong harvests observed in 2019 and 2020 and below average returns or closures of other regionally important commercial fisheries.

From 2016 to 2020, 69% of the Kodiak District Dungeness crab harvest was taken from 3 statistical areas, Trinity Islands (545601), Alitak Bay (545632), and Ugak Bay (525701), and 57% of Alaska Peninsula District Dungeness crab harvest was taken from 3 statistical areas, Pavlof and Volcano Bays (615508), Beaver Bay (605506) and Balboa Bay (605533), resulting in highly localized fishing effort and dense aggregations of gear (Tables 265-3 and 265-4). Although there are no estimates of Dungeness crab gear loss rates specific to Registration Area J, gear loss estimates from other west coast and Alaska Dungeness crab fisheries range from 3 to 23%. Applying these estimates to the 10-year average number of annually registered pots indicates up to 1,430 pots in the Kodiak District and 630 pots in the Alaska Peninsula District could be lost each year. Lost or irretrievable pots are known to increase Dungeness, Tanner, and king crab mortality through ghost fishing, particularly when pots are concentrated in a small area.

Studies from SE Alaska, British Columbia, and Puget Sound estimate Dungeness crab ghost-fishing mortality due to lost pots at 2–7% of the annual Dungeness crab harvest. Applying these estimates to the 10-year average harvest for the Kodiak District (295,000 crab) equates to an estimated annual ghost-fishing mortality of 5,900–20,650 Dungeness crab. A study in Women's Bay near the City of Kodiak published in 2014 additionally estimated 16–37% of smaller sized red king crab (60mm) present in the study area were killed annually due to ghost fishing during the study period (1991–2008).

Prior to adoption of the 14-day gear tending regulation in 2018, the department received and confirmed reports of vessels deploying baited Dungeness crab gear in the Kodiak District then leaving the district entirely to participate in other fisheries. Following closure of the 2017 season, Alaska Wildlife Troopers (AWT) removed 170 derelict commercial Dungeness crab pots from a small portion of the Kodiak District in a 1-week period. Observations from AWT indicate many of the recovered pots contained crab or were in fishing condition despite signs the gear had been in the water for long periods of time. Due to the large volume of gear being deployed annually, the

issue of lost Dungeness crab gear is most acute in the Kodiak District and in the Alaska Peninsula District during more recent years. The extent of untended gear in other Registration Area J districts is largely unknown but the potential exists for high gear loss and ghost fishing mortality.

Some fishery participants have communicated that the current 14-day gear tending period is too restrictive and disrupts historical fishing practices. Since this regulation was adopted in 2018 subsequent ACR and emergency petition requests were submitted and denied although department staff remain committed to balancing conservation and industry needs. This proposal is first time this issue will be addressed in-cycle since the regulation was first adopted.

DEPARTMENT COMMENTS: The department is **OPPOSED** to this proposal but **SUPPORTS** a compromise of amending the regulation from 14 to 21 days to allow vessel operators additional flexibility. Studies examining the effects of confinement/starvation on crab show that mortality is directly related to duration of confinement/starvation and that delayed mortality occurs even after crab are released and allowed to resume feeding. While increased mortality has been observed in as little as 14 days, the department believes that allowing vessel operators 21 days to lift their pots is not likely to substantially increase crab mortality overall.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

Table 265-1.–Kodiak District commercial Dungeness crab effort, harvest in pounds, CPUE, and exvessel value, by year, 2012–2021.

			Number			Avg.	Exvessel
Year	Vessels	Pots/vessel	Pots[a]	Pot lifts	Pounds	CPUE[b]	value
2012	7	703	4,922	27,061	97,000	2	$ 257,051
2013	3	720	2,160	19,597	69,001	2	$ 184,923
2014	6	664	3,985	35,960	223,773	3	$ 660,130
2015	7	664	4,650	35,041	193,223	3	$ 579,666
2016	8	636	5,087	46,466	273,617	3	$ 872,838
2017	5	740	3,700	28,296	183,769	3	$ 496,176
2018	7	667	4,670	52,258	647,396	6	$ 2,019,876
2019	16	480	7,685	76,807	1,511,864	9	$ 4,157,626
2020	29	591	17,125	198,603	2,786,897	6	$ 5,115,759
2021	25	682	17,720	204,362	1,987,304	5	$ 8,446,042
Average	11	635	7,170	72,445	797,384	4	$ 2,279,009

[a] Number of pots registered by vessels that made landings.

[b] Catch per unit effort (number of legal crab retained per pot lift).

Table 265-2.–Alaska Peninsula District commercial Dungeness crab effort, harvest in pounds, CPUE, and exvessel value, by year, 2012–2021.

			Number			Avg.	Exvessel
Year	Vessels	Pots/vessel	Pots[a]	Pot lifts	Pounds	CPUE[b]	value
2012	5	779	3,895	18,405	126,630	3	$284,918
2013	3	868	2,605	6,947	75,679	5	$182,386
2014	3	533	1,600	10,936	76,813	4	$207,395
2015	4	600	2,400	6,175	98,373	8	$285,282
2016	4	505	2,018	10,241	118,107	5	$354,321
2017	2	940	1,880		Confidential		
2018	4	481	1,923	18,509	440,576	12	$1,321,728
2019	6	500	3,000	25,891	450,712	9	$1,194,387
2020	16	340	5,435	63,662	1,411,947	11	$2,470,907
2021	26	471	12,240	109,639	1,753,320	8	$6,837,948
Average[c]	7	507	3,700	30,045	505,795	7	$1,459,919

Notes: Data are confidential when fewer than 3 vessels participated.

[a] Number of pots registered by vessels that made landings.

[b] Catch per unit effort (number of legal crab retained per pot lift).

[c] 2012–2021, excluding 2017 confidential harvest.

Table 265-3.–Kodiak District average commercial Dungeness crab harvest in pounds, by statistical area, 2016–2020.

Statistical Area	Pounds[a]	Percent of harvest
545601	410,041	38.0%
545632	220,244	20.4%
525701	111,830	10.4%
545602	78,689	7.3%
535635	49,277	4.6%
535633	34,020	3.2%
535705	28,686	2.7%
535703	26,626	2.5%
535706	25,532	2.4%
535707	24,575	2.3%
525703	15,938	1.5%
535701	13,194	1.2%
535702	12,422	1.2%
535631	11,411	1.1%
Other[b]	15,755	1.5%
Total	1,078,239	100%

[a] 5-year average harvest, 2016–2020.

[b] 14 statistical areas combined, each with <1% of total harvest.

Table 265-4.–Alaska Peninsula District average commercial Dungeness crab harvest in pounds, by statistical area, 2016–2020.

Statistical Area	Pounds[a]	Percent of harvest
615508	128,622	26.0%
605506	87,839	17.7%
605533	64,800	13.1%
635502	42,651	8.6%
625502	41,295	8.3%
625501	33,859	6.8%
595533	30,044	6.1%
615531	28,328	5.7%
605532	11,649	2.4%
605531	9,667	2.0%
605503	5,151	1.0%
Other[b]	11,717	2.4%
Total	495,621	100%

[a] 5-year average harvest, 2016–2020.

[b] 11 statistical areas combined, each with <1% of total harvest.

PROPOSAL 266 – 5 AAC 32.425. Lawful gear for Registration Area J.

PROPOSED BY: Old Harbor Fisheries Committee/Duncan Fields.

WHAT WOULD THE PROPOSAL DO? Implement an Area J commercial Dungeness crab fishery pot limit based on vessel size, not to exceed a maximum of 750 pots per vessel. It is unclear in the proposal but a pot limit for vessels equal to or less than 50 feet in length could be as low as 300 pots per vessel and a pot limit for vessels greater than 50 feet in length could be as low as 500 pots per vessel. This proposal would also restrict concurrent participation in Area J Dungeness crab and other commercial fisheries by either prohibiting simultaneous operation of Dungeness crab and salmon gear or requiring vessels to wait 7–14 days between deliveries when targeting Dungeness crab and any other commercial species.

The department interprets the author's intent is to limit these regulations only to the Kodiak District of Registration Area J, as opposed to all of Area J.

WHAT ARE THE CURRENT REGULATIONS? Registration Area J extends from Kodiak Island to the US/Russia Maritime Boundary and is comprised of five districts: Kodiak, Chignik, Alaska Peninsula, North Peninsula, and Aleutian Districts. All Registration Area J commercial Dungeness crab fisheries are open access fisheries. There are no vessel size limits or limits on the amount of pot gear that can be operated by a vessel. Simultaneous participation in a commercial Dungeness crab fishery and any other fishery using pot gear is prohibited. Vessels are not restricted from participating in a commercial Dungeness crab fishery and any other non-pot gear fishery at the same time (e.g., salmon seine or gillnet gear or halibut longline fisheries), although in some instances vessels may not have both species onboard at the same time.

There is no stock assessment or stock status data available for Area J Dungeness crab and preseason harvest limits are not established. Area J Dungeness crab fisheries are managed by regulating size, sex, and season ("3-S" management). Only male crab with a 6.5-in carapace width or greater may be retained during the open season. In the northern portion of the Kodiak District, the season is open from May 1 through October 31 while the southern portion of the Kodiak District is open from June 15 through October 31. Vessel operators actively participating in Registration Area J commercial Dungeness crab fisheries are required to lift their pots at least once every 14 days or remove all bait and bait containers and secure doors fully open.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Given the range of options presented in this proposal, potential effects are varied and difficult to predict.

A pot limit would not likely impact day to day operations of vessels that operate relatively small amounts of gear (< 750 pots). A pot limit for existing high capacity vessels (> 750 pots) would likely reduce their overall footprint in the fishery and limit their ability to maintain historical fishing intensity, catch, and spatial distribution of gear. Due to long soak times and low crab CPUEs associated with this fishery, catch rates by high-capacity vessels would likely decrease because pulling fewer pots more often to maintain historical catch would not likely yield that result. Conversely, less gear and competition from higher capacity vessels overall may improve catch rates for smaller vessels.

A pot limit may additionally disincentivize future entry into the fishery by new high capacity vessels which may benefit all existing users. Alternatively, some existing vessels may opt out of Kodiak District fishery and transition to an adjacent district (Chignik or Alaska Peninsula) without gear limits and increase competition in those fisheries.

Prohibiting operation of salmon and Dungeness gear concurrently would require vessels that have historically fished both fisheries to opt out of one when both seasons are open concurrently. A new regulation requiring a minimum 7- to 14-day period between Dungeness crab and any other commercially landing (e.g., salmon, halibut, sablefish, Pacific cod, etc.) would reduce a vessel operator's ability to participate in, and transition between, different fisheries. Net effects of these regulations are likely unique to individual fishing operations and will change over time given the size and value of fisheries vary year to year.

Requiring a minimum 7- to 14-day period between landings would also make it more difficult for Dungeness vessel operators to comply with the existing gear tending regulation that requires vessels to lift pots at least once every 14 days.

BACKGROUND: The Kodiak Dungeness crab fishery is generally characterized by low effort, high volumes of gear, and long soak times. Dungeness crab abundance is cyclical and generally follows a trend where abundance peaks every 8–10 years followed by steep declines. Thus, annual catch and effort largely reflects abundance patterns of the stock (Table 266-1).

Kodiak Dungeness crab vessel operators commonly register large compliments of gear and participate in other commercial fisheries while the Dungeness crab season is open. From 2012 to 2021, the total number of pots registered for the fishery ranged from 2,160 to 17,720 pots and averaged 7,170 pots year (635 pots per vessel per year; Table 266-1). On average, 38% of all participating vessels registered more than 750 pots (Tables 266-1 and 266-2). Under the proposed 750-pot limit, the amount of gear those vessels could legally operate would have been reduced by an average of 21% annually (Table 266-2).

From 2011 to 2020, on average, 61% of the total Dungeness crab harvest occurred during the peak of the Kodiak salmon season (June–August; Figure 266-1). From 2011 to 2020, 68% of Kodiak Dungeness crab vessels also participated in at least one other fishery during the Dungeness crab season (May 1–October 31; Table 266-3) including IFQ halibut/sablefish, salmon (seine and setnet), and miscellaneous groundfish (Pacific cod and/or rockfish). Since 2011, vessels that simultaneously participated in a different fishery harvested an average of 63% of the total Dungeness crab catch, indicating the Dungeness crab fishery is economically significant to those vessels (Table 266-3).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. The department issues buoy tags to aid enforcement of most fisheries with established pot limits. These fisheries typically have pot limits of fewer than 100 pots per vessel. Monitoring and enforcing a 750-pot limit could be challenging. If the board adopts this proposal the department recommends the board adopt buoy marking requirements to aid in enforcing the pot limit.

COST ANALYSIS: Approval of a pot limit would increase the cost for a private person to participate in this fishery should the board adopt a companion buoy tag requirement. Westward Region ADF&G offices currently sell buoy tags at cost for $1.50 each for other fisheries with a buoy tag requirement. The department would attempt to find a more cost-effective option for Dungeness pots should this proposal be adopted. Approval of this proposal is not expected to result in an additional direct cost for the department.

Table 266-1.–Kodiak District commercial Dungeness crab effort, harvest in pounds, CPUE, and exvessel value, by year, 2012–2021.

Year	Number Vessels	Pots/vessel	Pots[a]	Pot lifts	Pounds	Avg. CPUE[b]	Exvessel value
2012	7	703	4,922	27,061	97,000	2	$ 257,051
2013	3	720	2,160	19,597	69,001	2	$ 184,923
2014	6	664	3,985	35,960	223,773	3	$ 660,130
2015	7	664	4,650	35,041	193,223	3	$ 579,666
2016	8	636	5,087	46,466	273,617	3	$ 872,838
2017	5	740	3,700	28,296	183,769	3	$ 496,176
2018	7	667	4,670	52,258	647,396	6	$ 2,019,876
2019	16	480	7,685	76,807	1,511,864	9	$ 4,157,626
2020	29	591	17,125	198,603	2,786,897	6	$ 5,115,759
2021	25	682	17,720	204,362	1,987,304	5	$ 8,446,042
Average	11	635	7,170	72,445	797,384	4	$ 2,279,009

[a] Number of pots registered by vessels that made landings.

[b] Catch per unit effort (number of legal crab retained per pot lift).

Table 266-2.– Estimated reduction in pot gear for vessels that have historically registered more than 750 pots in the Kodiak District Dungeness crab fishery, 2012–2021.

Year	Vessels	Number of pots/vessel Min	Max	Avg	Total pots[a]	Proposed pot limit[b]	% Gear reduction[c]
2012	3	800	900	833	2,500	2,250	10%
2013	2	800	900	850	1,700	1,500	12%
2014	2	800	900	850	1,700	1,500	12%
2015	3	800	1,000	867	2,600	2,250	13%
2016	3	800	1,200	933	2,800	2,250	20%
2017	3	800	1,300	967	2,900	2,250	22%
2018	4	800	1,100	875	3,500	3,000	14%
2019	5	800	1,000	860	4,300	3,750	13%
2020	8	800	2,000	1,033	8,260	6,000	27%
2021	10	800	1,500	1,050	10,500	7,500	29%
Average	4	800	1,164	948	4,076	3,225	21%

[a] Total number of pots registered for the fishery by vessels that register more than 750 pots.

[b] Estimated number of pots that would have been registered by these vessels if a 750-pot limit was in effect.

[c] Percent reduction between the actual number of pots registered by these vessels and the estimated number of pots under the proposed pot limit.

Table 266-3.–Count of Kodiak Area Dungeness crab vessels that participated in other fisheries during the Dungeness crab season (May 1–Oct 31), by year, 2011–2020.

Year	Dungeness vessels	Dungeness vessels that participated in other fisheries	% of Dungeness vessels that participated in other fisheries	% of Dungeness harvest taken by vessels that participated in other fisheries	Other fisheries by type		
					Salmon	IFQ halibut or sablefish	Misc groundfish
2011	11	8	73%	43%	3	6	3
2012	7	6	86%	61%	3	4	2
2013	3	3	100%	100%	1	3	0
2014	6	5	83%	80%	2	3	1
2015	7	6	86%	90%	3	3	1
2016	8	6	75%	88%	2	3	1
2017	5	4	80%	76%	0	3	1
2018	7	6	86%	97%	2	4	0
2019	16	9	56%	81%	5	4	0
2020	29	14	48%	42%	7	6	1
Average	10	7	68%	63%	3	4	1

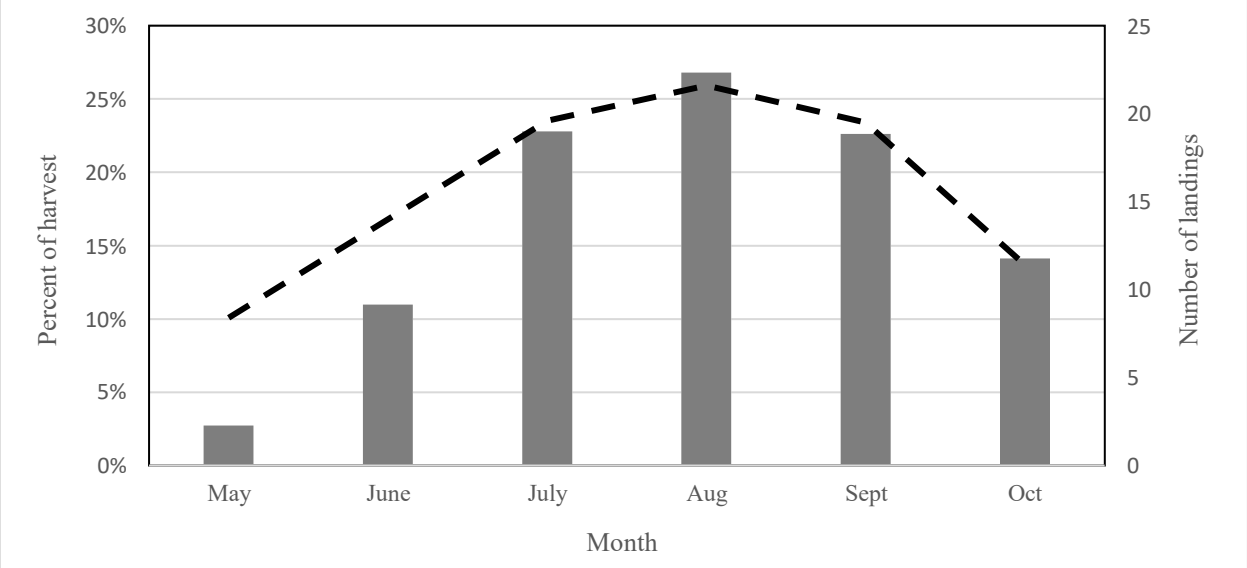

Figure 266-1.– Average percentage of annual Dungeness crab harvest and landings, by month, in the Kodiak District (2011–2020).

PROPOSAL 267 – 5 AAC 32.425. Lawful gear for Registration Area J.

PROPOSED BY: George Gundersen.

WHAT WOULD THE PROPOSAL DO? Implement a 500-pot limit for the Alaska Peninsula District commercial Dungeness crab fishery and cap the total number of pots allowed in the fishery at 10,000. While not directly specified in the proposal the department interprets that if more than 20 vessels register 500 pots each, the 10,000-pot cap would be divided by the total number of vessels registered which would result in a pot limit less than 500 pots per vessel.

WHAT ARE THE CURRENT REGULATIONS? The Alaska Peninsula District is an open access fishery for Dungeness crab. There are no vessel length restrictions or pot limits. Due to the lack of assessment and stock specific data for Area J Dungeness crab, there are no guideline harvest levels or other control rules established to limit harvest. The fishery is managed exclusively by regulating sex, size, and season ("3-S" management). Only male crab with a 6.5-in carapace width or greater may be retained from May 1 through October 31.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? A pot limit would not likely impact day to day operations for vessels that historically operate less than 500 pots. A pot limit for existing higher capacity vessels (> 500 pots) would likely reduce their overall footprint and limit their ability to maintain historical fishing intensity and spatial distribution of gear. Due to long soak times and low crab CPUEs associated with this fishery, catch rates by higher capacity vessels would likely decrease because pulling fewer pots more often in an attempt to maintain historical catch would not likely yield that result. Conversely, less gear and competition overall may improve catch rates for smaller vessels.

A pot limit may additionally disincentivize future entry into the fishery by new high capacity vessels which may benefit all existing users. Alternatively, some vessels may opt out of Alaska Peninsula District and transition to an adjacent (Chignik or Kodiak) Dungeness crab fishery without gear limits, increasing competition in those fisheries.

BACKGROUND: Commercial harvest of Dungeness crab in the Alaska Peninsula District first occurred in 1968. Harvest has occurred annually since 1981. Beginning with the 2002 season, the board divided the Alaska Peninsula District into 2 separate management districts, the present-day Alaska Peninsula and Chignik Districts.

Alaska Peninsula Dungeness crab abundance is cyclical. Periods of increased abundance are generally followed by increases in commercial effort (Table 267-1). The fishery is broadly characterized by low effort, high volumes of gear, and long soak times. Alaska Peninsula District Dungeness crab fishery participants often simultaneously participate in salmon or groundfish/halibut fisheries during the Dungeness crab season.

Since 2012, an average 7 vessels annually participated in the Alaska Peninsula District Dungeness crab fishery (Table 267-1). The amount of registered gear average 507 pots per vessel although the distribution of registered gear across vessels was highly variable and ranged between 50 and 1,550 per vessel (Table 267-1). On average, 36% of participating vessels operated more than 500

pots (Tables 267-1 and 267-2). Under the proposed 500-pot limit, the amount of gear those vessels could legally operate would have been reduced by an average of 39% annually (Table 267-2).

Historically, the maximum number of pots registered for the Alaska Peninsula Dungeness crab fishery was well below the proposed fishery cap of 10,000 pots; however the 2021 season had the most participation and harvest on record (12,240 pots; Table 267-1). In 2021, the proposed fishery cap of 10,000 pots would have reduced the amount of gear in the water by 18%. The department generally issues buoy tags to aid enforcement of fisheries with established pot limits, however a 500-pot limit would likely be difficult to enforce. Should the board adopt a buoy tag requirement, the 10,000-pot cap would require a preseason registration deadline at least 30 days before the fishery opening to allow staff adequate time to calculate and issue the appropriate number of buoy tags prior to the season start. Vessels may not be eligible to register or participate in the fishery after the preseason registration deadline if 10,000 pots have already been registered for the fishery.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. The department issues buoy tags to aid enforcement of most fisheries with established pot limits. These fisheries typically have pot limits of fewer than 100 pots per vessel. Monitoring and enforcing a 500-pot limit could be challenging. If the board adopts this proposal the department recommends the board adopt buoy marking requirements to aid in enforcing the pot limit.

COST ANALYSIS: Approval of a pot limit would increase the cost for a private person to participate in this fishery should the board adopt a companion buoy tag requirement with the pot limit. Westward Region ADF&G offices currently sell buoy tags at cost for $1.50 each for other fisheries with a buoy tag requirement. The department would attempt to find a more cost-effective option for Dungeness pots should this proposal be adopted. Approval of this proposal is not expected to result in an additional direct cost for the department.

Table 267-1.–Alaska Peninsula District commercial Dungeness crab effort, harvest in pounds, CPUE, and exvessel value, by year, 2012–2021.

		Number				Avg.	Exvessel
Year	Vessels	Pots/vessel	Pots[a]	Pot lifts	Pounds	CPUE[b]	value
2012	5	779	3,895	18,405	126,630	3	$284,918
2013	3	868	2,605	6,947	75,679	5	$182,386
2014	3	533	1,600	10,936	76,813	4	$207,395
2015	4	600	2,400	6,175	98,373	8	$285,282
2016	4	505	2,018	10,241	118,107	5	$354,321
2017	2	940	1,880		Confidential		
2018	4	481	1,923	18,509	440,576	12	$1,321,728
2019	6	500	3,000	25,891	450,712	9	$1,194,387
2020	16	340	5,435	63,662	1,411,947	11	$2,470,907
2021	26	471	12,240	109,639	1,753,320	8	$6,837,948[d]
Average[c]	7	507	3,700	30,045	505,795	7	$1,459,919

Notes: Data are confidential when fewer than 3 vessels participated.

[a] Number of pots registered by vessels that made landings.

[b] Catch per unit effort (number of legal crab retained per pot lift).

[c] 2012–2021, excluding 2017 confidential harvest.

[d] Estimated from fish ticket information.

Table 267-2.–Estimated reduction in pot gear for vessels that have historically registered more than 500 pots in the Alaska Peninsula District Dungeness crab fishery, 2012–2021.

		Number of pots/vessel			Total	Proposed	% Gear
Year	Vessels	Min	Max	Avg	pots[a]	pot limit[b]	reduction[c]
2012	3	675	1,500	1,058	3,175	1,500	53%
2013	2	685	1,500	1,093	2,185	1,000	54%
2014	2	600	700	650	1,300	1,000	23%
2015	3	600	800	667	2,000	1,500	25%
2016	2	618	800	709	1,418	1,000	29%
2017	1	1,500	1,500	1,500	1,500	500	67%
2018	1	800	800	800	800	500	38%
2019	2	600	900	750	1,500	1,000	33%
2020	3	525	900	668	2,005	1,500	25%
2021	7	525	1,550	782	5,475	3,500	36%
Average	3	713	1,095	821	2,136	1,300	39%

[a] Total number of pots registered for the fishery by vessels that register more than 500 pots.

[b] Estimated number of pots that would have been registered by these vessels if a 500-pot limit was in effect.

[c] Percent reduction between the actual number of pots registered by these vessels and the estimated number of pots under the proposed pot limit.

PROPOSAL 268 –5 AAC 35.507. Kodiak, Chignik, and South Peninsula C. bairdi Tanner crab harvest strategies.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Repeal and replace the Kodiak, Chignik, and South Peninsula commercial *C. bairdi* Tanner crab harvest strategies. Harvest strategy revisions include: 1) updating the long-term abundance thresholds used to open the fishery; 2) increasing the mature male abundance threshold, from 50% of the long-term average to 100% of the long-term average, in areas where the long-term trend in mature male abundance is declining or stable (i.e., Northeast, Westside, and North Mainland Sections of the Kodiak District); 3) implementing a ramped harvest control rule that incorporates both mature male and mature female abundance when determining maximum legal male exploitation rates (Figure 268-1); 4) eliminating the GHL doubling requirement needed to reopen a season after a closure the previous year; 5) eliminating the 400,000-pound district minimum GHL in the Kodiak District and the requirement that at least 2 sections of the Kodiak District be open for a fishery to occur; and 6) changing the regulatory season closure date from March 31 to February 15 in the Semidi Island Overlap and South Mainland Sections of the Kodiak District.

WHAT ARE THE CURRENT REGULATIONS? Commercial Tanner crab seasons in the Kodiak, Chignik, and South Peninsula Districts occur January 15 through March 31. Tanner crab in each district are managed as a single stock but separate GHLs are established for each district, or section within a district. The current harvest strategies have 4 primary components: 1) mature male abundance thresholds that must be met or exceeded before a commercial fishery may occur; 2) provisions for establishing maximum legal male exploitation rates based on mature male abundance; 3) provisions for reducing exploitation rates based on a district or section's failure to meet mature male abundance thresholds during the previous years' survey; and 4) minimum GHLs that must be met or exceeded before a commercial fishery may be opened.

In the Kodiak District, at least 2 sections must open for a commercial fishery to occur and abundance must be sufficient to provide for a GHL of at least 100,000 pounds per section and at least 400,000 pounds for the entire district. In the Chignik District and in the Eastern and Western Sections of the South Peninsula District, abundance must be sufficient to provide for a GHL of at least 200,000 pounds for a commercial fishery to occur.

No abundance thresholds are established for Semidi Island Overlap and South Mainland Sections of the Kodiak District due to the lack of fishery and stock abundance data available from those sections. These two sections only open when adjacent areas open, and close on the regulatory closure date of March 31. Harvest limits are not established due to the lack of abundance data so inseason fishery performance data guides management.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? These updates will provide for abundance-based exploitation rates that better reflect productivity of the stock while maintaining stability for fishery participants and modestly improving yield. Eliminating the 400,000-pound district minimum GHL in the Kodiak District and the requirement that at least 2 sections of the Kodiak District be open, but maintaining the 100,000-pound section minimum GHL, would allow smaller fisheries to occur more frequently without negatively impacting the department's ability to effectively manage the fishery. Changing the regulatory closure date, from March 31 to February 15, in the Semidi Island Overlap and South Mainland Sections of the Kodiak District would allow for a month of exploratory fishing opportunity while avoiding the potential

for protracted, low-yield fisheries where the department has little data or regulatory guidance to inform management decisions.

BACKGROUND: Kodiak, Chignik, and South Peninsula District Tanner crab fisheries developed in the 1970s and were managed by ADF&G until December 1978 when a federal fishery management plan (FMP) was adopted. Under the FMP, ADF&G managed Tanner crab in state waters (0–3 nmi offshore) and the federal government managed Tanner crab in federal waters (3–200 nmi offshore). Joint jurisdiction occurred until 1987, when the state again assumed full management authority.

In the early 1980s, Tanner crab abundance and commercial harvests began a decline that continued through the 1990s. During that time, thresholds for opening and closing fisheries were not used in practice or established regulation nor was there a requirement for abundance-based management. In response, board approved new harvest strategies in 1999, specifically designed to allow commercial fisheries only when defined harvestable surpluses of crab were available.

Current harvest strategies require both biological and management thresholds be met prior to any commercial fishing. Biological thresholds require mature male abundance within the district, or sections within a district, to meet or exceed 50% of the long-term average abundance of mature male crab. Management thresholds require available surplus to exceed minimum GHLs requirements (100,000 to 400,000 pounds) in each section or district to ensure manageability of the fishery. If mature male abundance and minimum GHL thresholds are met, a commercial fishery may occur in that management unit.

The harvest strategies implemented in 1999 replaced a high fixed 40% exploitation rate on legal males (used through 1998) with stair-step exploitation rates of 10% or 20% of molting mature males and a cap at 30% of legal males. Tanner crab populations are known to undergo wide, quasi-periodic fluctuations in population abundance. While not evident prior to the implementation of the 1999 harvest strategies, crab stocks in Kodiak, Chignik, and South Peninsula Districts have undergone 4 major abundance pulses since 2000. Given the high variability in abundance pattens that current characterize this stock, a new abundance based management approach is warranted.

The harvest strategies advanced for board consideration are based on a ramped harvest control rule based on a "female dimmer" very similar to the harvest policy the board adopted for Bering Sea Tanner crab in 2020 (Figure 268-1). The maximum legal male exploitation rate would vary between 5% and 20% based on both mature male and mature female abundance relative to long-term average abundance. These strategies maximize exploitation when crab are most valuable to industry (high abundance and in newshell condition) while still providing for a conservative management approach that better reflects the reproductive status of the stock. The proposed harvest rate on legal males will be scaled to match current abundance trends such that harvest rates will increase during periods of high abundance and decrease when the population is decline. The proposed maximum harvest rate of 20% on legal males will only apply when estimates of both mature male and mature female crab are above the long-term averages.

A full description of the analytical approach, results, and department recommendations are provided in a written report submitted for this meeting (*Updated Tanner Crab Harvest Strategies for Kodiak, Chignik, South Alaska Peninsula Districts: A Report to the Alaska Board of Fisheries).*

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

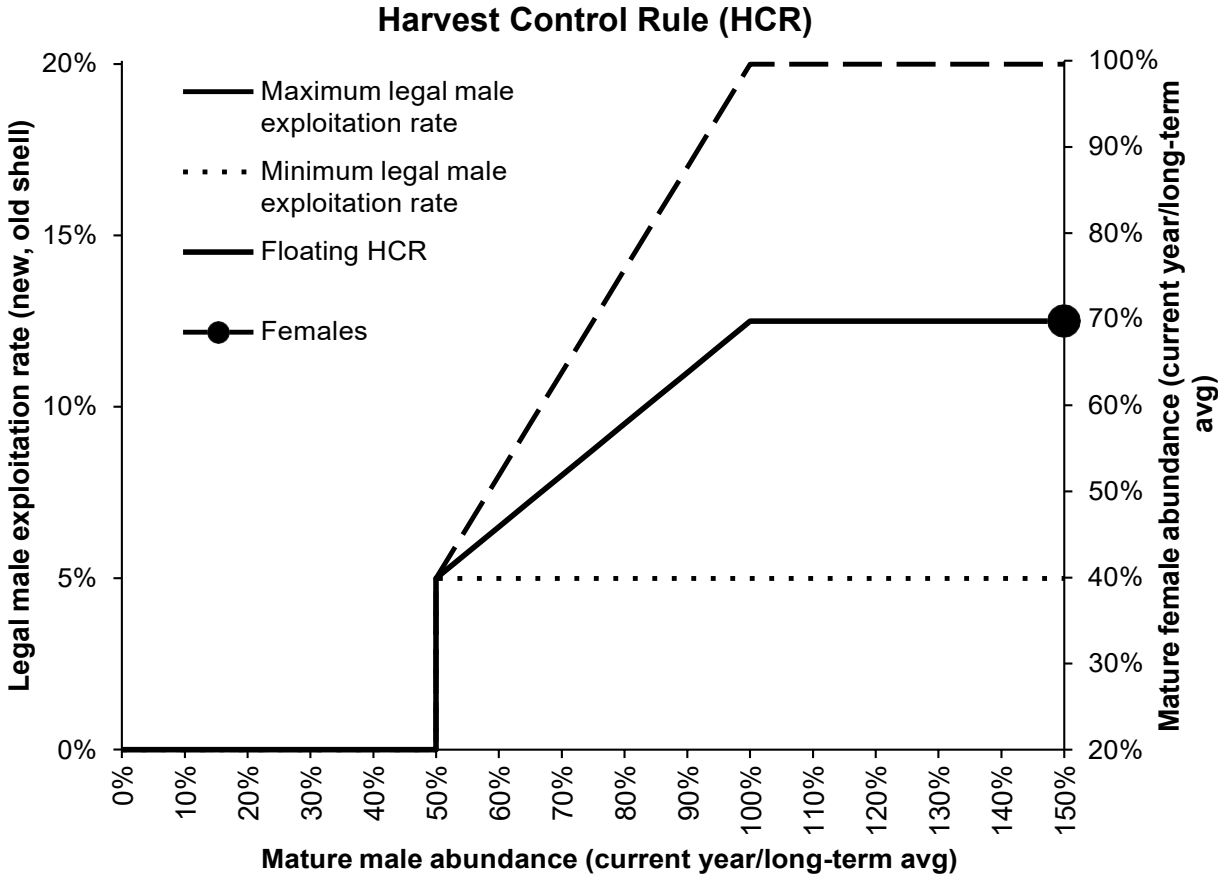

Figure 268-1.–Proposed harvest control rule for exploitation rates on new and old shell legal males based on mature male abundance ratios of current to long-term average abundance and reduced using mature female abundance ratios of current to long-term average abundance (female dimmer).

PROPOSAL 269 –5 AAC 35.507. Kodiak, Chignik, and South Peninsula C. bairdi Tanner crab harvest strategies.

PROPOSED BY: Old Harbor Fisheries Committee/Duncan Fields.

WHAT WOULD THE PROPOSAL DO? Modify the Kodiak District commercial Tanner crab fishery by; 1) eliminating the requirement that at least two sections open for a fishery to occur 2) eliminating the 400,000-pound district minimum GHL; 3) reducing the section minimum GHL from 100,000 pounds to 10,000 pounds; 4) modify pot limits; and 5) establish an exclusive registration requirement for sections with GHLs less than 100,000 pounds.

This proposal also recommends updating long-term mature male abundance thresholds to include recent survey estimates.

WHAT ARE THE CURRENT REGULATIONS? The Kodiak District is divided into eight sections for Tanner crab management. At least two sections must open for a commercial Tanner crab fishery to occur. Abundance must be sufficient to provide for a GHL of at least 100,000 pounds per section and at least 400,000 pounds for the entire district. The pot limit in the Kodiak District ranges from 20 to 60 pots per vessel based on the GHL (Table 269-1).

Commercial Tanner crab seasons in the Kodiak District occur January 15 through March 31. The district is managed as a single stock but separate GHLs are established for each section. The current harvest strategy contains 4 primary components: 1) mature male abundance thresholds that must be met or exceeded before a commercial fishery may occur; 2) provisions for establishing maximum legal male exploitation rates based on mature male abundance; 3) provisions for reducing exploitation rates based on a district or section's failure to meet mature male abundance thresholds during the previous years' survey; and 4) minimum GHLs that must be met or exceeded before a commercial fishery may be opened.

The Kodiak District is a superexclusive registration district for Tanner crab. A vessel registered for the Kodiak District Tanner crab fishery may not be used to take Tanner crab in any other registration district in the state during the same registration year. However, vessels registered for the Kodiak District may be used to take Tanner crab in any or all open sections within the district as long as vessel operators comply with check-in and check-out procedures specified during registration.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Based on retrospective comparisons, this harvest strategy could result in more fishery openings and increased harvests compared to the current strategy or the recommended harvest strategy presented in Proposal 268 (Table 269-2). These gains would mostly occur in sections previously closed for long periods of time due to low relative abundance.

Eliminating the 400,000-pound minimum district GHL the requirement for at least two sections be above thresholds for a fishery to occur would likely result in more frequent fishery openings without diminishing conservation or manageably of the stock. However, the proposed minimum section GHL of 10,000 pounds could be difficult to manage and result in over- or under harvest of often highly localized stocks.

Abundance-based pot limits as proposed and currently established for the Kodiak District generally aid fishery management, however, they largely reflect user preferences and address allocative issues due to the wide range of vessel size and capacity within the fishery.

Requiring exclusive vessel registration in sections with GHLs less than 100,000 pounds would prevent vessels registered for those sections from harvesting Tanner crab in any other section of the Kodiak District during that registration year.

BACKGROUND: The Kodiak District commercial Tanner crab fishery is a limited entry fishery where permits are divided into two vessel length categories, < 60 ft (73% of permits) and ≤ 120 ft (27% of permits). Guideline harvest levels are established annually based on Tanner crab abundance estimates from an ADF&G stock assessment trawl survey. During some years regulatory minimum stock thresholds are not met and the fishery does not open (Table 269-3). From 2001 to 2020, harvest averaged 800,417 pounds per year from 73 vessel with an average fishery value of $2.0 million (Table 269-3).

Minimum GHLs aid manageability by distributing the fleet across the fishing grounds and ensure seasons are long enough to allow for adequate ADF&G catch accounting and management precision. Communication with the fleet has steadily improved over time and most fishing vessels now communicate with managers daily. While the 400,000-pound district minimum GHL is no longer necessary for management or conservation of the stock, the department has concern about manageability of the proposed 10,000-pound minimum section GHLs. The existing survey and stock assessment process effectively tracks overall trends in Tanner crab distribution and abundance but generally lacks the resolution to support fine scale management of the stock.

Exclusive registration requirements predominantly reflect user preference and are intended to promote localized fisheries with the region. Historically, exclusivity has been used to limit mobility between fisheries, as opposed to limiting mobility within a fishery, but it could easily be implemented in this way if desired by users.

DEPARTMENT COMMENTS: This proposal addresses a range of Tanner crab management practices. The department **SUPPORTS** eliminating the 2-section opening threshold and the 400,000 minimum GHL. The department is **NEUTRAL** on restructuring pot limits and **OPPOSES** reducing the section minimum GHL from 100,000 pounds to 10,000 pounds based on manageability concerns. Overall, the department recommends considering this proposal with Proposal 268 to ensure a comprehensive Tanner crab harvest strategy is adopted.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost to the department.

Table 269-1.–Current and proposed pot limits for the Kodiak District commercial Tanner crab fishery.

Current		Proposed	
GHL	Pot limit	GHL	Pot limit
		< 40,000	10
		40,000–79,999	15
< 2,000,000	20	80,000–1,999,999	20
2,000,000–3,999,999	30	2,000,000–3,999,999	30
4,000,000–4,999,999	40	4,000,000–4,999,999	40
≥ 5,000,000	60	≥ 5,000,000	60

Table 269-2.–Comparison of actual Kodiak District commercial Tanner crab fishery openings and harvest under the current harvest strategy to potential fishery openings and guideline harvest levels (GHLs) under proposed harvest strategies from Proposals 268 and 269.

	Current Strategy		Proposal 268		Proposal 269	
Fishery Year	Number of sections open	Total Harvest	Number of sections open	Total GHL	Number of sections open	Total GHL
2001	2	510,407	1	188,270	1	188,270
2002	2	361,166	0	0	2	104,995
2003	2	511,324	1	104,426	3	201,745
2004	3	566,218	3	502,102	4	523,108
2005	4	1,802,046	3	842,628	4	874,969
2006	4	2,122,704	2	1,468,620	4	1,599,777
2007	2	765,092	2	456,004	4	566,754
2008	2	425,353	3	582,698	5	653,827
2009	2	359,056	3	326,316	5	417,016
2010	3	650,316	5	1,746,803	5	1,746,803
2011	4	1,522,806	5	3,738,549	5	3,738,549
2012	3	1,049,911	3	989,879	3	989,879
2013	2	658,194	1	154,051	3	279,998
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	1	211,876	3	277,449
2018	2	422,804	1	311,259	2	397,485
2019	2	620,726	2	1,013,007	4	1,084,400
2020	2	401,028	1	104,269	2	171,761
2021	0	0	1	219,826	3	333,501
Fishery closures	5		4		3	
Openings 100k–399k		2		8		8
Openings ≥ 400k		14		9		10
Total harvest		12,749,151		12,960,580		14,150,285
Average harvest		796,822		762,387		786,127

Table 269-3.–Kodiak District commercial Tanner crab guideline harvest level (GHL), effort, harvest, and value, 2000–2021.

Season	GHL	Number			Avg. price per pound	Exvessel value
		Vessels	Landings	Pounds		
2000			No Commercial Fishery			
2001	500,000	145	192	510,407	$2.30	$1,173,936
2002	500,000	181	279	361,166	$2.20	$794,565
2003	510,000	72	276	511,324	$2.48	$1,268,084
2004	795,000	66	252	566,218	$2.45	$1,387,234
2005	1,750,000	76	291	1,806,416	$1.73	$3,125,100
2006	2,100,000	68	249	2,123,931	$1.53	$3,249,614
2007	800,000	50	96	765,092	$1.84	$1,407,769
2008	500,000	33	64	425,353	$1.98	$842,199
2009	400,000	31	48	359,056	$1.80	$646,301
2010	700,000	52	84	650,315	$1.58	$1,027,498
2011	1,490,000	80	131	1,537,384	$3.04	$4,673,647
2012	950,000	64	93	1,078,106	$3.00	$3,234,318
2013	660,000	59	115	658,194	$2.70	$1,777,124
2014–2017			No Commercial Fishery			
2018	400,000	56	65	431,991	$4.52	$1,952,599
2019	615,000	82	119	620,726	$4.40	$2,731,194
2020	400,000	49	114	400,990	NA	NA
2021			No Commercial Fishery			
Avg. 2000–2021	816,875	73	154	800,417	$2.50	$1,952,746

PROPOSAL 270 –5 AAC 35.525. Lawful gear for Registration Area J.

PROPOSED BY: Old Harbor Fisheries Committee/Duncan Fields.

WHAT WOULD THE PROPOSAL DO? Restructure GHL tiers that guide annual pot limits and reduce the maximum allowable pot limit from 60 to 40 pots per vessel in the Kodiak District commercial Tanner crab fishery.

WHAT ARE THE CURRENT REGULATIONS? The pot limit in the Kodiak District commercial Tanner crab fishery ranges from 20 to 60 pots per vessel based on size of the annual GHL (Table 270-1). A vessel may only operate Tanner crab pots between 8:00 a.m. and 5:59 p.m. each day while the fishery is open.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Under prevailing conditions, this proposal would result in similar pot limits as currently allowed under the existing regulation. Since 2000, the proposed change would have resulted in a different pot limit once (2006). At higher GHLs the proposed structure could result in a 25% or 33% reduction in the pot limit, depending on the GHL (Table 270-2). Lower pot limits could reduce harvest rates and lead to longer seasons but effects are likely unique to each vessel and may vary by vessel size.

BACKGROUND: The Kodiak District commercial Tanner crab fishery is a limited entry fishery where permits are divided into two vessel length categories, < 60 ft (73% of permits) and ≤ 120 ft (27% of permits). Guideline harvest levels are established annually based on Tanner crab abundance estimates from an ADF&G stock assessment trawl survey. During some years, regulatory minimum stock thresholds are not met, and the fishery does not open (Table 270-3). Since the current management plan was adopted in 1999, an average of 73 vessels landed 800,417 pounds of crab annually worth approximately $2.0 million each year (Table 270-3).

Prior to 2000, the pot limit in the Kodiak District commercial Tanner crab fishery was 75 pots regardless of the GHL. The current 4-tier pot limit was adopted in 2000 (Table 270-1). Since 2000, the fishery has opened during 16 seasons and the pot limit was set at the minimum tier level of 20 pots per vessel every season except one (2006; Table 270-3). GHLs have not exceeded 5.0 million pounds since the 1985/86 season.

Abundance-based pot limits as proposed and currently established for the Kodiak District generally aid fishery management, however, they largely reflect user preferences and address allocative issues due to the wide range of vessel size and capacity within the fishery.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost to the department.

Table 270-1.–Current and proposed pot gear limits for the Kodiak District commercial Tanner crab fishery.

Current		Proposed	
GHL	Pot limit	GHL	Pot limit
< 2,000,000	20	< 2,500,000	20
2,000,000–3,999,999	30	2,500,000–4,999,999	30
4,000,000–4,999,999	40	≥ 5,000,000	40
≥ 5,000,000	60		

Table 270-2.–Difference between current and proposed pot gear limits for the Kodiak District commercial Tanner crab fishery.

	Pot limit		
GHL	Current	Proposed	% Difference
< 2,000,000	20	20	0%
2,000,000–2,499,999	30	20	-33%
2,500,000–3,999,999	30	30	0%
4,000,000–4,999,999	40	30	-25%
> 5,000,000	60	40	-33%

Table 270-3.–Kodiak District commercial Tanner crab guideline harvest level (GHL), effort, harvest, and value, 2000–2021.

Season	GHL	Number			Avg. price per pound	Exvessel value
		Vessels	Landings	Pounds		
2000			No Commercial Fishery			
2001	500,000	145	192	510,407	$2.30	$1,173,936
2002	500,000	181	279	361,166	$2.20	$794,565
2003	510,000	72	276	511,324	$2.48	$1,268,084
2004	795,000	66	252	566,218	$2.45	$1,387,234
2005	1,750,000	76	291	1,806,416	$1.73	$3,125,100
2006	2,100,000	68	249	2,123,931	$1.53	$3,249,614
2007	800,000	50	96	765,092	$1.84	$1,407,769
2008	500,000	33	64	425,353	$1.98	$842,199
2009	400,000	31	48	359,056	$1.80	$646,301
2010	700,000	52	84	650,315	$1.58	$1,027,498
2011	1,490,000	80	131	1,537,384	$3.04	$4,673,647
2012	950,000	64	93	1,078,106	$3.00	$3,234,318
2013	660,000	59	115	658,194	$2.70	$1,777,124
2014–2017			No Commercial Fishery			
2018	400,000	56	65	431,991	$4.52	$1,952,599
2019	615,000	82	119	620,726	$4.40	$2,731,194
2020	400,000	49	114	400,990	NA	NA
2021			No Commercial Fishery			
Avg. 2000–2021	816,875	73	154	800,417	$2.50	$1,952,746

PROPOSAL 271 – 5 AAC 35.525. Lawful gear for Registration Area J.

PROPOSED BY: Patrick Pikus.

WHAT WOULD THE PROPOSAL DO? Reduce the escape mesh size requirement from 7.25 inch to 6.75 inch for *C. bairdi* Tanner crab pot gear in Registration Area J, except in the Bering Sea District.

WHAT ARE THE CURRENT REGULATIONS? To aid escapement of undersize crab, Tanner crab pot gear in the Kodiak, Chignik, South Peninsula, and Eastern Aleutian Districts must have at least 1/3 of one vertical surface covered in mesh webbing that measures no less than 7.25 inch when stretched or contain at least four 5-inch circular escape rings installed on a vertical surface. Only male Tanner crab with a 5.5-in carapace width or greater may be retained during the fishery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Smaller escape mesh may improve CPUE of legal-size crab while providing adequate escapement for smaller sized crab.

BACKGROUND: Appropriately sized escape rings and mesh effectively retain legal sized crab in the pot while allowing smaller crab to escape. Undersized mesh retains more non-target crab (female and sublegal male crab) leading to higher on-deck sorting and associated handling mortality and decreases efficiency of the fishing operation. Oversized escape mesh is more conservative and allows a higher proportion of non-target crab to escape, but it also allows more legal crab to escape, reducing yield for vessel operators.

Registration Area J *C. bairdi* Tanner crab minimum escape mesh and ring sizes were adopted in March 1996. In 1997, the department completed a study near Kodiak comparing retention of Tanner crab in pot gear configured with 7-inch escape mesh or 5-inch rings. Results of the study showed no significant difference between the two escape mechanisms: all pots retained similar numbers of legal male, sublegal male, and female Tanner crab. While this study was intended to inform the board's actions in establishing regulatory escape mesh and ring sizes at the 1996 board meeting, it was not completed in time and the board adopted a regulation requiring 7.25-inch mesh or 5-inch rings. At that time, commercial Tanner fisheries were predominantly closed for due to low Tanner crab abundance. The department interprets that the board took a conservative approach and adopted the larger 7.25-in mesh requirement in the absence of study data on 7-inch mesh.

For comparison, Figure 271-1 demonstrates the escape openings created by a 5-in ring compared to the proposed 6.75-inch mesh, 7-inch from the 1997 study, and the current 7.25-inch mesh. The escape opening created by a 5-inch ring and 7-inch mesh match, whereas the proposed 6.75-inch mesh allows for a slightly smaller escape opening and the 7.25-inch mesh slightly larger opening compared to 5-inch rings.

Current escape mesh and ring sizes in the Kodiak, Chignik, and Alaska Peninsula Districts are larger (more conservative) than other areas with the same size legal crab (Table 271-1).

DEPARTMENT COMMENTS: The department **SUPPORTS** reducing the minimum escape mesh size from 7.25-inch to 7-inch to align mesh and ring size in regulation.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost to the department.

Table 271-1.–*C. bairdi* Tanner crab legal size, minimum escape mesh size, and minimum escape ring size, by registration area.

Registration area	*C. bairdi* Tanner crab legal size (in)	Min escape mesh size (in)	Min escape ring size (in)
A (Southeast)	5.50	7.00	4.75
D (Yakutat)	5.50	7.00	4.75
E (Prince William Sound)	5.00	-	4.75
H (Cook Inlet)	4.50	-	4.75
J (Kodiak, Chignik, South Peninsula, and Eastern Aleutian Districts)	**5.50**	**7.25**	**5.00**
J (Bering Sea east of 166°)	4.80	6.50	4.50
J (Bering Sea west of 166°)	4.40	6.50	4.50

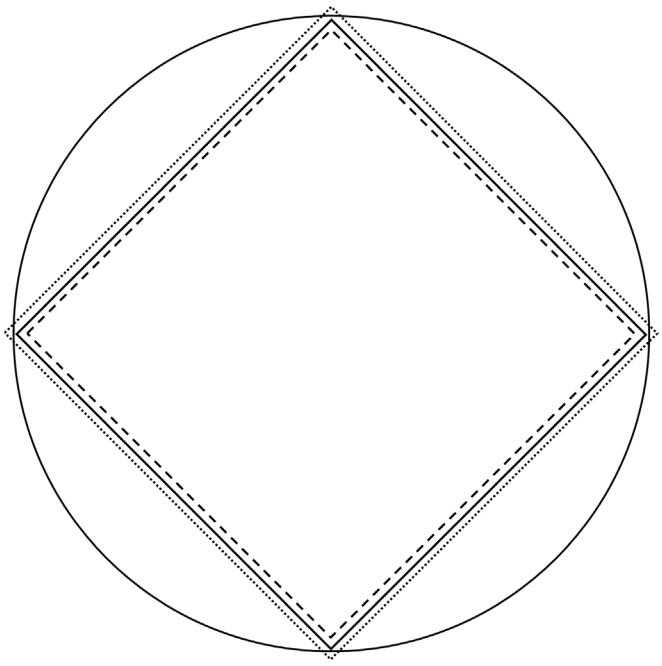

Figure 271-1.–Visual comparison of opening size for 7.25-inch (dotted), 7-inch (solid), and 6.75-inch (dashed) stretched mesh webbing (diamonds), and a 5.0-in escape ring (circle).

PROPOSAL 272 – 5 AAC 35.509. Eastern Aleutian District Tanner crab harvest strategy.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Repeal and replace the Eastern Aleutian District (EAD) Tanner crab harvest strategy. Revisions include updating the trawl survey time series and abundance thresholds used to open the fishery, lowering regulatory exploitation rates on mature and legal sized male crab, provide the department flexibility to open fisheries when survey data are unavailable, and authorizing the department to enact area closures during the commercial fishery to protect subsistence fishing opportunity.

WHAT ARE THE CURRENT REGULATIONS? Within the EAD, the Akutan, Unalaska/Kalekta Bay, and Makushin/Skan Bay Sections open based on preseason survey data. For a section to open, abundance estimates of mature-sized male abundance (MMA; defined as all males greater than 114 mm carapace width) must exceed a threshold set at one half of the average abundance of mature-sized male Tanner crab for the period from 1990 to 2000.

If MMA is less than or equal to the long-term average, the exploitation rate will be no more than 10% of the molting mature male abundance (MMMA; 100% of new and soft shell mature-sized male Tanner crab and 15% of old and very old shell mature-size male Tanner crab). If MMA is above the long-term average, the exploitation rate will be no more than 20% of the MMMA. Under either scenario, harvest may not exceed 30% of legal male abundance. If a section is above biological threshold, abundance of legal male crab must also be sufficient to allow for a minimum GHL of 35,000 pounds. The General Section of the EAD may also open if preseason survey results indicate a harvestable surplus; however, no threshold is defined in regulation for the General Section as it is not regularly surveyed.

EAD fishery management measures include pot limits, daily fishing periods, reporting requirements and vessel length restrictions. Maximum vessel length of 58 feet applies to all sections of the EAD when the GHL for Tanner crab is 1.0 million pounds or less. Mandatory inseason reporting from vessel operators is required. No more than 300 pots are allowed in the fishery, with no more than 50 pots per vessel. Tanner crab pots may only be operated from 8:00 a.m. to 5:59 p.m. daily. The EAD season is open January 15 through March 30.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Lower exploitation rates on mature and legal sized male crab may allow for smaller fisheries to occur more frequently. This proposal would also create opportunity for small monitoring fisheries to gather stock information in the event a survey does not occur. For the Unalaska Section, the proposed harvest strategy would also provide flexibility for the department to close areas important to subsistence crab fishing when a commercial fishery is open.

BACKGROUND: The EAD Tanner crab fishery (Figure 272-1) began in the 1973/74 season. From 1973/74 to 1994, the fishery was managed under size-sex-season (3S) policy. From 1993 through 2003 the fishery was closed. Since 2003, the fishery has been managed using preseason guideline harvest levels established through a regulatory harvest strategy based on an annual trawl survey data.

Harvest in the 1973/74 season was 500,000 pounds. Harvests increased and peaked at 2.5 million pounds in 1977/78. The fishery subsequently collapsed and was closed from 1994 through 2003 due to low stock abundance. In 2002/03, an industry-cooperative pot survey under authority of a commissioner permit was conducted where retention and sale of legal-size crab was permitted to

cover survey costs. The fishery reopened in 2003, with a harvest of 140,000 pounds. Fisheries continued intermittently from 2005 to 2017 in various sections, with annual harvest ranging from 35,000 to 135,000 pounds. Most harvest is confidential due to limited participation. The General Section is not currently surveyed and has not opened since 1993/94. Between 2003 and 2015, 10% of harvest has been taken from the Akutan Section and 45% each has been taken from the Makushin/Skan Bay and Unalaska/Kalekta Bay Sections. All sections of the EAD were closed in 2014, 2017, and 2019 to 2021 due to low abundance (2021 closure result of survey cancellation due to COVID-19; Table 272-1). Most recent openings in the EAD occurred in the Makushin/Skan Bay Section (Table 272-1).

ADF&G trawl surveys were conducted six times between 1990 and 2000, and annually since 2003, except the 2020 survey was cancelled due to COVID-19. Trawl survey results evaluate stock composition and generate area-swept abundance estimates of Tanner crab in surveyed areas. The current harvest strategy uses abundance estimates from six surveys between 1990 and 2000. Updating the harvest strategy to include the full survey time series (1990-2019) is more representative of current stock status (Table 272-2, Figures 272-2, 272-3, and 272-4). Retrospectively, these changes would have resulted in fewer recent fishery closures in the Akutan and Makushin/Skan Bay Sections and an increase in closures in the Unalaska/Kalekta Bay Section (Table 272-2).

To determine annual GHLs, the current harvest strategy uses a stair step exploitation rate applied to annual survey abundance estimates. If the annual mature male abundance estimate is at or below the long-term average abundance estimate for mature males, a 10% exploitation rate is used to establish the GHL. If the annual abundance estimate is higher than the long-term average, a 20% exploitation rate is used to establish the GHL. This approach scales exploitation to trends in abundance and allows for more liberal harvests when abundance is high and becomes more conservative during periods of decline. In practice, the current 10/20 stairstep approach often yields computed GHLs that are believed to be unsustainable by fishery managers and do not seem consistent with other indicators of stock status. In these situations, managers evaluate all other sources of information then typically reduce computed GHLs to levels believed to be more consistent with guiding principles for Tanner crab management. Fishery performance data from the subsequent fisheries typically affirm the smaller revised GHLs were appropriate. Higher than desired computed GHLs from the current harvest strategy could be due to overestimation of crab abundance from survey data or faulty logic that the 10% and 20% exploitation rates applied to this stock provide for sustainable yield.

The proposed strategy employs the same stairstep approach but updates the biological definition used to estimate mature male abundance and reduces the stairstep exploitation rates from 10% and 20% to 5% and 10%. Applying the proposed harvest strategy retrospectively to past seasons suggests there may have been some over-harvest in the Akutan and Makushin/Skan Bay Sections and forgone harvest in the Unalaska/Kalekta Bay Section (Table 272-3). Overall, the revised strategy is anticipated to continue to maximize exploitation when crab are most valuable to industry (high abundance and in newshell condition) while still provide for a conservative management approach by reducing exploitation overall.

There is a positive C&T finding for king crab, Tanner crab, Dungeness crab, and miscellaneous shellfish in the Alaska Peninsula/Aleutian Islands Area, and a positive C&T finding for all shellfish in the Bering Sea Area. The board has found that 4,200–16,200 Tanner crab are reasonably necessary for subsistence uses in the Alaska Peninsula-Aleutian Islands area, which includes

1,500–8,000 Tanner crab within the waters west of the longitude of Scotch Cap Light. The board has not made an ANS finding for shellfish in the Bering Sea Area.

Unalaska Bay has an active Tanner crab subsistence fishery. During the past 21 years, an average of 237 subsistence permits have been issued annually. On average, approximately 57% of permits are returned reporting an annual average harvest of 2,081 Tanner crab. Harvest estimates extrapolated from the subsistence harvest permits indicate an average of 3,700 Tanner crab were harvested annually between 1999 and 2019 (Table 272-4). The subsistence fishery occurs primarily in Nateekin and Captains bays near the Port of Dutch Harbor, which are within the commercial Unalaska/Kalekta Bay Section, but which are not surveyed as part of the annual trawl survey. Since crab in these bays are not included in the abundance estimates, closing these areas to commercial fishing would protect important subsistence fishing areas but would not have an impact on the estimated available crab for the commercial fishery.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Updating the trawl survey time series and abundance thresholds used to open the fishery, lowering regulatory exploitation rates on mature and legal sized male crab, providing the department flexibility to open fisheries when survey data are unavailable, and authorizing the department to enact area closures during the commercial fishery to protect subsistence fishing opportunity will increase opportunity and economic return while not impacting long-term conservation and sustainability of the crab stocks.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost to the department.

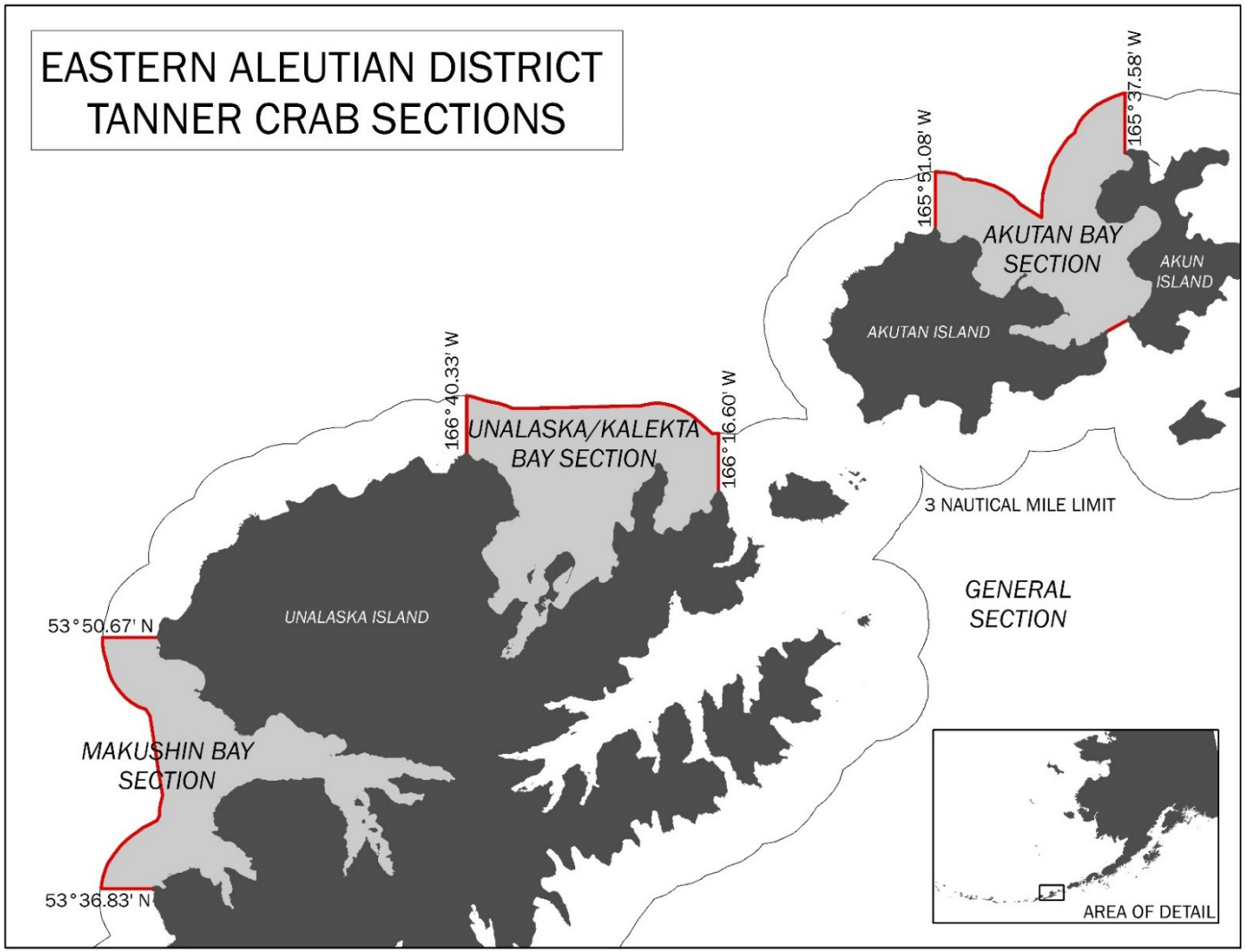

Figure 272-1.-Eastern Aleutian District Tanner crab sections.

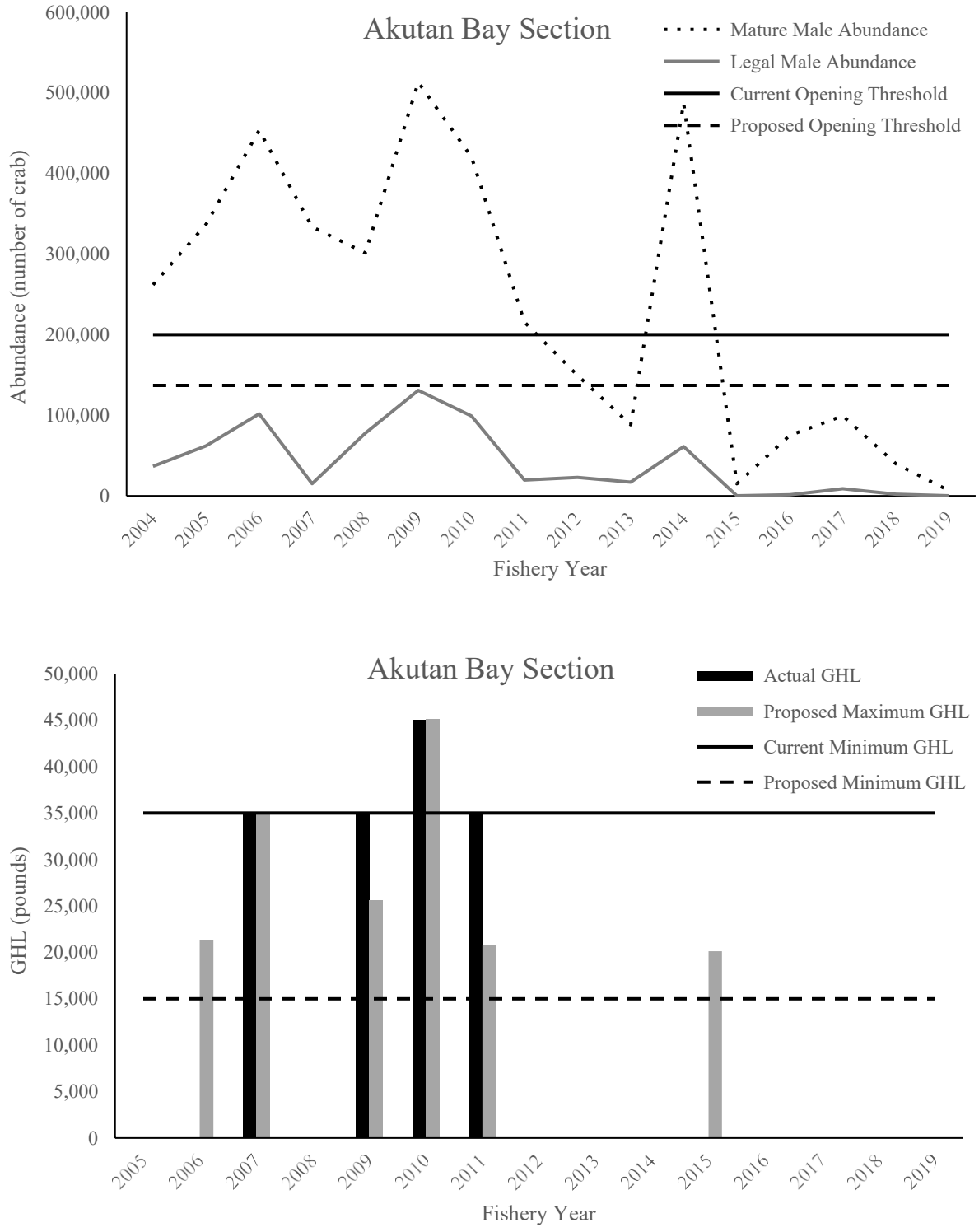

Figure 272-2.-Comparison of proposed and current minimum abundance thresholds (top panel) and proposed and current computed GHLs (bottom panel) for the Akutan Bay Section.

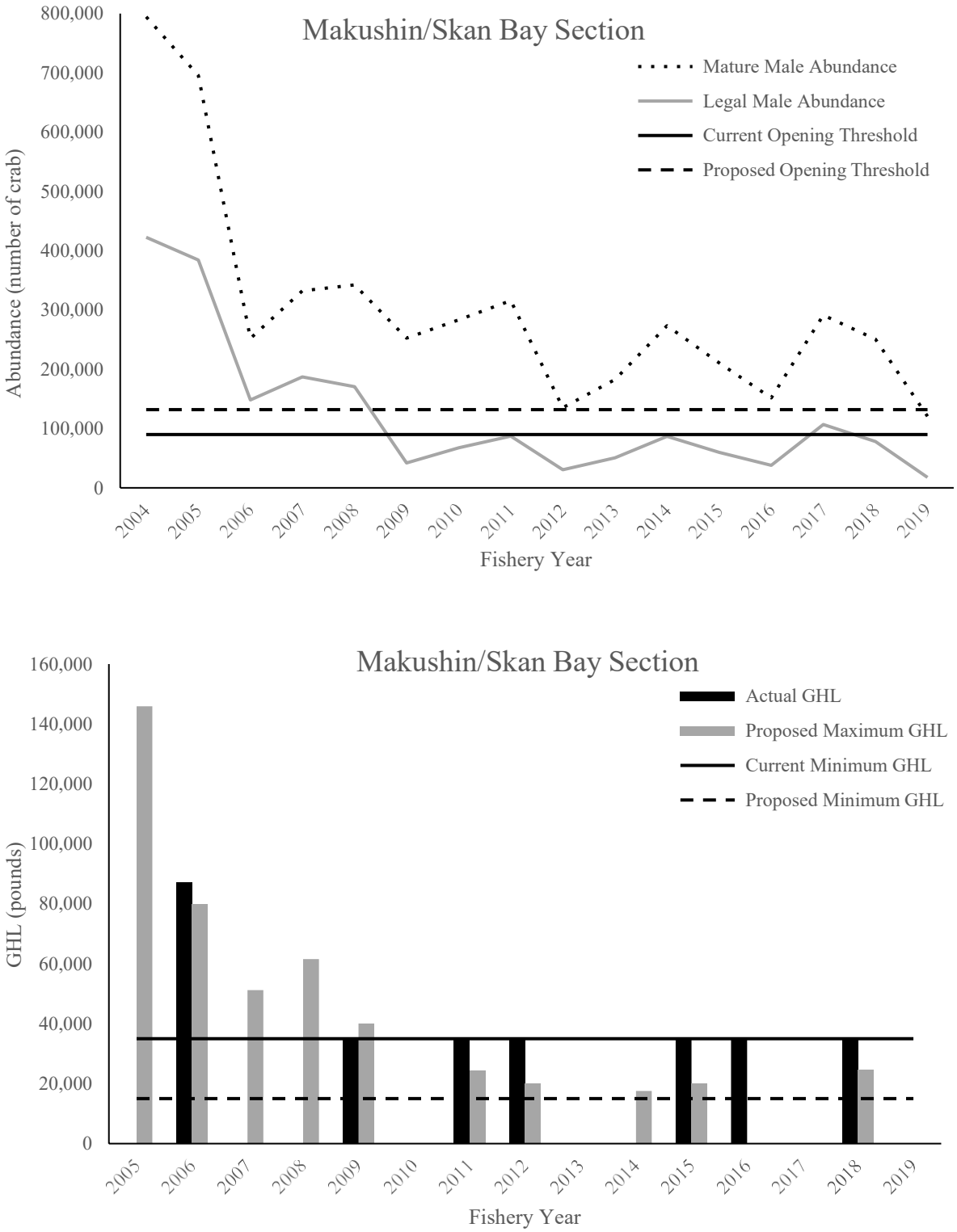

Figure 272-3.-Comparison of proposed and current minimum abundance thresholds (top panel) and proposed and current computed GHLs (bottom panel) for the Makushin/Skan Bay Section.

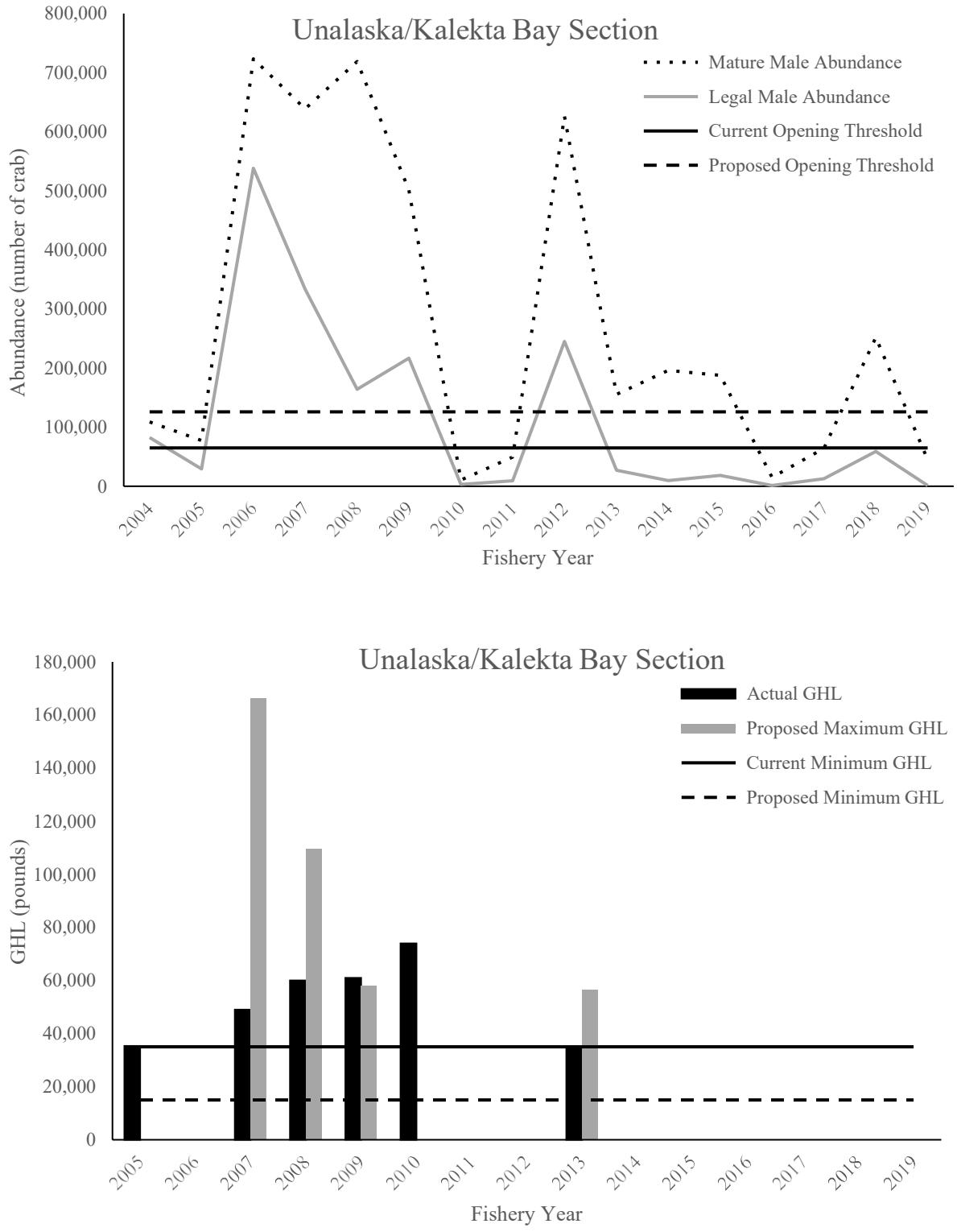

Figure 272-4.-Comparison of proposed and current minimum abundance thresholds (top panel) and proposed and current computed GHLs (bottom panel) for the Unalaska/Kalekta Bay Section.

Table 272-1.-Eastern Aleutian District Tanner crab commercial fishery harvest data, 2005–2021.

Season	Location	GHL[a,b]	Harvest[a,c]	Deadloss[a]	Number of				Average	
					Vessels	Landings	Crab[c]	Pots lifted	CPUE[d]	Weight[a,e]
2005	Unalaska Bay	35,304	34,022	0	25	79	14,249	696	20	2.4
2006	Makushin/Skan Bay	87,241	CF	CF	10	32	CF	CF	CF	CF
2007	Akutan Bay	35,000	CF	CF	3	7	CF	CF	CF	CF
	Unalaska Bay	49,000	CF	CF	12	41	CF	CF	CF	CF
	TOTAL	84,000	CF	CF	13[f]	47	CF	CF	CF	CF
2008	Unalaska Bay	60,000	CF	CF	11	48	CF	CF	CF	CF
2009	Akutan Bay	35,000	CF	CF	1	2	CF	CF	CF	CF
	Makushin/Skan Bay	35,000	CF	CF	1	3	CF	CF	CF	CF
	Unalaska Bay	58,000	CF	CF	10	83	CF	CF	CF	CF
	TOTAL	128,000	CF	CF	11[f]	88	CF	CF	CF	CF
2010	Akutan Bay	45,000	CF	CF	3	3	CF	CF	CF	CF
	Unalaska Bay	74,000	CF	CF	7	63	CF	CF	CF	CF
	TOTAL	119,000	CF	CF	8[f]	66	CF	CF	CF	CF
2011	Akutan Bay	35,000	CF	CF	2	3	CF	CF	CF	CF
	Makushin/Skan Bay	35,000	CF	CF	3	4	CF	CF	CF	CF
	TOTAL	70,000	CF	CF	3[f]	7	CF	CF	CF	CF
2012	Makushin/Skan Bay	35,000	CF	CF	1	6	CF	CF	CF	CF
2013	Unalaska Bay	35,000	CF	CF	6	28	CF	CF	CF	CF
2014	No Commercial Fishery									
2015	Makushin/Skan Bay	35,000	CF	CF	1	5	CF	CF	CF	CF
2016	Makushin/Skan Bay	35,000	CF	CF	1	4	CF	CF	CF	CF
2017	No Commercial Fishery									
2018	Makushin/Skan Bay	35,000	CF	CF	2	8	CF	CF	CF	CF

2019-2021	No Commercial Fishery

Note: CF = confidential

[a] In pounds.

[b] Guideline harvest level (GHL).

[c] Deadloss included beginning 1980.

[d] Number of retained crab per pot lift.

[e] Retained catch.

Table 272-2.-Proposed and current harvest strategy thresholds and GHLs with a comparison of the rates of fisheries closures.

Section	Average Long-term MMA (1990-2019)	Threshold Proportion of Long-term MMA	Current MMA Threshold	Proposed MMA Threshold	Current Minimum GHL (pounds)	Proposed Minimum GHL (pounds)	Proportion Current Fishery Closures	Proportion Proposed Fishery Closures
Akutan Bay	273,868	50%	200,000	137,000	35,000	15,000	73%	60%
Makushin/Skan Bay	263,521	50%	90,000	132,000	35,000	15,000	53%	33%
Unalaska/Kalekta Bay	252,740	50%	65,000	127,000	35,000	15,000	60%	73%

Table 272-3.-Comparison of average GHLs and harvest rates for the current and proposed harvest strategies for the EAD Tanner crab fishery.

	Current Harvest Strategy			Proposed Harvest Strategy		
	Average			Average		
Section	GHL (pounds)	Harvest Rate on Mature Crab	Harvest Rate on Legal Crab	Maximum GHL (pounds)	Harvest Rate on Mature Crab	Harvest Rate on Legal Crab
Akutan Bay	37,500	4.1	16.8	27,998	3.0	14.2
Makushin/Skan Bay	42,463	5.4	16.4	48,526	5.3	12.5
Unalaska/Kalekta Bay	52,384	5.6	11.3	97,648	8.8	13.4

Table 272-4.-Subsistence king and Tanner crab harvest from the Eastern Aleutian Islands, west of Scotch Cap Light and east of 168°W long, 1999–2019.

	Permits			Harvest[a]	
Year	Number issued[b]	Number returned	Percent returned	King crab reported	Tanner crab reported
1999	179	80	45%	787	1,432
2000	193	137	71%	523	916
2001	200	153	77%	1,149	1,703
2002	231	179	77%	1,080	2,451
2003	229	160	70%	387	4,600
2004	225	144	64%	225	4,714
2005	241	182	76%	866	5,447
2006	256	185	72%	1,796	1,439
2007	203	122	60%	1,359	1,542
2008	290	177	61%	1,212	853
2009	273	154	56%	639	2,045
2010	283	117	41%	142	2,315
2011	256	119	46%	185	1,476
2012	342	134	39%	229	2,436
2013	266	117	44%	606	2,081
2014	249	113	45%	236	1,953
2015	222	111	50%	73	1,570
2016	257	115	45%	100	2,243
2017	205	99	48%	29	1,395
2018	182	127	70%	22	663
2019	187	77	41%	32	428
1999–2019 Average	237	133	57%	556	2,081

[a] Reported harvest, in number of crab, from waters surrounding Unalaska Island.

[b] Includes permits issued for both shellfish and salmon.

PROPOSAL 273 –5 AAC 34.425. Lawful gear for Registration Area K.

PROPOSED BY: Patrick Pikus.

WHAT WOULD THE PROPOSAL DO? Allow vessels to longline pot gear while targeting golden king crab (GKC) in the Kodiak Area (Registration Area K).

WHAT ARE THE CURRENT REGULATIONS? In the Kodiak Area, golden king crab may be taken year-round (Jan 1–Dec 31) under conditions of a permit issued by the commissioner. Only male crab with a 6.5-in carapace width or greater may be retained. No more than 75 pots may be operated by a vessel. Only single pots may be deployed with at least one buoy attached to each pot.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Fishery and conservation effects are largely unknown given the limited understanding of Kodiak GKC stock status and fishery history. Longlining pot gear may improve operational efficiency for some vessels and could result in higher gear density on the fishing grounds. Catch rates could increase if higher rates of gear are deployed in areas with concentrated GKC abundance.

BACKGROUND: Golden king crab around Kodiak Island are predominantly found along the outer continental shelf or in benthic depressions in Shelikof Strait. GKC are not surveyed or assessed and abundance estimates are not available. Little is known about the overall stock status, but it is generally understood that GKC abundance in Kodiak is relatively low compared to other areas of the state where GKC are found. It is unclear if sufficient abundance exists to support sustained annual removals. Commercial effort and harvests are sporadic (Table 273-1). There are no reports of subsistence or sport harvests of GKC in Kodiak.

Given the low relative abundance and limited regulatory guidance for GKC, fishing is allowed under authority of a commissioner permit issued by regional crab management staff. Commissioners permits are issued with the dual purpose of allowing for some commercial opportunity while also collecting data needed to better inform stock status or management practices. During years with fishery effort, the department opportunistically deploys biologists on commercial fishing trips to collect biological data from non-retained crab. These data, in addition to information from the retained catch, and fishery logbook and fish ticket data, provide basic insight into crab recruitment, abundance trends, and fishery performance.

The Kodiak Area GKC commissioner permit specifies that pot gear must be fished in water 125 fathoms or deeper. This requirement is intended to limit red king crab bycatch. Operating 75 pots at these depths requires large volume of line. Longlining pot gear requires less line than traditional "single pot" configurations, as not every pot needs to be attached to a buoy on the surface. Vessels can deploy and retrieve longline pot gear more rapidly compared to the single pot fishing. Regulations in other areas of the state that allow or require pot longlining are intended to improve operational efficiency and safety for vessels as well as reduce potential for pot loss.

Given the low density and patchy distribution of the stock, Kodiak GKC are likely susceptible to overharvest, particularly if pot gear is densely deployed in areas with higher concentrations of crab. From the limited data available, Kodiak GKC abundance appears to be relatively stable under the current regime of small, periodic harvests.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost to the department.

Table 273-1.–Kodiak Area commercial golden king crab effort, harvest in pounds, and CPUE, by year, 1985–2020.

Year	Vessels	Landings	Pounds	Crab	Pot Lifts	CPUE
1985	4	19	63,641	10,005	2,693	4
1986	4	31	146,679	21,862	5,463	4
1987	5	38	67,191	9,485	3,187	3
1988	2	5		Confidential		
1989	1	2		Confidential		
1990	3	6	7,314	1,214	1,090	1
1991			No effort			
1992	1	6		Confidential		
1993	1	1		Confidential		
1994			No effort			
1995	2	2		Confidential		
1996–1999			No effort			
2000	1	2		Confidential		
2001	1	1		Confidential		
2002	3	7	25,184	5,464	990	6
2003	2	4		Confidential		
2004	2	3		Confidential		
2005–2009			No effort			
2010	1	6		Confidential		
2011	2	3		Confidential		
2012			No effort			
2013	2	7		Confidential		
2014	1	2		Confidential		
2015			No effort			
2016	1	1		Confidential		
2017–2020			No effort			

Note: Data are confidential when fewer than 3 vessels participated.

PROPOSAL 274 – 5 AAC 39.646. Shellfish onboard observer trainee program qualifications and requirements.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Require weathervane scallop observer trainee candidates to possess a valid department crab observer trainee permit or crab observer certification in good standing prior to applying to become a weathervane scallop observer.

WHAT ARE THE CURRENT REGULATIONS? Prior to becoming a candidate, an observer trainee must possess a bachelor's degree in the field of biology or hold a valid National Marine Fisheries Service observer certification or have other fisheries related education or work experience approved by the department.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Improve observer retention for BSAI crab and weathervane scallop fisheries, reduce program costs, and improve data quality.

BACKGROUND: Weathervane scallops in waters of the Exclusive Economic Zone off Alaska are managed by the State of Alaska and the federal government. The scallop Fishery Management Plan developed by the North Pacific Fishery Management Council defers most management to the state, although a License Limitation Program implemented by the federal government restricts fleet size. The statewide fleet is limited to a total of 9 vessels although fishery effort and harvest is generally low. During most years 2 to 3 vessels catch and process scallops statewide during seasons that typically range from July through November.

Under state regulation all vessels are required to carry an independent onboard observer while fishing. Scallop observers are supplied by third-party observer provider companies with deployment costs paid for by harvesters. The state establishes the minimum education and experience requirements for incoming observer trainees and conducts the annual observer training class. The observer training class occurs over a three-week period each spring and requires up to four contracted or department staff to fully prepare observer trainees for independent deployment. The observer training is expensive and during some years only a single trainee candidate attends the training class.

Across the range of fishery observer opportunities, most observers tend to work in larger federal observer programs that offer stable employment. Due to the small size and relatively unique timing of the Alaska scallop fishery, recruiting and retaining observers is challenging. Unreliable observer staffing adds to program costs and lost fishing opportunity for harvesters when observers are unavailable. In addition to the scallop fishery, the department administers a larger onboard crab observer program that annually deploys around 30 observers in support of BSAI rationalized crab fisheries. Scallop and crab observer training and sampling responsibilities overlap substantially and the department offers two crab observer training classes each year. Limiting recruitment of scallop observers to candidates that previously received department crab observer training would reduce scallop training time and costs by approximately half as well as improve data quality and provide additional stability for scallop harvesters.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost to the department.

PROPOSAL 275 – 5 AAC 39.143. Onboard observer certification and decertification.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Extend the amount of time a certified BSAI crab or weathervane scallop observer can remain inactive in fishery without losing certification from 12 to 18 months.

WHAT ARE THE CURRENT REGULATIONS? Observer certification expires for any department certified observer that has not actively deployed in an applicable BSAI crab or statewide scallop fishery within a consecutive 12-month period. If an observer certification expires, a person must successfully reapply and complete all training and certification requirements prior to redeploying in a crab fishery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Improve observer retention, reduce program costs, and improve data quality.

BACKGROUND: The BSAI crab observer program was established by the board in 1988 to collect fishery-dependent data used to characterize crab fisheries and inform stock assessment and management. Crab fisheries covered by the observer program include Bristol Bay red king crab, eastern and western Bering Sea Tanner crab, Bering Sea snow crab, eastern and western Aleutian Islands golden king crab, and several smaller non-rationalized crab fisheries. Each crab fishery has unique data collection protocols and sampling guidelines.

Crab and scallop observers are employed by independent contractors, however, the department trains and provides direct performance and data handling oversight. Observers are deployed on commercial crab vessels randomly selected preseason for each crab fishery. Approximately 25-30 observers are deployed seasonally to achieve crab fishery coverage rates ranging from 20-100%, depending on fishery and stock assessment data needs. All scallop vessels are required to carry an independent onboard observer while fishing. Observer trainees are promoted to fully certified observers in both fisheries at the discretion of the department when they demonstrate and maintain data collection proficiency and have deployed across multiple fisheries. Certified observers tend to provide better quality data and are more cost effective relative to trainees. As such, the department and the observer contacting company attempt to retain and deploy the maximum number of fully certified observers as possible.

Crab and scallop observer retention remains low due to unpredictability within shellfish fisheries and short seasonal duration. Lack of flexibility for observer provider companies to deploy observers across fisheries and observer programs throughout the year also contributes to certified observers leaving the shellfish observer program to pursue more predictable and stable employment. Extending the amount of time an observer can be absent from the crab or scallop observer program provides flexibility and aids retention without reducing observer safety or data quality.

State of Alaska crab observer regulations are a Category 3 management measure under the *Fishery Management Plan for Bering Sea/Aleutian Islands King and Tanner Crabs* (Section 8.3.7). Category 3 management measures are not rigidly specified or frame-worked in the FMP.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost to the department.

PROPOSAL 281 5 AAC 41.070. Prohibitions on importation and release of live fish.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would clarify that live oysters may be imported, transported, and possessed in Alaska for research purposes.

WHAT ARE THE CURRENT REGULATIONS? Live oysters from the Pacific Coast of North America may be imported and released in waters of Alaska, under terms of a permit issued by the department, only for aquaculture purposes.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED? Research institutions would have improved access to research subject oysters. This could lead to advances in aquaculture science that may result in growth of the aquaculture industry in Alaska. Oysters could also be held for educational purposes at non-farm locations helping with public outreach about aquatic farming, or for aquaculture training through the University or other vocational programs.

BACKGROUND: Oysters are not native to the State of Alaska. While Alaskan waters are ideal for growing oysters, waters of Alaska are too cold for them to reproduce. Artificially spawning oysters in a hatchery setting is possible but not a cost-effective solution for supplying oyster spat to the aquatic farm industry. Oysters originating from the Pacific Coast of North America may be imported into Alaska for aquaculture purposes under terms of a stock transport permit. Definitions found in 5 AAC 41.400 focus on commercial aquaculture production, which implies research would not be included. Definitions found in 5 AAC 41.899 define "aquaculture purposes" as rearing under positive control which would indicate that research could be included. This was likely an oversight when regulations related to aquatic farms were originally adopted because focus was on growing the aquaculture industry, not research. The governor's Mariculture Task Force has set a goal to grow a $100 million mariculture industry in 20 years. That growth will require research on aquatic farm species in Alaska. Research facilities have available funding and are ready to begin work immediately but are currently unable to legally obtain or possess oysters. Importation or possession of oysters in waters of Alaska or in laboratories for research purposes will not compete with the aquatic farm industry because oyster spat is readily available from commercial hatcheries outside the state and research facilities would be prohibited from selling oysters (AS 16.40.100. Aquatic Farm and Hatchery Permits).

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional cost for the department.

PROPOSAL 282 – 5 AAC 09.365. South Unimak and Shumagin Islands June Salmon Management Plan and 5 AAC 09.366. Post-June Salmon Management Plan for the South Alaska Peninsula.

PROPOSED BY: Don Bumpus.

WHAT WOULD THE PROPOSAL DO? This seeks to modify South Unimak and Shumagin Islands June fishery in 5 AAC 09.365 (1)(A) and (2)(A), so that beginning June 15 the duration of commercial fishing periods authorized under 5 AAC 09.365(d), in the Shumagin Islands Section and the "Dolgoi Islands area" (defined in (f) of 5 AAC 09.365) will be reduced from 88 hours to 40 hours on June 15 at 6:00 a.m., on June 20 at 6:00 a.m., and on June 25 at 6:00 a.m. until the department projects the mid-point of the Chignik River early-run sockeye salmon escapement goal range to be met or the Chignik Management Area (CMA) has its first commercial salmon opening. The proposal does not change the management plan prior to June 15.

This also seeks to modify the Post-June Salmon Management Plan for the South Alaska Peninsula by reducing all commercial fishing periods from July 6 through July 31 in the Shumagin Islands Section of the Southeastern District and the "Dolgoi Islands area" (defined in (j) of 5 AAC 09.366) to 18 hours until the department projects the mid-point of the Chignik River early-run sockeye salmon escapement goal range to be met or the CMA has its first commercial salmon opening.

WHAT ARE THE CURRENT REGULATIONS? The *South Unimak and Shumagin Islands June Salmon Management Plan* (5 AAC 09.365) is in effect from June 6 through June 28 (5 AAC 09.365). The South Unimak June fishery includes the following, the Unimak District as described in 5 AAC 09.200(c), the Bechevin Bay Section as described in 5 AAC 09.200(b)(2), the Southwestern District as described in 5 AAC 09.200(d), and the West Pavlof Bay and East Pavlof Bay Sections of the South Central District as described in 5 AAC 09.200(e)(1) and (2). The Shumagin Islands fishery includes the Shumagin Islands Section of the Southeastern District as described in 5 AAC 09.200(f)(3) (Figures 282-1 through 282-3).

Commercial fishing periods for the *South Unimak and Shumagin Islands June Salmon Management Plan* (5 AAC 09.365) begin on June 6 at 6:00 a.m. and close at 10:00 p.m. on June 8, a 64-hour fishing period for set gillnet gear only. Beginning at 6:00 a.m. June 10, commercial fishing by all gear types is allowed for an 88-hour fishing period which will end at 10:00 p.m. on June 13. This fishing period is followed by a closure of 32 hours for all gear types. The commercial salmon fishery is reopened for three more 88-hour fishing periods, each followed by closures of 32 hours. The final commercial fishing period in June ends at 10:00 p.m. on June 28 (Figure 282-6).

In addition to the scheduled fishing periods during the month of June, the harvest of sockeye salmon in the Western Alaska Salmon Stock Identification Program (WASSIP) described "Dolgoi Island area" is monitored through fish ticket information. Once the harvest of sockeye salmon reaches 191,000 fish, the waters of the West Pavlof Bay Section south of Black Point and the waters of the Volcano Bay Section close to commercial salmon fishing for the remainder of the June fisheries and through July 25 (Figure 282-4).

Commercial salmon fishing opportunities during the month of July consist of one 33-hour fishing period, followed by a 63-hour closure, followed by six 36-hour fishing periods, separated by 60-hour closures (5 AAC 09.366(d)). The first post-June fishing period begins on July 6, pending the results from the immature salmon test fishery. July fishing periods begin at 6:00 a.m. on July 6, and end on July 31 at 6:00 p.m. (5 AAC 09.366(d); 9; Figure 282-7).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED? During the June fishery, fishing time would be reduced from 416 hours to 272 hours for set gillnet gear in the "Dolgoi Island area" and the Shumagin Islands Section of the Southeastern District, and from 352 hours to 208 hours for purse seine gear in the Shumagin Islands Section of the Southeastern District, and from 352 to 208 hours for drift gillnet gear in the outer portion of the "Dolgoi Islands area" until the department projects the mid-point of the Chignik River sockeye salmon escapement goal range to be met, or the CMA has its first commercial salmon opening (Figure 282-6).

In the post-June fishery, fishing time in the "Dolgoi Island area" and the Shumagin Islands Section of the Southeastern District would be reduced from 249 hours to 126 hours for set gillnet and purse seine gear in those areas until the department projects the mid-point of Chignik River sockeye salmon escapement goal range to be met, or the CMA has its first commercial salmon opening (Figure 282-7).

This would likely reduce the harvest of all species of salmon in the Alaska Peninsula Management Area by an unknown amount depending on annual run strength and run timing and potentially increase the number of sockeye salmon returning to CMA. This would likely result in increased purse seine fishing effort in the South Unimak and Ikatan Bay areas. Shifting purse seine fishing effort west would likely result in increased gear conflicts between the purse seine and drift gillnet fleets and increase the proportion of Bristol Bay and western Alaska-origin salmon in the Alaska Peninsula harvest.

BACKGROUND:

June fishery:

In February 2004, the board modified the *South Unimak and Shumagin Islands June Fisheries Management Plan* (5 AAC 09.365 (b)). Prior to 2004, the South Unimak June fishery was not allowed to occur in the South Central District. In the Southwestern District during the June fishery, the current regulation language has been in effect since 1990. In 1988 and 1989, fishing was only allowed in the Ikatan Bay Section of the Southwestern District. Prior to 1988, the Southwestern District was generally opened by emergency order in June every year. Prior to 1977, when the commercial fishery was open in June, only limited fishing effort occurred in the South Central District and in part of the Southwestern District.

Those opposed to enlarging the June fishery harvest area argued that Bristol Bay, and Arctic-Yukon-Kuskokwim stocks of management and yield concerns were present, and that increasing the June fishing area could increase the harvest of these stocks. Those in favor of enlarging the fishery area suggested that the current areas were congested, that harvestable quantities of sockeye

salmon were present in the expanded area, and that the stocks of management and yield concern would not be significantly impacted by allowing fishing in new areas.

During the February 2016 meeting, the board made changes to the *Post-June Salmon Management Plan for the South Alaska Peninsula* by adopting regulation to limit the number of sockeye salmon harvested in the Western Alaska Salmon Stock Identification Program (WASSIP) described "Dolgoi Island Area" (statistical areas 283-15 through 283-26 and 284-36 through 284-42). From June 1 through July 25, a harvest limit of 191,000 sockeye salmon, based on fish ticket information, was created. Once this harvest limit is reached, the portion of the West Pavlof Bay Section south of Black Point (statistical area 283-26) and waters of the Volcano Bay Section (statistical areas 284-37 through 284-39) will be closed to commercial salmon fishing through July 25. However, the portion of West Pavlof Bay Section south of Black Point (statistical area 283-26) may reopen to commercial salmon fishing on July 17. All other statistical areas are managed in accordance with each prescribed management plan. In addition to the changes made in the "Dolgoi Islands Area", the board also repealed the minimum mesh size of a drift gillnet during the post-June fisheries. There is now no minimum mesh size in Registration Area M for drift gillnet gear.

In 2018, the early-run Chignik River sockeye salmon escapement was historically low and the department reduced the last two fishing periods of the South Unimak and Shumagin Islands June Salmon Management Plan from 88 hours to 40 hours for the entire South Alaska Peninsula Area for all gear types. On July 14, the department closed the "Dolgoi Islands area" until July 25, which adhered to the board's adoption of emergency regulations from the July 17, 2018, emergency petition meeting.

During the February 2019 Alaska Peninsula, Aleutian Islands, and Chignik meeting, the board made changes to the *South Unimak and Shumagin Islands June Salmon Management Plan* (5AAC 09.365) by amending subsection (d) that establishes the June fishing schedule to align fishing times for all gear types. Additionally, the board added a new subsection to the *South Unimak and Shumagin Islands June Salmon Management Plan* (5 AAC 09.365(g)) to close the "Dolgoi Island area" to purse seine gear in June.

In 2020, the early-run Chignik River sockeye salmon escapement was again historically low and the department closed the "Dolgoi Islands area" beginning June 15 through July 30. The department also reduced the last two fishing periods in the Shumagin Islands Section of the Southeastern District from 88 hours to 40 hours each. These actions were outside the adopted management plan, taken under the commissioner's emergency authority to conserve Chignik River sockeye salmon.

Harvest information from the Shumagin Islands Section of the Southeastern District and the "Dolgoi Islands area" in the June fishery is summarized in Table 282-1 and more harvest information can be found in the "South Alaska Peninsula Salmon Annual Management Report, 2021, and the 2020 Subsistence Fisheries in the Alaska Peninsula, Aleutian Islands, and Atka-Amlia Islands Management Areas" in Appendix B.

Stock composition estimates and harvest rates of the early-run (Black Lake) Chignik River sockeye salmon results from WASSIP for the June Shumagin Island Section of the Southeastern District and the "Dolgoi Islands area" samples are summarized in Tables 282-3 and 282-4.

Post-June fishery:

Prior to 1974, the July South Alaska Peninsula salmon fishery was generally open five days per week with a total season closure on August 10. During the 1974 and 1975 fishing season, the fishery was severely restricted to rebuild pink salmon runs. From 1976 through 1991, the salmon fishery was managed by emergency order based on local stock run strength. Fishing periods from July 6 through July 18 were based on chum salmon run strength and from July 18 through about August 20 on pink salmon run strength.

In November of 1991, the board established the *Post-June Salmon Management Plan for the South Alaska Peninsula* (5 AAC 09.366). The plan essentially limited fishing from July 6 through July 19 to designated terminal areas. From 1993 through 1997, harvests in the July 6 through July 19 period in the South Alaska Peninsula were significantly lower than pre-1993 harvests for the same period. One reason for closing most of the South Peninsula during July 6 through July 19 was the board's desire to minimize July coho salmon harvests.

The Stepovak-Shumagin Setnet Association sued the board in early 1992 to stop the implementation of the *Post-June Salmon Management Plan for the South Alaska Peninsula* (5 AAC 09.366). On July 10, 1992, Alaska State Superior Court Judge Hopwood (Third Judicial District, Kodiak) granted a preliminary injunction staying the implementation of the new management plan. On July 13, traditional commercial salmon fishing periods resumed, and additional fishing time was provided as conditions warranted.

In February 1993, the Alaska State Superior Court dissolved the 1992 injunction, and granted the board's cross-motion for summary judgment. As a result, the *Post-June Salmon Management Plan* was reinstated. The *Post-June South Alaska Peninsula Management Plan* was in effect from 1993 to 1997.

During the 2001 meeting, the board made only minor changes to the *Post-June Salmon Management Plan for the South Alaska Peninsula*. These changes included modifying terminal harvest area boundaries and clarifying the definition of immature salmon during the department's July test fishery. For purposes of the test fishery, immature salmon were defined as those king, sockeye, coho, and chum salmon that were gilled in the seine web during the test fishery.

In 2004, the board adopted few changes to the *Post-June Salmon Management Plan for the South Alaska Peninsula*. The 60,000 coho salmon cap, enacted in 1998 for nonterminal areas from July 22 through July 31, was rescinded. The board also determined that the global positioning system (GPS) would be used to determine latitude and longitude coordinates throughout all salmon fisheries in Registration Area M. In 2007, the board did not make any changes to the *Post-June Salmon Management Plan for the South Alaska Peninsula*. A summary of these changes can be found in the "Alaska Board of Fisheries Findings on February 2004 Amendments to the South Unimak and Shumagin Islands June Salmon Management Plan."

The 2013 board amended the July fishing schedule (5 AAC 09.366(d)) in the *Post-June Salmon Management Plan for the South Alaska Peninsula* by consolidating the number of fishing periods from nine to seven, while still offering the same 249 hours of fishing time. Additional fishing time could be permitted in designated terminal harvest areas if escapements of pink and chum salmon were warranted, however terminal areas within the Southeastern District Mainland, the Stepovak Flats and Northwest Stepovak sections, were repealed from the *Post-June Salmon Management Plan for the South Alaska Peninsula.*

During the 2013 meeting, the board made changes to the schedule of the *Post-June Salmon Management Plan for the South Alaska Peninsula*. The first fishing period would begin at 6:00 a.m. on July 6 for 33 hours, followed by a 63-hour closure. After the initial fishing period, there would be six 36-hour fishing periods that would begin at 6:00 a.m. and be interspersed by 60-hour closures. All other components of the *Post-June Salmon Management Plan for the South Alaska Peninsula* would remain unchanged.

Harvest information from the Shumagin Islands Section of the Southeastern District and the "Dolgoi Islands area" in July in the post-June fishery is summarized in Table 282-2 and more harvest information can be found in the "South Alaska Peninsula Salmon Annual Management Report, 2021, and the 2020 Subsistence Fisheries in the Alaska Peninsula, Aleutian Islands, and Atka-Amlia Islands Management Areas" in Appendix D.

Stock composition estimates and harvest rates of the early-run (Black Lake) Chignik River sockeye salmon results from WASSIP for the post-June Shumagin Island Section of the Southeastern District and the "Dolgoi Islands area" samples are summarized in Tables 282-3 and 282-4. The contribution of early-run Chignik River to the June fishery in the Shumagin Islands area ranged from 0.2-28.8% in 2006-2008, 15.9-73.9% to the June fishery in the Dolgoi Islands area, 0.0-8.5% to the post-June fishery in the Shumagin Islands area, and 7.2-34.9% to the post-June fishery in the Dolgoi Islands area. The harvest rate of early-run Chignik River in the June fishery in the Shumagin Islands area ranged from 2.3-5.4%, 1.6-12.6% in the June fishery in the Dolgoi Islands area, 1.0-1.6% in the post-June fishery in the Shumagin Islands area, and 0.4-6.4% in the post-June fishery in the Shumagin Islands area.

Chignik early-run escapement:

Since 2011, the midpoint (400,000 sockeye salmon) of the Chignik River early-run BEG (350,000 – 450,000 sockeye salmon) has been achieved in 2011, 2015, 2016, and 2017. The lower bound of 350,000 sockeye salmon has not been achieved since 2017. The date of the first commercial salmon opener in the CMA has ranged from June 5 in 2011, to July 12 in 2021. No commercial salmon opener occurred in the CMA during 2020 (table 282-5). The department last reviewed these escapement goals in 2019. The department will again review these goals as part of the next regularly scheduled Chignik finfish board meeting.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in the impacted fisheries. Approval of this proposal is not expected to result in an additional cost for the department.

Figure 282-1.–Map of the areas that are currently in regulation to open for the South Unimak and Shumagin Islands June salmon fishery.

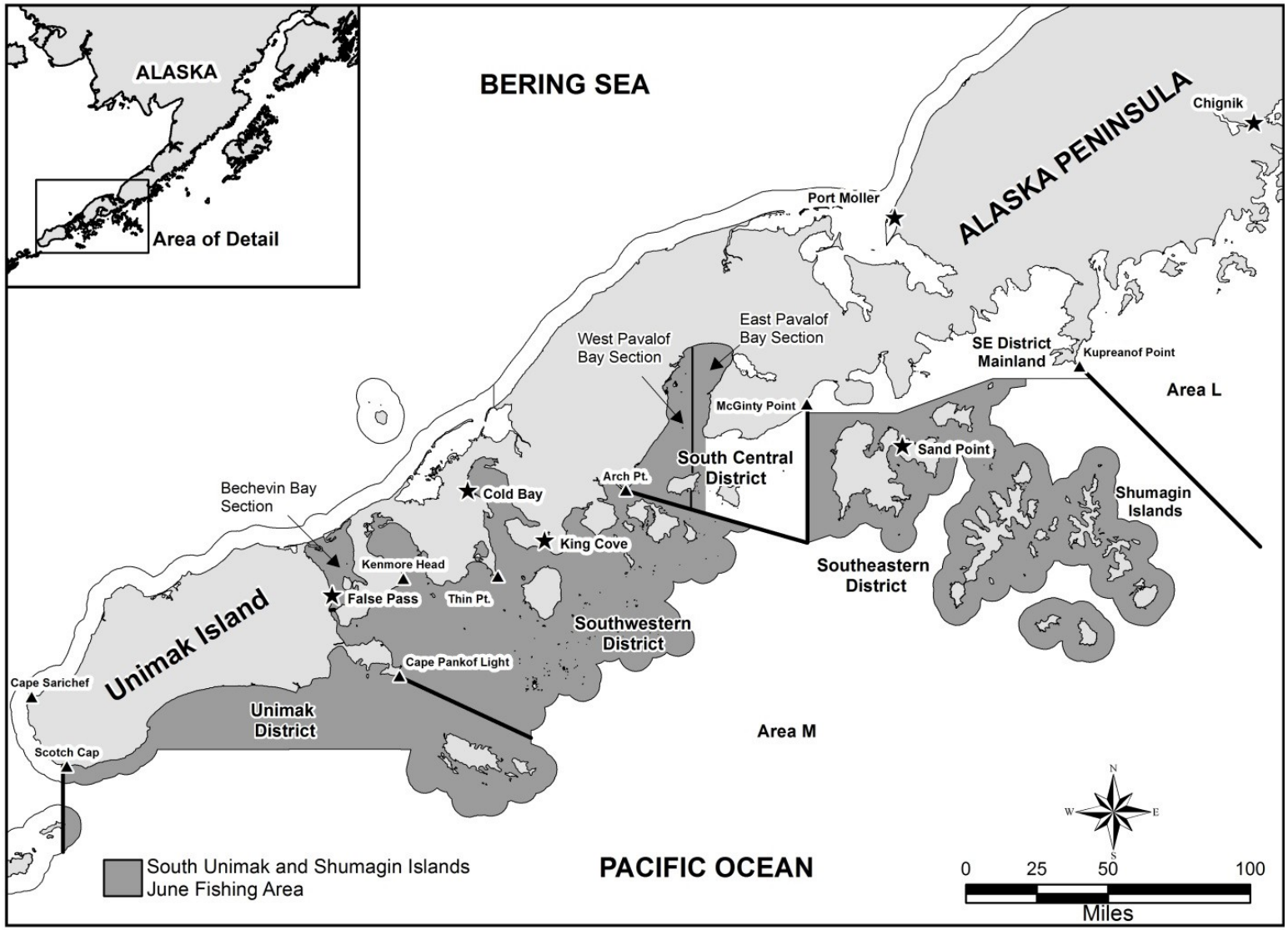

Figure 282-2.–Map depicting the locations fisheries for purse seine and set gillnet gear currently in regulation for the *South Unimak and Shumagin Islands June Salmon Management Plan*.

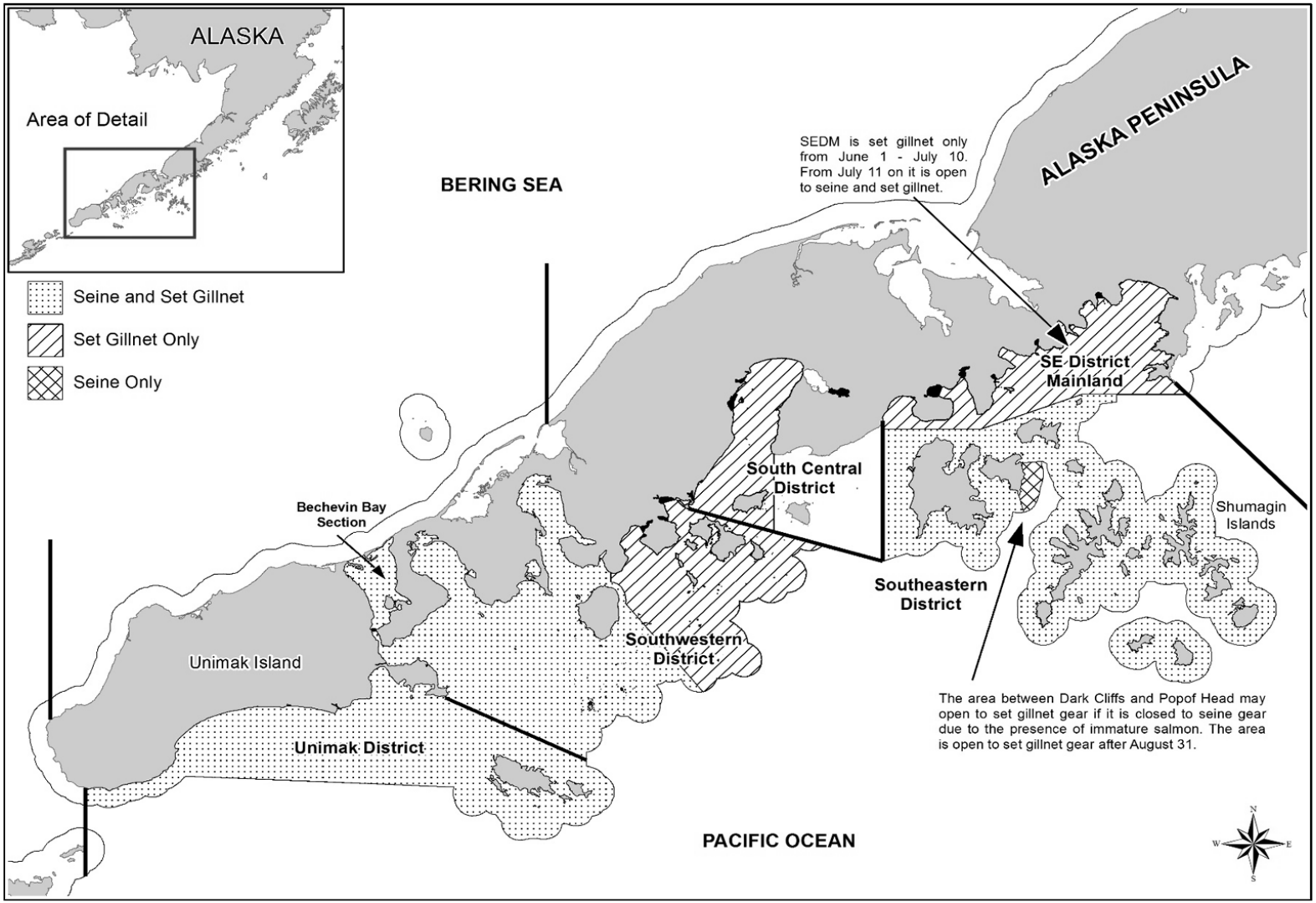

Figure 282-3.–Map depicting the locations fisheries for drift gillnet gear currently in regulation for the *South Unimak and Shumagin Islands June Salmon Management Plan*.

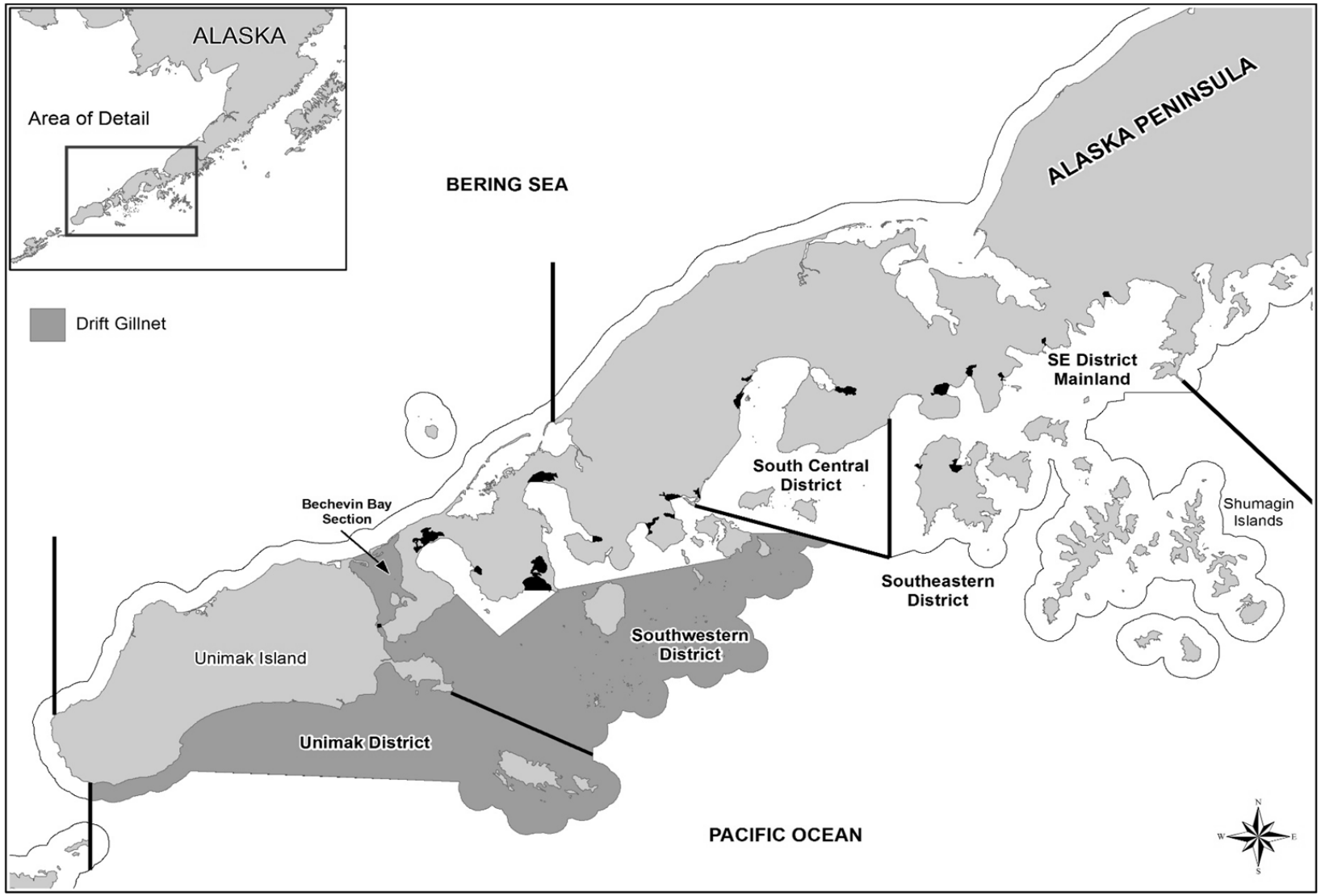

Figure 282-4.–Map depicting the locations fisheries for all gear types currently in regulation for the *Post-June Salmon Management Plan for the South Alaska Peninsula*.

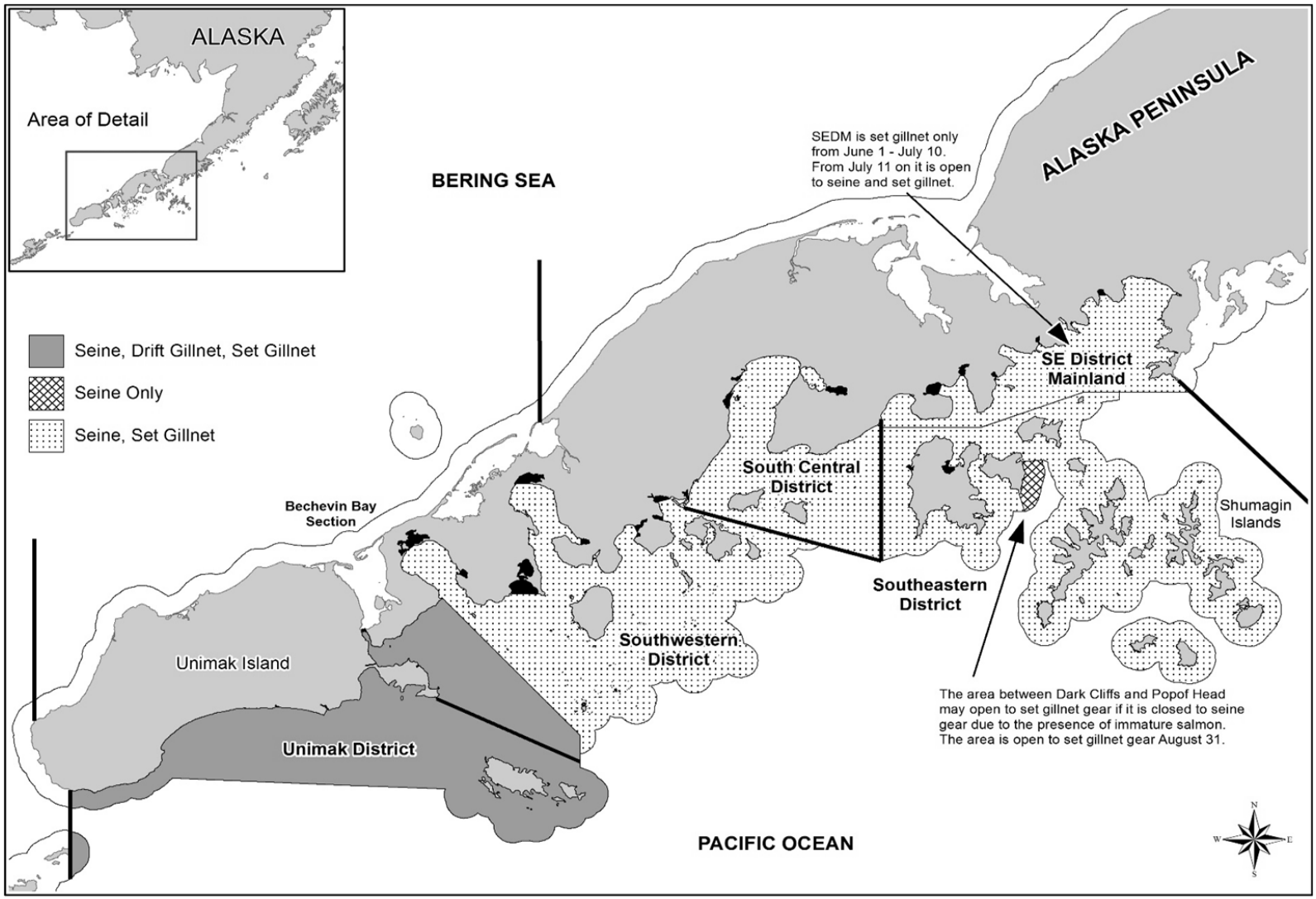

Figure 282-5.–Map of the "Dolgoi Island area" as defined in the *South Unimak and Shumagin Islands June Salmon Management* and *Post-June Salmon Management Plan for the South Alaska Peninsula.*

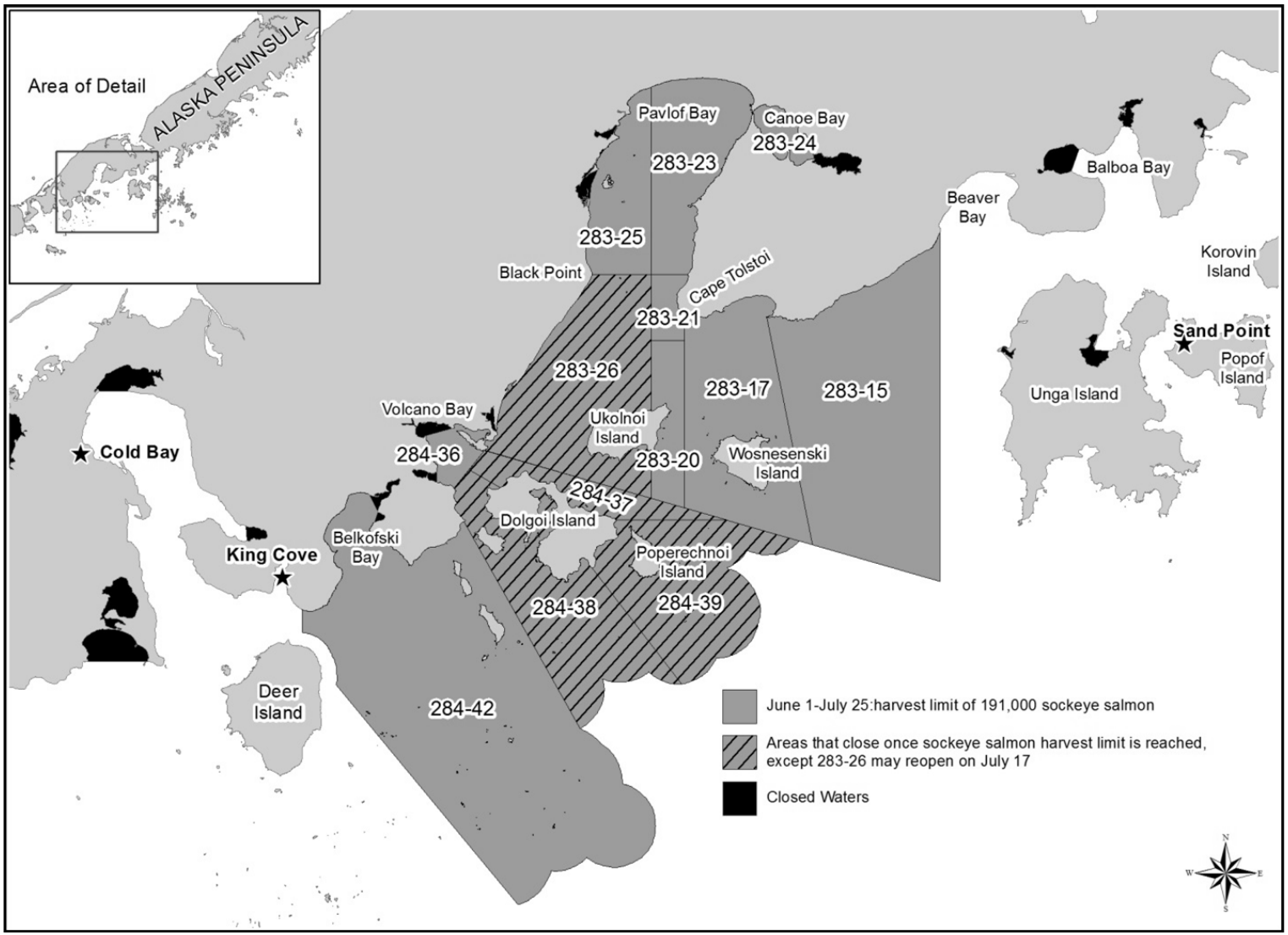

Figure 282-6.–Calendar of current fishing periods in the June salmon management plan fishery and the proposed fishery periods in the Shumagin Islands Section of the Southeastern District and "Dolgoi Island area" of the South Central and Southwestern Districts until the mid-point of the early-run Chignik sockeye salmon escapement goals are met and Chignik has had its first commercial salmon fishery.

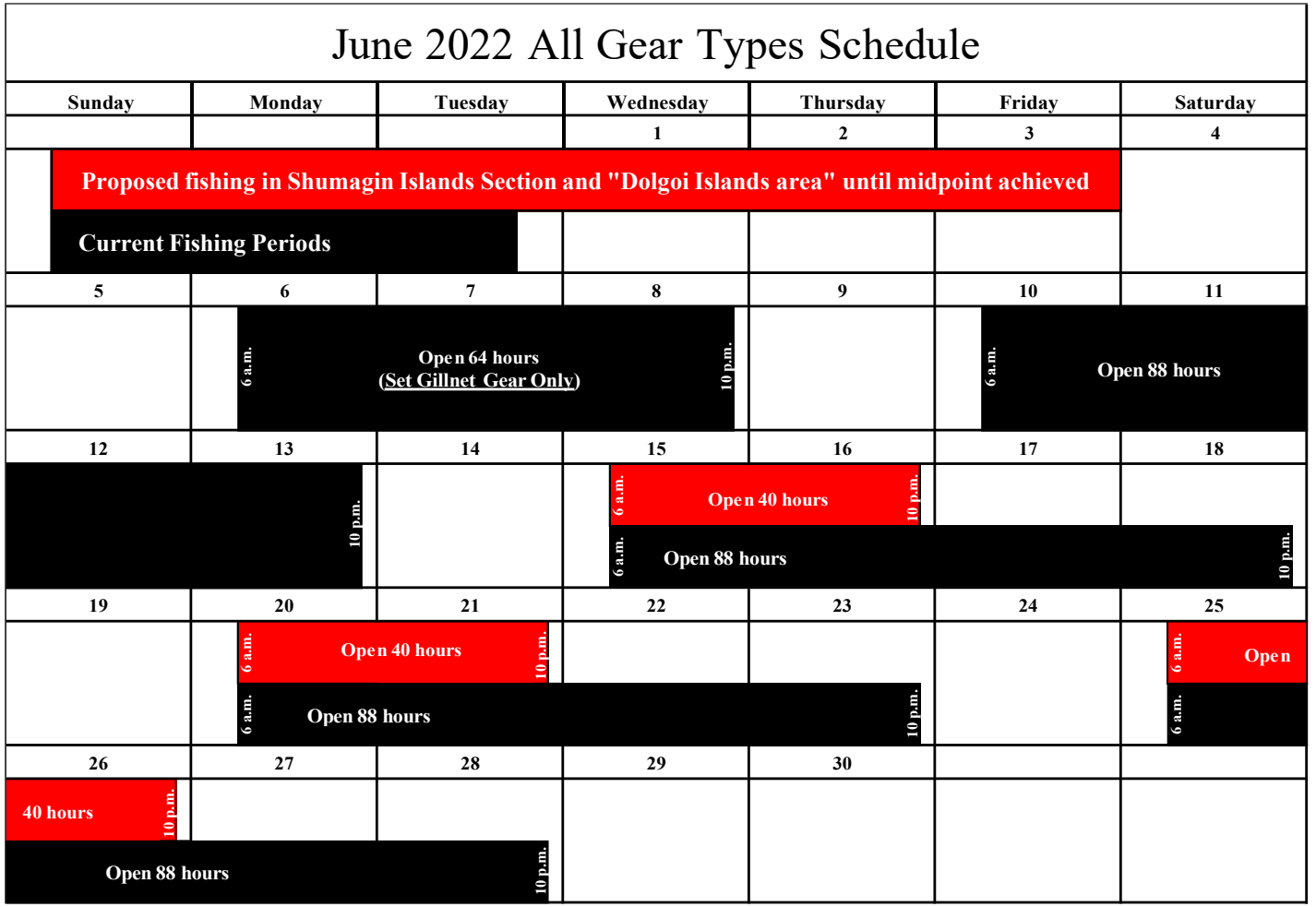

Figure 282-7.–Calendar of current fishing periods in the post-June fishery and the proposed fishery periods in the Shumagin Islands Section of the Southeastern District and “Dolgoi Island area” of the South Central and Southwestern Districts until the mid-point of the early-run Chignik sockeye salmon escapement goals are met and Chignik has had its first commercial salmon fishery.

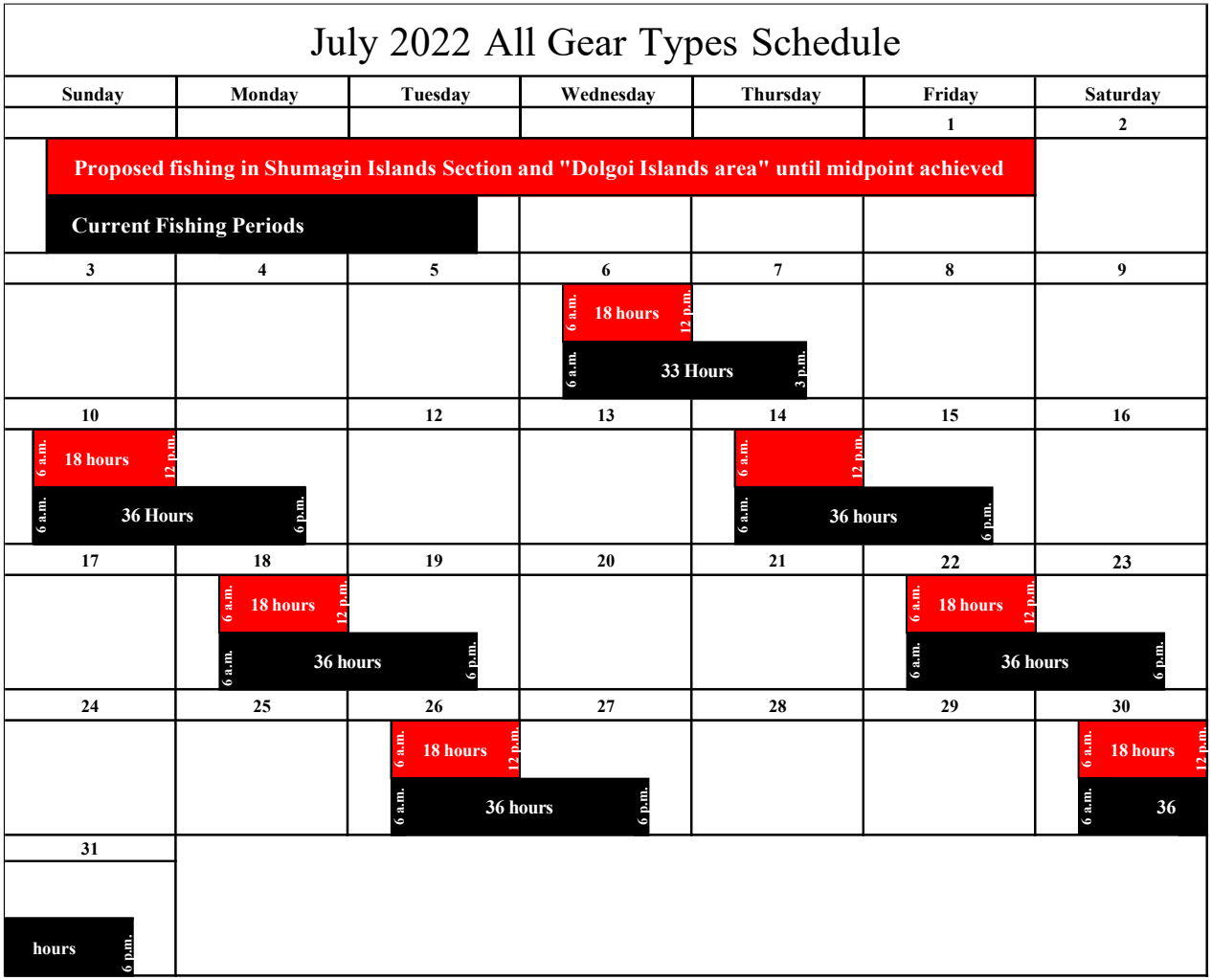

Table 282-1.–Shumagin Islands Section and “Dolgoi Islands area” commercial harvest of sockeye salmon in June.

Year	Shumagin Islands	"Dolgoi Islands area"
2011	422,273	27,504
2012	641,213	29,900
2013	513,513	14,411
2014	239,482	79,488
2015	497,019	480,653
2016	415,897	339,012
2017	884,430	176,981
2018	406,806	11,941
2019	246,419	30,993
2020	118,596	2,521
2021	1,168,998	10,830
2011-2020 Average	438,565	119,340

Table 282-2.–Shumagin Islands Section and “Dolgoi Islands area” commercial harvest of sockeye salmon in July.

Year	Shumagin Islands	"Dolgoi Islands area"
2011	191,905	42,346
2012	120,063	36,700
2013	154,953	36,993
2014	395,465	242,039
2015	635,388	508,274
2016	427,163	267,630
2017	395,881	243,103
2018	337,209	42,698
2019	534,937	132,835
2020	393,403	65,765
2021	541,694	152,496
2011-2020 Average	358,637	161,838

Table 282-3.–Stock composition estimates of the early-run (Black Lake) Chignik River sockeye salmon from WASSIP samples taken in June and July in the Shumagin Islands Section of the Southeastern District and the “Dolgoi Islands area” from 2006-2008 (Appendices D1-D6 and E1-E8).

			June			July	
Year	Area Sampled	(6/7-6/13)	(6/14-6/20)	(6/22-6/29)	(7/6-7-12)	(7/14-7/21)	(7/23-7/31)
2006	Shumagin Islands	7.1	28.8	9.2	7.0	8.5	7.6
	"Dolgoi Islands area"	54.8	72.3	73.9		34.9 (7/6-7/31)	
2007	Shumagin Islands	1.0	0.2	3.3	1.8	5.2	1.6
	"Dolgoi Islands area"	21.6	28.1	15.9		7.2 (7/6-7/31)	
2008	Shumagin Islands	No sample	3.5	4.7	9.8	0.7	0.0
	"Dolgoi Islands area"	42.3	40.6	25.8		8.2 (7/6-7/31)	

Table 282-4.–Harvest rates of the early-run (Black Lake) Chignik River sockeye salmon from WASSIP samples taken in June and July in the Shumagin Islands Section of the Southeastern District and the “Dolgoi Islands area” from 2006-2008 (Appendices D19-D24 and D31-D36).

Year	Area Sampled	June	Post-June
2006	Shumagin Islands	5.4	1.6
	"Dolgoi Islands area"	12.6	6.4
2007	Shumagin Islands	2.3	1.4
	"Dolgoi Islands area"	2.4	2.4
2008	Shumagin Islands	3.8	1.0
	"Dolgoi Islands area"	1.6	0.4

Table 282-5.–Date that the midpoint (400,000 sockeye salmon) of the early run BEG (350,000 – 450,000 sockeye salmon) was met, and date of the first commercial salmon opening in the CMA.

Year	Date Midpoint Escapement Met	Date of First Commercial Opening
2011[a]	22-Jun	5-Jun
2012[a]	Midpoint not achieved	8-Jun
2013[a]	Midpoint not achieved	6-Jun
2014	Midpoint not achieved	12-Jul
2015	6-Jul	24-Jun
2016	15-Jul	4-Jun
2017	12-Jul	10-Jun
2018[b, c]	Midpoint not achieved	7-Jul
2019[b]	Midpoint not achieved	6-Jul
2020[c]	Midpoint not achieved	No opening occurred
2021[b]	Midpoint not achieved	12-Jul

[a] The BEG during this time period was 350,000 – 400,000 sockeye salmon
[b] Initial opener targeted pink and chum salmon in select inner bays.
[c] No opener occurred this year targeting sockeye salmon.

PROPOSAL 283 – 5 AAC 21.359. Kenai River Late-Run King Salmon Management Plan.

PROPOSED BY: This is a Board generated proposal from the Alaska Board of Fisheries based on ACRs heard at the October 2021 meeting.

WHAT WOULD THE PROPOSAL DO? This proposal would amend *Kenai River Late-Run King Salmon Management Plan* (5 AAC 21.359; KRLKSMP) and allow, at the discretion of the Commissioner, sockeye salmon directed commercial set gillnet fishing within 600 feet of mean high tide in the Upper Subdistrict (ESSN) of Upper Cook Inlet (UCI) when escapement of late-run Kenai River king salmon exceeds the Sustainable Escapement Goal (SEG) and Kenai and Kasilof river sockeye salmon escapement objectives are being met. The proposal would impact the current "paired restriction" framework in that the inriver sport fishery would remain closed while allowing the harvest of king salmon in the eastside side setnet fishery.

WHAT ARE THE CURRENT REGULATIONS? Both the *Kenai River Late-Run Sockeye Salmon Management Plan* (5 AAC 21.360; KRLSMP) and the *Kasilof River Sockeye Salmon Management Plan* (5 AAC 21.21.365; KRSMP) contain provisions to manage sockeye salmon based on sockeye salmon abundance that are specifically preempted by the KRLKSMP when preseason or inseason Kenai River king salmon abundance is low. This regulatory management framework is commonly known as "paired restrictions".

The KRLKSMP states the purposes of the management plan are to ensure escapement of late-run king salmon into the Kenai River system and provide management guidelines to the department towards that purpose. Under the plan, the department shall manage the late run of Kenai River king salmon to achieve an optimal escapement goal (OEG) of 15,000–30,000 king salmon 75 cm mid eye to tail fork and longer. This plan also states that the department shall manage the late-run Kenai River king salmon stocks primarily for sport and guided sport uses to provide sport and guided sport fishermen with a reasonable opportunity to harvest these salmon resources over the entire run, as measured by the frequency of inriver restrictions. If the preseason or inseason abundance of Kenai River late-run large king salmon suggests indicates the OEG will not be met, without restrictions to harvest, the KRLKSMP stipulates step down limitations to sport, personal use, and commercial fisheries (i.e., paired restrictions). Specifics of the KRLKSMP are as follows:

If the projected late-run king salmon escapement is less than 15,000 king salmon 75 cm mid eye to tail fork and longer, the department shall

- close the sport fisheries in the Kenai River and in the salt waters of Cook Inlet north of the latitude of Bluff Point to the taking of king salmon;
- close the commercial drift gillnet fishery in the Central District within one mile of the Kenai Peninsula shoreline north of the Kenai River and within one and one-half miles of the Kenai Peninsula shoreline south of the Kenai River;
- close the commercial set gillnet fishery in the Upper Subdistrict of the Central District.

In order to achieve the optimal escapement goal and provide reasonable harvest opportunity, the commissioner may, by emergency order, establish fishing seasons as follows:

- in the Kenai River sport fishery (open July 1 – July 31);
    - the use of bait is prohibited or

    - the use of bait is prohibited and retention of king salmon 34 inches or greater in length is prohibited, or
    - the use of bait and retention of king salmon are prohibited
- in the Kenai River personal use fishery, if the use of bait is prohibited in the Kenai River sport fishery then the retention of king salmon is prohibited in the personal use fishery.
- in the Upper Subdistrict set gillnet commercial fishery, excluding the East Foreland Section, notwithstanding the provisions of 5 AAC 21.360(c)(1)(B), (2)(B), and (3)(B), based on the abundance of sockeye salmon returning to the Kenai and Kasilof Rivers,
    - if the use of bait is prohibited in the Kenai River sport fishery commercial fishing periods are open for no more than 48 hours per week, with a 36-hour continuous closure per week beginning between 7:00 p.m. Thursday and 7:00 a.m. Friday, during which the number of set gillnets operated may also be restricted to either
        - four set gillnets that are each not more than 35 fathoms in length, 105 fathoms in aggregate length, and 29 meshes in depth,
        - or two set gillnets that are each not more than 35 fathoms in length and 45 meshes in depth or
- if the use of bait and the retention of king salmon greater than 34 inches in length are prohibited in the Kenai River sport fishery, commercial fishing periods are open for no more than 36 hours per week, with a 36-hour continuous closure per week beginning between 7:00 p.m. Thursday and 7:00 a.m. Friday.
- if the use of bait and the retention of king salmon are prohibited in the Kenai River sport fishery, commercial fishing periods are open for no more than 24 hours per week, with a 36-hour continuous closure per week beginning between 7:00 p.m. Thursday and 7:00 a.m. Friday.

The provisions of this section do not apply to provisions of the KRSMP that pertain to the Kasilof Special Harvest Area. Area reduction options for the ESSN fishery are also established in the KRSMP,.. The KRSMP stipulates that the Kasilof Section may be opened and restricted to half mile of shore after July 15, or to within 600 feet of shore if the Kenai and East Foreland sections are closed. Additionally, any ESSN open periods may be restricted to the Kasilof River Special Harvest Area (KRSHA) on or after July 8, or if of the Kasilof River sockeye salmon escapement projection exceeds 365,000 fish. Finally, by regulation, the Kasilof Section is a part of the ESSN fishery, and subject to paired restrictions under the KRLKSMP, including closure if the Kenai River Late Run King Salmon OEG is not projected to be met.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would grant the Commissioner discretionary authority to open the ESSN fishery within 600 feet of the mean high tide mark on the Kenai Peninsula shoreline when the escapement estimate (sonar count minus inriver harvest) of Kenai River late-run large king salmon is greater than 13,500 fish, and less than 15,000 fish. This would impact the current paired restriction regulatory framework and allow ESSN openings at king salmon abundance levels that close the sport and personal use fisheries to retention of king salmon. Additional ESSN openings within 600 feet of the mean high tide mark would increase ESSN harvest of all salmon species, including king salmon, by an unknown amount. Based on king salmon run timing in years of low abundance, the escapement estimate would be between 13,500 and 15,000 fish late in the season and any potential harvest opportunity in the ESSN fishery would most likely occur in August.

BACKGROUND: Management of fisheries throughout Cook Inlet is complex, intertwined, and controversial. Many fisheries harvest mixed stocks. Additionally, fisheries harvest an array of weak and strong stocks. Finally, a diversity of users harvests these stocks including subsistence, sport, personal use, and commercial users.

The current regulatory framework used to manage fisheries throughout Cook Inlet is the result of years of work by various boards, the public and the department. This includes the paired restrictions regulatory framework described above.

As stated, salmon management plans that govern the fisheries that take Kenai and Kasilof river salmon in UCI are intertwined, and most fisheries are to some degree mixed stock in nature. Both the KRLSMP and the KRSMP, contain provisions to manage sockeye salmon based on sockeye salmon abundance that are specifically preempted by the KRLKSMP when preseason or inseason Kenai River king salmon abundance is projected to not be sufficient to meet established king salmon escapement goals.

The KRLKSMP has contained regulations to restrict and close sport king salmon fisheries and ESSN commercial fisheries for all species since its inception in 1988. Prior to 2014, the only paired restriction was to close the king salmon sport fisheries in the Kenai River and salt waters of Cook Inlet north of Bluff Point; the commercial drift gillnet fishery in the Central District within one mile of the Kenai Peninsula shoreline north of the Kenai River and within one-half miles south of the Kenai River; and the commercial set gillnet fishery in the Upper Subdistrict. In 2014, in an effort to share the burden of conservation of Kenai River late-run king salmon, the board modified the KRLKSMP to include the step-down restrictions in sport, commercial, and personal use fisheries during periods of low Kenai River king salmon abundance. The current OEG (15,000-30,000) for Kenai River late-run king salmon was established by the board in 2020. The current SEG (13,500-27,000) was established by the department in 2017. It was reviewed by the department in 2020 and was not changed. It will again be reviewed by the department during the next Upper Cook Inlet regularly scheduled meeting.

The ESSN fishery occurs along approximately 60 miles of beach (Figure 1). The fishery primarily harvests sockeye, coho, pink, and king salmon returning to the Kenai and Kasilof rivers. Area and or gear restriction options were first enacted in the ESSN fishery in 2011. Changes to gear and the open fishery area have occurred in area regulation (5 AAC 21.310 and 21.320) and in management plans. The board modified the *KRSMP* in 2011 to include potential area restrictions of the Kasilof section commercial fishery to prescribe restricted fishing options within half mile from shore, within 600 feet of the mean high tide mark on the Kenai Peninsula shoreline, and or to within the Kasilof River Special Harvest area (*KRSHA)*. In 2017, the ability to restrict the North Kalifornsky Beach (NKB) statistical area stat area to within 600 feet of the mean high tide mark on the Kenai Peninsula shoreline was also added to regulation. In 2020, restrictions for potential 600-foot openings were added for the Kenai and East Foreland sections into the KRLKSMP. This was added under the assumption that most Kenai River king salmon migrate offshore and nets fishing within 600 feet of shore would have reduced harvest of king salmon.

Currently, any potential ESSN 600-foot opening is also gear restricted with one of two available options discretionarily available to the Commissioner. The hours used while restricted to 600 feet of the mean high tide mark on the Kenai Peninsula shoreline are not included towards the weekly hour restrictions of the KRLKSMP. The available gear restrictions limit gillnet gear in the ESSN fishery by approximately 1/3 or 2/3 depending on which is option is implemented. Also, failing to project achieving the OEG closes the ESSN fishery in its entirely, including the Kasilof Section. Finally, in 2020, the paired restrictions of the KRLKSMP were extended to affect the Kasilof Section as early as June 20 and continue as late as August 15.

Not all ESSN fishery sites are able to fish during openings limited to within 600 feet of shore. The topography of some sites leaves much of the area within 600 feet of shore with no water at most tide levels. As such these sites are exposed mudflats out to 600 feet for most of the open fishing time, and the water may never be deep enough for effective set gillnetting during an opening limited to 600 feet from shore in some sites. Additionally, some ESSN set gillnetters do not have shore-based sites and they fish in offshore areas beyond 600 feet. As such these offshore set gillnetters cannot fish at all when openings are limited to within 600 feet of shore.

Inseason escapement projections of king salmon and management actions are based upon sonar passage estimates and inriver mortality estimates obtained from creel surveys. Between June 20 and August 15, once restrictions to the Kenai River king salmon sport fishery are announced, a restriction to the ESSN fishery is required under the paired restriction regulatory framework. Inseason management decisions are based on current run entry that is used to project if the OEG will be achieved and management actions are implemented if harvest reductions are needed to ensure the OEG is achieved.

From 2017 to 2021, the late-run king salmon SEG was met in 2 of 5 years whereas the OEG has not been met since its establishment in 2020. Since establishment of the OEG in 2020, neither the SEC nor the OEG has been attained.

Since 2011, the Kenai River sockeye salmon escapement and inriver goals (Table 2) have been met or exceeded in all years. From 2017 to 2020 the Kenai River late-run sockeye salmon SEG was achieved or exceeded; however, the 2021 final escapement is not yet known. In 2021, 2.4 million sockeye salmon were estimated at the Kenai River sonar (Table 2). The 2019 and 2020 sockeye salmon escapements were the largest since 2011 for the Kenai River, and 2021 was the highest recorded inriver count. From 2011 to 2016, the Kasilof River sockeye salmon escapement goal (Table 3) was achieved or exceed in all years. From 2017 to 2021, the Kasilof River sockeye salmon goal was achieved or exceeded. For years 2020 and 2021, the escapements of sockeye salmon into the Kasilof River were the largest since 2011. This said, the department has yet to see an impact from exceeding the sockeye salmon escapement goals in either the Kasilof or Kenai River in that neither system has ever failed to replace an escapement.

The numbers of king salmon harvested in the ESSN fishery is estimated from fish tickets. This likely underestimates the total mortality of king salmon in that drop-outs and delayed mortality of released fish is not accounted for. Accurate accounting of mortality from these sources would require some type of observer program.

The department's ability to estimate king salmon stock composition of ESSN harvest in 600-foot fisheries is limited due to many inconsistent annual variables that affect stock specific resolution and accuracy. Due to small sample sizes, the calculation of the stock composition of large king salmon harvested during individual ESSN openings, or during ESSN openings that are restricted to 600 feet of shore is unknown.

Post season estimation of the stock composition of large king salmon harvest in the ESSN fishery has been available when calculated for timeframes and areas that allow for appropriate sample sizes. There are 10 years of annual stock composition and stock-specific harvest estimates for large king salmon relative to all-fish harvest in the ESSN fishery dating back to 2010 (Table 4). Overall, Kenai River mainstem fish have comprised the greatest proportion of the large fish harvest every year, averaging 0.33 of the annual harvest of all fish sizes, ranging from 0.19 (2020) to 0.63 (2017). The average harvest of large Kenai River mainstem was 1,631 fish (range: 166–2,998 fish) with the lowest harvests occurring in 2013–2014 and 2018–2020, when management of the ESSN fishery was restricted by low king salmon abundance.

ESSN harvest of all salmon species has declined since 2011 (Table 5). Harvest of king salmon during openings of the ESSN fishery is variable but tends to decrease as the area open to fishing decreases. (Table 6).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal.

Table 283.1. Kenai river Late-run king salmon escapement data since large fish goal was adopted 2017 – 2021.

Year		Escapement	SEG/BEG	OEG
2017	**Large Fish**	20,615	**13,500–27,000**	-
2018		17,289	**13,500–27,000**	-
2019		11,638	**13,500–27,000**	-
2020		11,909	13,500–27,000	**15,000–30,000**
2021[a]		12,176	13,500–27,000	**15,000–30,000**
Averages				
2017–2021		14,725		

Note* Large fish are king salmon that are 75 cm from mideye to tail fork in length or longer

[a]These estimates are preliminary until biometrically reviewed and published.

Table 283.2. Kenai River late-run sockeye salmon escapement data 1990 – 2021.

Year	Kenai River Sonar Count	Spawning Escapement	Inriver Goal	BEG/SEG	OEG
2011	1,599,217	1,280,675	1,100,000-1,350,000	700,000-1,200,000	**700,000-1,400,000**
2012	1,581,555	1,212,835	1,100,000-1,350,000	700,000-1,200,000	**700,000-1,400,000**
2013	1,359,893	980,208	1,000,000-1,200,000	700,000-1,200,000	**700,000-1,400,000**
2014	1,520,340	1,218,342	1,000,000-1,200,000	700,000-1,200,000	**700,000-1,400,000**
2015	1,709,051	1,400,047	1,000,000-1,200,000	700,000-1,200,000	**700,000-1,400,000**
2016	1,383,692	1,119,988	1,100,000-1,350,000	700,000-1,200,000	**700,000-1,400,000**
2017	1,308,498	1,071,064	1,000,000-1,300,000	**700,000-1,200,000**	repealed
2018	1,035,761	886,761	900,000-1,100,000	**700,000-1,200,000**	-
2019	1,849,054	1,457,031	1,000,000-1,300,000	**700,000-1,200,000**	-
2020	1,714,565	1,505,940	1,000,000-1,200,000	**750,000-1,300,000**	-
2021	2,441,825	NA	900,000-1,100,000	**750,000-1,300,000**	-

NA achievement of goal unknown

Table 283.3. Kasilof River sockeye salmon escapement data 1990 – 2021.

Year	Escapement	BEG	OEG
2011	245,721	160,000–340,000	**160,000–390,000**
2012	374,523	160,000–340,000	**160,000–390,000**
2013	489,654	160,000–340,000	**160,000–390,000**
2014	439,997	160,000–340,000	**160,000–390,000**
2015	470,677	160,000–340,000	**160,000–390,000**
2016	239,981	160,000–340,000	**160,000–390,000**
2017	358,724	160,000-340,000	**160,000–390,000**
2018	394,309	160,000-340,000	**160,000–390,000**
2019	378,416	160,000-340,000	**160,000–390,000**
2020	545,654	140,000-320,000	**140,000–370,000**
2021	521,859	140,000-320,000	**140,000–370,000**
Averages			
1990–2010	279,742		
2012–2021	421,379		

Table 283.4.–Large fish (≥75 cm mid eye to tail fork [METF]) stock compositions relative to all fish harvested and stock-specific large fish harvest estimates by year for king salmon harvested in the Eastside set gillnet fishery, Upper Cook Inlet, Alaska, 2010, 2011, and 2013–2021.

	Reporting group							
	Kenai River tributaries		Kenai River mainstem		Kasilof River mainstem		Cook Inlet other	
Year	Stock comp. relative to all fish [a]	Stock-specific large fish harvest	Stock comp. relative to all fish [a]	Stock-specific large fish harvest	Stock comp. relative to all fish [a]	Stock-specific large fish harvest	Stock comp. relative to all fish [a]	Stock-specific large fish harvest
2010	0.01	44	0.34	2,384	0.21	1,466	0.01	96
2011	0.00	3	0.32	2,499	0.19	1,445	0.00	10
2013	0.00	1	0.23	679	0.09	279	0.00	8
2014	0.00	2	0.31	706	0.19	439	0.00	2
2015	0.00	8	0.36	2,808	0.10	764	0.01	48
2016	0.00	14	0.43	2,906	0.15	1,039	0.01	34
2017	0.01	29	0.63	2,998	0.15	730	0.01	44
2018 [b]	0.01	16	0.24	555	0.06	141	0.00	10
2019	0.01	12	0.27	613	0.18	393	0.00	6
2020	0.01	6	0.19	166	0.06	49	0.03	24
2021 [c]	0.00	1	0.17	217	0.06	79	0.02	31
Average	0.00	13	0.32	1,503	0.13	620	0.01	28
Minimum	0.00	1	0.17	166	0.06	49	0.00	2
Maximum	0.01	44	0.63	2,998	0.21	1,466	0.03	96

Note: The 90% credibility intervals of stock compositions and stock-specific harvest estimates for prior years can be found in previous reports (Eskelin and Barclay 2016, 2017, 2018, 2019, 2020, 2021, 2022 *in prep*).

[a] "Stock comp" means stock composition of large fish relative to the total harvest of all fish (large and small combined).

[b] Stock compositions and stock-specific harvest estimates for 2018 do not include large king salmon harvested in the Kasilof River Special Harvest Area.

c Data from 2021 is preliminary until published.

Table 283.5. Commercial harvest of salmon in the ESSN fishery.

Year	King	Sockeye	Coho	Pink	Chum
1990	4,139	1,117,621	40,351	225,429	4,611
1991	4,893	844,603	30,436	2,670	2,387
1992	10,718	2,838,076	57,078	244,068	2,867
1993	14,079	1,941,798	43,098	41,690	2,977
1994	15,575	1,458,162	68,449	234,827	2,927
1995	12,068	961,227	44,751	53,420	3,711
1996	11,564	1,483,008	40,724	95,717	1,448
1997	11,325	1,832,856	19,668	32,055	1,222
1998	5,087	512,306	18,677	332,484	688
1999	9,463	1,092,946	11,923	9,357	373
2000	3,684	529,747	11,078	23,746	325
2001	6,009	870,019	4,246	32,998	248
2002	9,478	1,303,158	35,153	214,771	1,790
2003	14,810	1,746,841	10,171	16,474	1,933
2004	21,684	2,235,810	30,154	107,838	2,019
2005	21,597	2,534,345	19,543	13,619	710
2006	9,956	1,301,275	22,167	184,990	347
2007	12,292	1,353,407	23,610	69,918	521
2008	7,573	1,303,236	21,823	59,620	433
2009	5,588	905,853	11,435	55,845	319
2010	7,059	1,085,789	32,683	121,817	3,035
2011	7,697	1,877,939	15,560	15,527	1,612
2012	705	96,675	6,537	159,003	49
2013	2,988	921,533	2,266	14,671	102
2014	2,301	724,398	5,908	213,616	548
2015	7,781	1,481,336	17,948	22,983	2,248
2016	6,759	997,768	11,606	103,503	1,203
2017	4,779	832,220	29,916	59,995	601
2018	2,312	289,841	4,705	21,822	78
2019	2,246	784,543	6,511	32,746	528
2020	852	295,341	372	11,604	31
2021	1,297	407,007	883	5,944	50
Averages					
All Yrs	8,074	1,186,271	21,857	88,586	1,311
2012-2021	3,202	683,066	8,665	64,589	544

Table 283.6. Harvest of king salmon in those periods limited to within 600 feet from shore, those limited to within 1.5 miles of shore, and openings open to 1.5 miles from shore, in the ESSN fishery.

Area open*	Year	# Openings	King salmon harvested	King salmon harvested per opening
Within 600 feet of shore	2015	6	224	37
Within 600 feet of shore	2018	6	115	19
Within 600 feet of shore	2019	3	21	7
Within 600 feet of shore	2020	7	44	6
Within 600 feet of shore	2021	8	139	17
Within .5 miles of shore	2000	2	238	119
Within .5 miles of shore	2001	10	1,629	163
Within .5 miles of shore	2002	2	611	306
Within .5 miles of shore	2003	2	456	228
Within .5 miles of shore	2006	6	1,310	218
Within .5 miles of shore	2007	4	830	208
Within .5 miles of shore	2008	7	1,544	221
Within .5 miles of shore	2009	9	1,294	144
Within .5 miles of shore	2010	4	604	151
Within .5 miles of shore	2011	1	312	312
Within .5 miles of shore	2013	1	114	114
Within .5 miles of shore	2014	2	244	122
Within .5 miles of shore	2015	1	146	146
Within .5 miles of shore	2018	3	347	116
Within .5 miles of shore	2019	2	179	90
Within 1.5 miles	2000	13	3446	265
Within 1.5 miles	2001	13	4380	337
Within 1.5 miles	2002	24	8867	369
Within 1.5 miles	2003	35	14354	410
Within 1.5 miles	2004	36	21616	600
Within 1.5 miles	2005	41	20968	511
Within 1.5 miles	2006	24	7381	308
Within 1.5 miles	2007	27	11298	418
Within 1.5 miles	2008	19	4865	256
Within 1.5 miles	2009	20	4294	215
Within 1.5 miles	2010	29	6455	223
Within 1.5 miles	2011	27	7385	274
Within 1.5 miles	2012	7	705	101
Within 1.5 miles	2013	11	2516	229
Within 1.5 miles	2014	13	1432	110
Within 1.5 miles	2015	30	6985	233
Within 1.5 miles	2016	27	6759	250
Within 1.5 miles	2017	23	4779	208
Within 1.5 miles	2018	9	1822	202
Within 1.5 miles	2019	16	2046	128
Within 1.5 miles	2020	16	808	51
Within 1.5 miles	2021	12	1160	97

*Note; which stat areas and the number of stat areas open during these openers is not consistent.

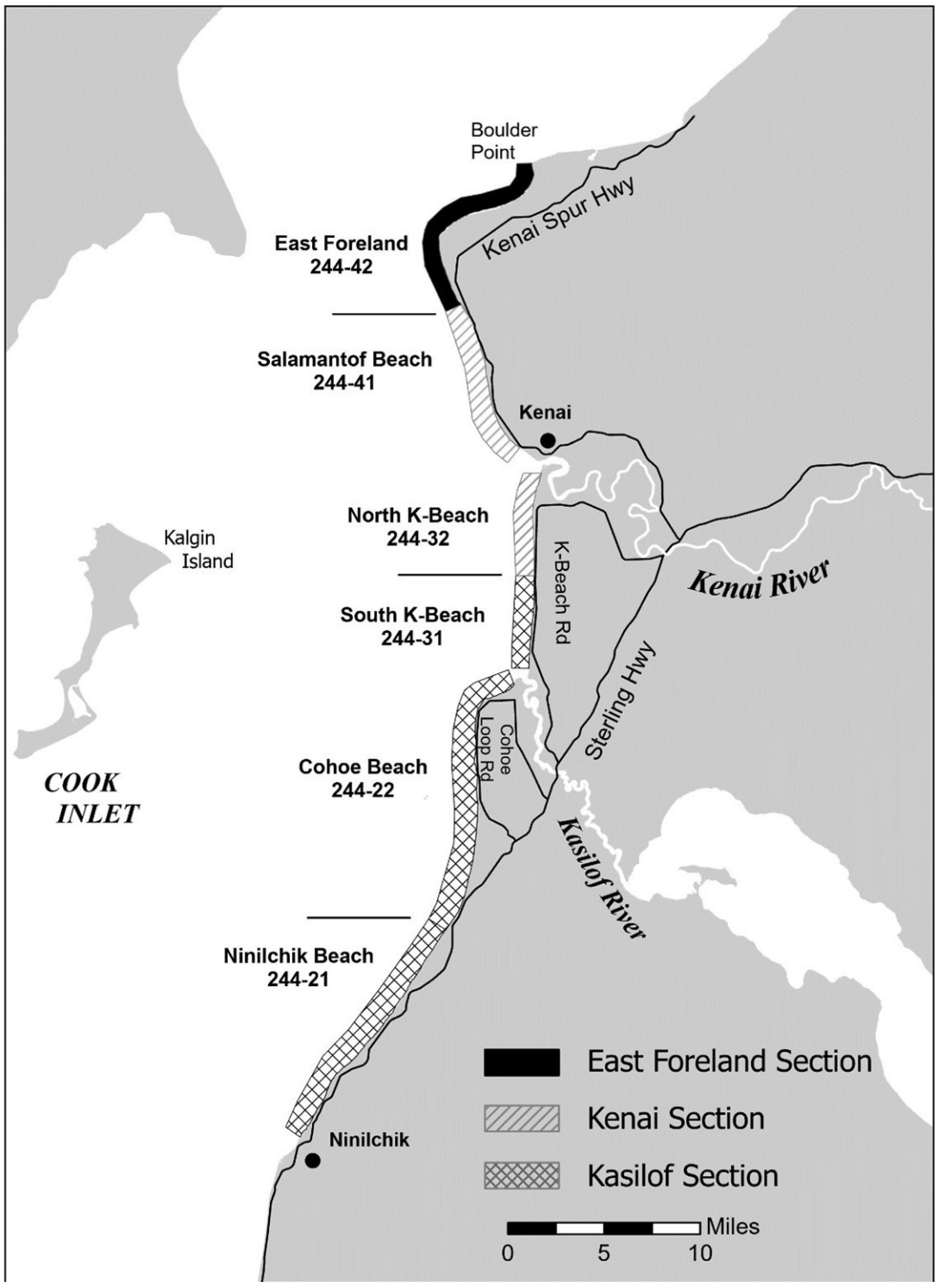

Figure 283.1. East side set net (ESSN) fishing sections and statistical areas. Collectively these areas are the Upper Subdistrict of the Central District of Upper Cook Inlet.