

**Operational Plan: Southeast Alaska Summer Crab Pot
Survey and Red King Crab Stock Assessment, 2023–
2027**

by

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April 2025

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



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Weights and measures (metric)		General		Mathematics, statistics	
centimeter	cm	Alaska Administrative Code	AAC	<i>all standard mathematical signs, symbols and abbreviations</i>	
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	alternate hypothesis	H_A
gram	g	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	base of natural logarithm	e
hectare	ha	at	@	catch per unit effort	CPUE
kilogram	kg	compass directions:		coefficient of variation	CV
kilometer	km	east	E	common test statistics	(F, t, χ^2 , etc.)
liter	L	north	N	confidence interval	CI
meter	m	south	S	correlation coefficient	
milliliter	mL	west	W	(multiple)	R
millimeter	mm	copyright	©	correlation coefficient (simple)	r
		corporate suffixes:		covariance	cov
Weights and measures (English)		Company	Co.	degree (angular)	$^\circ$
cubic feet per second	ft ³ /s	Corporation	Corp.	degrees of freedom	df
foot	ft	Incorporated	Inc.	expected value	E
gallon	gal	Limited	Ltd.	greater than	>
inch	in	District of Columbia	D.C.	greater than or equal to	\geq
mile	mi	et alii (and others)	et al.	harvest per unit effort	HPUE
nautical mile	nmi	et cetera (and so forth)	etc.	less than	<
ounce	oz	exempli gratia	e.g.	less than or equal to	\leq
pound	lb	(for example)		logarithm (natural)	ln
quart	qt	Federal Information Code	FIC	logarithm (base 10)	log
yard	yd	id est (that is)	i.e.	logarithm (specify base)	log ₂ , etc.
		latitude or longitude	lat or long	minute (angular)	'
Time and temperature		monetary symbols (U.S.)	\$, ¢	not significant	NS
day	d	months (tables and figures): first three letters	Jan, ..., Dec	null hypothesis	H_0
degrees Celsius	$^\circ\text{C}$	registered trademark	®	percent	%
degrees Fahrenheit	$^\circ\text{F}$	trademark	™	probability	P
degrees kelvin	K	United States (adjective)	U.S.	probability of a type I error (rejection of the null hypothesis when true)	α
hour	h	United States of America (noun)	USA	probability of a type II error (acceptance of the null hypothesis when false)	β
minute	min	U.S.C.	United States Code	second (angular)	"
second	s	U.S. state	use two-letter abbreviations (e.g., AK, WA)	standard deviation	SD
Physics and chemistry				standard error	SE
all atomic symbols				variance	
alternating current	AC			population sample	Var
ampere	A			sample	var
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				

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**OPERATIONAL PLAN: SOUTHEAST ALASKA SUMMER CRAB POT
SURVEY AND RED KING CRAB STOCK ASSESSMENT, 2023–2027**

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PURPOSE

The Alaska Department of Fish and Game conducts annual stock assessment surveys for red king crab (RKC) in Southeast Alaska using a stratified sampling design. The assessment provides abundance indices across seven different areas, status of stock health, and trends in catch per unit effort across size and sex classes. Survey catch per unit effort (CPUE) information is modeled using a three-stage catch survey analysis to produce estimates of mature and legal male red king crab biomass, which are used to manage the commercial fishery. Survey CPUE by size and sex class are compared to long-term average values to determine stock health.

Keywords: Pot survey, red king crab, *Paralithodes camtschaticus*, Southeast Alaska

OBJECTIVES

1. Capture and collect biological information on RKC from seven specific survey areas throughout the northern portion of Southeast Alaska for model-based biomass estimation.
2. Determine guideline harvest level (GHL) for the upcoming commercial RKC season, and set personal use annual bag and possession limits for the region.
3. Capture and collect biological information on Tanner, Dungeness crab, and golden king crab.
4. Maintain long-term data set on bottom temperature, using HOBO temperature tidbits, for future climate analysis and comparisons.
5. Tag male RKC and with recaptured crab to estimate growth increments and movement in Pybus Bay, Gambier Bay, Peril Strait, Seymour Canal, and Excursion Inlet.

BACKGROUND

The survey is currently conducted in the northern part of Southeast Alaska in 7 survey areas: Lynn Sisters, Juneau (including Barlow Cove), Pybus Bay, Gambier Bay, Seymour Canal, Peril Strait, and Excursion Inlet (Figure 1). Previously surveyed areas included Holkham Bay and Port Frederick; these areas were excluded from the survey beginning in 2015. Starting in 2023, Peril Strait was surveyed on a biennial basis. Peril Strait has shown little improvement in CPUE for most sex/size classes for almost 20 years. The Alaska Department of Fish and Game (ADF&G) has decided to allocate more survey resources towards Pybus Bay, Gambier Bay and Seymour Canal during the years in which Peril Strait is not surveyed.

Approximately 28 to 196 pots are set in each survey area, depending on the size of the area and time needed to sample the pots. Location codes exist for each survey area, including those areas no longer surveyed but included in the historical data set (Table 1). Mature male crab catch information are used to produce population estimates for each surveyed area. Population is estimated using a three-stage catch survey analysis model that tracks three recruit categories (classified using size and shell condition; Tables 2 and 3) of male crabs over the range of survey years, which in most areas is from 1979 to present, to estimate the current abundance of mature and legal male crab in each area.

In addition to estimating abundance, other factors that contribute to the overall health of the population are examined, including CPUE of juvenile male and female crab, egg condition, clutch fullness, size distributions, and other factors. Risk-neutral and low-risk harvest rates are applied and used to determine the regional GHL. The risk-neutral option uses equilibrium harvest rates, and the low-risk option uses the average harvest rates for years in which the mature male biomass increased within each survey area (Palof and Stratman 2020). The regional GHL is compared to a

regulatory threshold of 200,000 pounds (5 AAC 34.113), which is the minimum level for the commercial fishery to open in November. Survey results are also used to set bag and possession limits in the red king crab personal use fishery and to determine whether any personal use closures are necessary in survey areas.

METHODS

POT LOCATIONS

Pot locations are selected within 5 density strata through a stratified random sampling design. The number of pots within each stratum is determined using a Neyman allocation based on the variance of total crab CPUE survey estimates by stratum between 2021 and 2023, which is updated using new data every 3 years (Cochran 1977). A minimum of 3 pots are assigned to each stratum to ensure adequate data collection for future years. The number of pots assigned to strata 4 and 5 in each area is set to be >60%. The pot allocation for survey areas was updated for the 2023 survey season to accommodate the triennial survey schedule for Peril Strait and allocate more pots to other survey areas. The next update is scheduled for 2025. The total number of pots within each survey area is determined based on logistics and time that the crew can efficiently sample and set pots. The strata boundaries were based on past abundances of both male and female red king crab (Clark 2008). Exact pot locations for each area are determined using ArcGIS Pro software to assign randomly generated locations within each stratum. Details of pot locations for each survey year are presented, starting with the 2024 information in Appendix E. Extra pot locations for each area are provided, in the event that there are conflicts with gear from concurrent fisheries in the vicinity or if set locations are otherwise unattainable.

SETTING AND PULLING

Pots will be set between 1200 and 1800 hours and pulled between 0700 and 1300 hours. Soak times will range from 18–20 hours; pots with soak times greater than 20 hours and up to 28 hours will be sampled with a note in the comments that they exceeded the 20-hour soak time. Pots with a soak longer than 28 hours will not be sampled, and all contents of the pot will be released at sea. Setting and pulling times will be recorded for each pot on the Crab Pot Set Form (Appendix C1).

SOAK TIME

Currently, there is no catch-soak time curve information for RKC in Southeast Alaska. The current soak times are based on catch-soak time curves generated for RKC in the Bering Sea and have been adjusted to reflect local crab densities, which show large variations due to non-standard soak times (Briand et al. 2001). An internal review of past red king crab survey data indicates that decreasing soak time below 18 or increasing it above 20 hours showed a significant decrease or increase in mature male CPUE, respectively.

POT GEAR AND BAIT

Conical king crab pots with an 88-inch diameter and no escape rings will be used for the survey. Pots will be baited with frozen, winter-caught Alaska bait herring (preferably caught the same year as the current survey) and chopped within 24 hours of use. Two bait containers will be used for each pot placed on opposite sides of the pot and loosely filled with chopped herring. The bait jar will be suspended so that the top of the bait jar is approximately the same height as the bottom of the pot cone and about halfway between the cone and the exterior webbing. The bio-twine (30-

thread untreated cotton twine) will be replaced on all pots prior to setting gear on the first day of the Juneau Area and Barlow Cove survey (Leg I of the survey).

HOBO tidbit temperature loggers will be attached to all pots with zip ties prior to the first set on each leg of the survey. Tidbits should be attached to pots so that the tag number is facing out and visible to crew on deck. All tidbits should be removed from the pots and the information downloaded at the end of each survey leg. Temperature logger protocols are found in Appendix B.

The vessel crew is responsible for setting and pulling the gear. Biologists are available to help set and pull gear at the request of the deck supervisor or captain.

At the end of each trip, the biological crew will scrub and clean all survey gear, including tables, bait chopper, bait jars, mats, and baskets. All gear removed from the supply tote will be cleaned and returned to the tote.

DATA COLLECTION

Pot Condition and Substrate:

When a pot is pulled, its condition and proper fishing status will be recorded using the Crab Specimen Form (Appendix C2). Any evidence that the pot: 1) was on its side, 2) had holes in mesh webbing, 3) had empty bait jars, or 4) had errors in closing will be noted along with the sediment type found on the pot (Table 4). Holes or other features that would allow small crabs to escape will be repaired before the pot is used again. Pots will be emptied onto a sampling table. Commercially important bycatch species will be counted. Non-commercially important species will be counted as time allows, and numbers will be estimated when species counts are high. These numbers will be recorded, and then these animals will be returned to the sea (Table 5). All captured *Pycnopodia helianthoides* will be measured in millimeters from tip of an arm to the tip of the arm directly across and recorded, and yelloweye rockfish *Sebastes ruberrimus* will be returned to the water via a deepwater release device to 100 ft. All king, Tanner, and Dungeness crabs will be retained for collection of biological information before being returned to the sea.

Biological Information:

The carapace length (CL) of all king crab and carapace widths (CW) of Tanner and Dungeness crabs will be measured with Vernier calipers to the nearest millimeter, using the standard biological measurement for that species (Figure 2); shell condition of crabs will also be assessed (Table 2). Tanner crab with shell condition between three and four will be designated as shell four, due to the timing of this survey relative to the molt; these are skip molts and will be more observably shell four during the fall crab pot survey. Male RKC recruit classes (Table 3) are visually assessed and all legal (greater than 7.0 in CW) and pre-recruit sized RKC will be measured first and should be given priority above all other size/sex class and species. Male RKC measuring 138–155-mm CL will be checked for legality using a seven-inch crab gauge.

If there are pots with high numbers of crab, a maximum of approximately 100 crab (50 minimum for male crab) should be sampled. If there is high variability in clutch size, as many females as possible will be sampled. The scientific lead on each leg will determine if and at what rate to sub-sample using the following criteria:

- Tanner crab males and females will always be subsampled before subsampling RKC;
- female RKC will be sub-sampled second but every effort must be made to separate juvenile females and mature females prior to subsampling, as this could affect analyses;
- small male RKC will be sub-sampled last.

Leg condition is no longer gathered; this data collection was discontinued in 2023. For each crab, abnormalities in the carapace and the presence of any parasites or diseases will be noted (Table 6). If *Briarosaccus* spp. is found on a specimen (Figure 3), do not release the live crab back into the water. Freeze the infected crab so that the parasite will be killed and not spread.

For all female crabs, the percent clutch fullness will be estimated in 10% increments and the development and condition of the eggs will be noted according to the reproductive codes (Table 7).

Chela heights of adult male Tanner crab will be measured to monitor any changes in the size at functional maturity (point when mature males are “large clawed”). For each survey area, a total of 150 male Tanner crab are randomly sampled until target numbers are achieved within each of six size groups and measured for biological carapace width (to the nearest 1 mm) and right chela height, (also to the nearest 1 mm) using Vernier calipers (Jadamec et al, 1999; Table 8; Figure 4; Appendix C3).

Individual crab weights will not be measured to increase sampling efficiency.

DATA INTEGRITY

Data will be recorded on standard data sheets (Appendix C1 and C2) and entered into the Zander database onboard the vessel by the survey biological staff. Once the data is entered, datasheets are marked with the initials of the person entering the data (EB: initials). The database is then re-checked against the datasheets for errors, by a different biological staff. The datasheets are marked with the initials of the person verifying the data (VB: initials). This should be completed before disembarking from the vessel to ensure efficient analysis of the data. All data are housed in OceanAK, a relational database available via intranet to ADF&G researchers and managers statewide (subject area: Region 1–Invertebrates–Surveys–Crab). Raw datasheets are archived.

LOST POT PROTOCOL

If a pot is lost (buoy is not visible), a retrieval pot (with biotwine cut, escape rings opened, and tidbit removed) will be set next to the lost pot with a pot saver attached to the floating line just above the bridle. An extra line should be placed on the retrieval pot, depending on depth, to allow the vessel to adequately circle the lost pot a minimum of four times. The line from the retrieval pot should be left in the block and tied off to a cleat until four rotations are complete before the retrieval pot may be hauled. The skipper should make every attempt to keep the line at ninety degrees to the boat. This process should be repeated a second time if the pot is not retrieved on the first attempt, if time allows.

TAGGING MALE RED KING CRAB

Male RKC will be tagged in an effort to determine growth increments of different size classes and movement patterns in Pybus Bay, Gambier Bay, Peril Strait, Seymour Canal, and Excursion Inlet. Male RKC from three recruit size classes (juvenile, pre-recruit, and recruit) will be tagged using a numbered double T-bar tag in the isthmus muscle. All captured crab are examined for previous tags with the tag number recorded and the tag left in place. Tagging instructions are found in Appendix A.

VOLUNTEERS

Occasionally, volunteers such as graduate students or National Parks Service employees join the crew for a RKC survey leg. They typically assist with setting and pulling gear and/or sorting crab species once they have been briefed by both the boat and scientific crew. Prior to boarding the R/V *Medeia*, all volunteers must be approved by the Crab Group staff and complete the “Volunteer Agreement” form in Appendix C4.

VESSEL

The State of Alaska owned research vessel, R/V *Medeia*, is used to conduct the annual RKC survey. This 110-foot vessel was built in 1982 of iron, steel, and alloy, and has a net capacity of 246 tons. It currently resides at Harris Harbor in Juneau, Alaska. The vessel crew consists of four positions: Boat Officer IV, Boat Officer III, Boat Officer II, and Boat Officer I.

DATA ANALYSIS

All data are entered in Zander and stored in OceanAK, ADF&G’s database. Data analyses are done using the most updated version of R¹. After the completion of each survey area, the data from the survey area is uploaded and stored into OceanAK

SURVEY CATCH PER UNIT OF EFFORT

Data, including sex and size, are collected for all red king crab in each pot. Based on the sex and size designations, crab are classified into recruit classes. Males are classified based on size and shell conditions according to Table 3. Females are classified as either large and mature or small and immature based on both size and presence of physical maturity (Donaldson & Byersdorfer 2005). A CPUE is calculated for each recruit class in each pot, with the goal of computing an average CPUE for each survey area. Only pots that are classified as “normal” are included in this analysis. Abnormal pots are removed to prevent bias (refer to Table 4 for abnormal pots designations).

Due to the stratified design of the survey, the average area CPUE must be calculated as a weighted average, including both the number of pots sampled in each stratum and the area of each stratum. Catch in each pot is weighted by a multiplier of the area of each stratum divided by the number of pots sampled in that stratum in the current year. Once each pot’s catch is weighted, an average CPUE for each recruit class is computed for each survey area. Weighting the CPUE is essential due to the stratified design of the survey and differential sample size in each stratum.

¹ The R project for statistical computing. Version 4.5.0. Vienna, Austria. <https://www.R-project.org/> accessed April 14, 2025)

STOCK HEALTH DETERMINATION

Historically, the weighted CPUEs and survey data calculated for each recruit class have been used to help determine the overall stock health for each survey area. This is done by comparing the current year's data to long-term and short-term benchmarks (Siddon et al. 2009). This method for evaluating stock health is repeatable and objective; additionally, it has also been used to assess Tanner crab in Southeast Alaska. The following metrics are examined to evaluate stock health: mature female clutch fullness and CPUE, juvenile female CPUE, pre-recruit CPUE, recruit CPUE, and post-recruit CPUE. These metrics are each weighted equally and provide a range of indicators for the population.

All the metrics except mature female clutch fullness are calculated using weighted CPUE from the survey. For the long-term trends, the current year's metric is compared, using a t-test, to the long-term mean calculated from baseline years (1993–2007). This specific time-period, from 1993 to 2007, was established in 2008 and was found to characterize the best combination of the most representative data quality available (Siddon et al. 2009). If the current year is significantly above the long-term mean, it is scored +1, if not different from the mean it is scored 0, and if significantly lower than the mean it is scored -1. The short-term trends are examined by performing a linear regression on the last four years of data for each metric. The significance of these regressions is then scored similarly to the long-term trends, with a positive trend having a score of 0.25, no trend having a score of 0, and a negative trend having a score of -0.25. The area scores are a sum of all the long-term and short-term scores for each metric into one score for each area. Scores less than -4.50 are considered poor, between -4.25 and -1.75 below average, between -1.50 and 1.50 moderate, between 1.75 and 4.25 above average, and above 4.50 is healthy.

Mature female clutch fullness is evaluated by calculating the mean proportion of mature females in each pot with a clutch fullness of < 25% (i.e. very small clutches). The level allows for human error in assessing clutch fullness to the nearest 10% on the survey, because low clutches (<25%) are noticeably low.

STOCK ASSESSMENT

Red king crab biomass, both mature and legal, is estimated using a catch-survey analysis model (CSA) which relies on inputs from both the survey and the fishery (in years when the fishery was open).

Model inputs

Inputs from the survey data include weighted CPUE of pre-recruits, recruits, and post-recruits by survey area, mid-date for the survey, and average weight (using the established length-weight relationships) of pre-recruits, recruits, and post-recruits. The mid-date for the survey is the middle date for the pots set in each survey area. If the area is surveyed an even number of days, the date used would be the first day of the second half of the survey for that area. For example, if an area were surveyed for four days, the date used would be the date for day three.

The average weight of male RKC crab in each survey year is calculated from the length composition collected on the survey using a survey area specific length-weight relationship. These relationships were established from both fishery and survey data (1996–2002; Clark et al. 2003). A summary of the relationships for each area is provided in Table 9.

Inputs from the fishery include catch in crab numbers and the mid-date of the fishery, both of which are obtained from the commercial fish ticket database. Additionally, personal use catches are obtained from the Juneau area personal use permit program. Personal use permits and harvest reporting for all of Southeast Alaska have been required since July 1, 2018. The mid-date for the fishery is computed as the sum of the days in the season, the ratio of the catch for that day, divided by the total catch for the area and season (Clark et al. 2003).

The model

A CSA model is used to estimate mature and legal abundance of RKC for each of the surveyed areas. This analysis type was initially developed in 1983 (Collie and Sissenwine 1983) and adapted to crab abundance estimation in the 1990s (Kruse and Collie 1991; Zheng et al. 1997; Collie and Kruse 1998). Starting in 1994, a two-stage model was used to estimate abundance of red king crab in Southeast Alaska (Woodby 1994); this evolved to a three-stage model (Collie and DeLong 1998) using pre-recruits, recruits, and post-recruits in 2002 (Clark et al. 2003).

This type of model estimates the abundance of a population by comparing the changes in survey catches to the number of crabs removed through commercial and personal use effort. In a three-stage model, pre-recruits are estimated every year and recruits are related to the number of pre-recruits that survive and molt to become recruits (Eq. 1). Post-recruits are estimated from the recruits and post-recruits in the previous year and the fishery removals that occur between the survey years (Eq. 2). Errors are associated with both survey and fishery catch and are assumed to be log-normally distributed (Eq. 3). A constant instantaneous natural mortality rate of 0.32 is used; this translates to an annual natural mortality of 27% (Woodby 1994).

Equations depicted below are modified from those previously published (Woodby 1994; Clark et al. 2003).

These are the two processes described in the three-stage CSA model:

$$R_{yr+1} = \mu A_{yr} \quad (1)$$

$$P_{yr+1} = (R_{yr} + P_{yr})e^{Mt_{yr}} - qC_{yr}e^{Ml_{yr}} \quad (2)$$

Where:

R_{yr+1} = relative abundance of recruit crab in year +1

A_{yr} = relative abundance of pre-recruit crab in year yr

μ = proportional constant, a function of the relative catchability of pre-recruit and recruit crab, along with the survival and probability of molting from pre-recruit to recruit crab

P_{yr+1} = relative abundance of post-recruit crab in year +1

C_{yr} = total harvest (in number of crabs) in year yr

t_{yr} = time interval between surveys (in years)

l_{yr} = time lag between the midpoint of the fishery in year yr and the survey in year $yr + 1$

q = catchability coefficient relating relative abundance measured as catch per pot in the survey to absolute abundance of crab in the area

M = instantaneous natural mortality coefficient

The observed catches in the survey are the relative abundances with lognormally distributed measurement error:

$$\begin{aligned}\tilde{A}_{yr} &= A_{yr}e^{\tau_{yr}} \\ \tilde{R}_{yr} &= R_{yr}e^{u_{yr}} \\ \tilde{P}_{yr} &= P_{yr}e^{\omega_{yr}}\end{aligned}\tag{3}$$

Where:

τ_{yr} , u_{yr} , and ω_{yr} = normal deviates

The values of A_{yr} , R_{yr} , and P_{yr} are estimated by minimizing the squared deviation of the log of the estimated values and observed values. The squared deviations are weighted to take into account differences in survey methods throughout the years. This was established in 2002 (Clark et al. 2003) without much documentation and should be revisited in the future. Currently, weightings are 1 for 1979–1985 (fixed station surveys), 2 for 1986–1991 (random station by sometimes mixed fall/summer surveys), and 3 for 1993 to present, unless significant changes have occurred since then (exceptions include the Juneau area and Peril Strait). Minimizing the sum of the weighted squared deviations was performed using the “optim” function in the most recent version of R.

Model output

The CSA model computes an estimated relative index value for each of the three recruit classes (pre-recruit, recruit, and post-recruit), which is then scaled (using q which is estimated in the model) to a number of male crab for each recruit class. The number of crab in each recruit class is converted to a biomass (lb) using the average weight of all three recruit classes from the survey (using the length-weight relationship established for each area). For each survey area, the biomass of both legal (recruits and post-recruits) and mature (all three male recruit classes) is reported. These are summarized annually in the Southeast Alaska red king crab stock assessment memo prepared by the biometrics team.

REGIONAL ESTIMATION

Red king crab are managed regionally in Southeast Alaska; the biomass estimates from all surveyed areas are summed to produce a regional estimate of RKC biomass. This is then extrapolated to those areas that are not surveyed, using previous catch data. The total regional biomass of legal and mature male red crab combines both the survey and non-survey biomass estimates. This is reported annually in the Southeast Alaska red king crab stock assessment memorandum, as well as being used for scenarios for setting GHs.

STAFF AND RESPONSIBILITIES

- Adam Messmer, Fishery Biologist III (Lead King/ Tanner Biologist/Scientific Crew Lead)
- Zane Chapman, Fishery Biologist II (Scientific Crew Lead)
- Tessa Bergmann, Fishery Biologist I (Scientific Crew Lead)
- Caitlin Stern, Biometrician II (Biometric Review)
- Alex Reich, Biometrician

Logistics and Field Studies

Adam Messmer and Zane Chapman will have the primary responsibilities associated with logistics and field studies.

Database Integrity

Adam Messmer and Zane Chapman will have the primary responsibilities associated with data entry and database integrity queries and will be assisted by field crews.

Data Analysis

Alex Reich and Caitlin Stern will have the primary responsibility for catch-survey modeling. Adam Messmer will assist with matrix analyses and weight calculations as needed.

Stock Assessment/Management Report

An annual regional information report (RIR) will be published with Katie Palof, Alex Reich, and Caitlin Stern having primary responsibilities associated with analysis of survey results and assessment and Adam Messmer having primary responsibilities associated with the commercial fishery and personal use fishery management recommendations and resulting decision.

Calendar of Activities

Dates	Activity	Personnel
April/May	Define pot survey locations in ArcGIS	FB III and FB II
May/June	Project and Operation Planning	FB III and FB II
April to June	Purchase, prepare, and stage survey gear	FB III and FB II
June to August	Conduct three legs of at-sea surveys	All
July to September	Compile and edit red king crab survey data and submit to biometrics for stock assessment report	Biometrician, FB III, and FB II
July	Review and determine bag and possession limits for Section 11-A personal use fishery.	All
August/September	Stock assessment analysis of catch survey data.	Biometrician
September	Review catch survey data and conduct commercial fishery management for season.	All
September	Management announces potential season and GHGs	Management staff

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TABLES AND FIGURES

Table 1.–Southeast Alaska red king crab survey location codes.

Survey area	Location code
Barlow Cove	1
Deadman Reach	4
Excursion Inlet	9
Gambier Bay	15
Juneau	23
Lynn Sisters	26
Pybus Bay	37
Seymour Canal	39

Table 2.–Southeast Alaska red king crab survey shell age criteria.

Shell condition	Shell age	Description
1, soft	0–2 weeks	Shells very soft and flaccid, lose shape when out of water. Similar in texture to wet leather. Lack of careful handling will cause shell to lose shape.
2, light	2–8 weeks	Shiny ventral surface of coxa and exoskeleton. Few or no scratches, pits or epibionts presents. Dactyls and spines sharp with no wear present. Legs easily compressed when pinched because legs contain little muscle tissue. Merus flexible and does not crack when bent. Chela depressible.
3, new	2–20 months	Coxa and ventral surface of exoskeleton dull. Legs mostly full of muscle tissue, meri not easily compressed by pinching and will crack if bent. Spines and dactyls may show slight wear.
4, old	21–36 months	Skip molts. Distal portion of ventral coxa partially or totally covered with grown scratching. Legs full of muscle tissue, meri not easily compressed. Epifauna almost always present.
5, very old	>36 months	Double skip molts. Distal portion of ventral coxa densely covered with dark scratching. Legs full of muscle tissue, meri not easily compressed when pinched. Tips of dactyls worn, rounded and dark. Carapace frequently covered with fouling organism to greater extent than with old-shell crabs.

Note: Table adapted from Donaldson and Byersdorfer (2005).

Table 3.—Southeast Alaska red king crab survey male crab recruit class descriptions.

Recruit status	Carapace length (CL)	Shell condition
Juvenile	≤128 mm	Any
Pre-recruit	Between 129 and 144 mm	Any
Recruit	Between 145 and 160 mm	1, 2, or 3
Post recruit	If greater than 161 mm	1, 2, or 3
Post recruit	If between 145 and 160 mm	4 or 5

Note: Descriptions adapted from McCaughran and Powell (1977).

Table 4.—Southeast Alaska crab survey codes for pots to describe debris, substrate, pot condition, type, dimensions, escape device, and bait.

Code	Debris	Substrate	Pot condition	Pot type	Pot dimensions	Escape device	Bait
0	^a	Unknown	^a	^a	^a	^a	^a
1	Large brown kelp	Mud	Normal	Pyramid	4' diameter	None/closed rings	No bait
2	Mussels	Mud/gravel	Not baited	Cone	5–5'11" diameter	king (4, 6 ¼ inch rings)	Jar & hanging
3	Shells	Mud/clay	Lost	Square	6–6'11" diameter	king (9 inch stretch mesh)	Jar only
4	Woody debris	Mud/shell	Door open	Dungeness	7–7'11" diameter	Tanner (4, 4 ¾ inch rings)	hanging only
5	Hair kelp	Mud/soft	Broken webbing	^a	7x7	Tanner (7 inch stretch mesh)	^a
6	Barnacles	Mud/hard	Upside down	^a	8x8	Dungeness (2, 4 ⅜ inch rings)	^a
7	Sponges	Clay	Collapsed tunnel	^a	9x9	^a	^a
8	^a	Sand	Not on bottom	^a	^a	^a	^a
9	^a	Gravel	Pot open/broken	^a	^a	^a	^a
10	^a	Boulder	Lost pot contents	^a	^a	^a	^a
11	^a	Cobble	^a	^a	^a	^a	^a
12	^a	Rock	^a	^a	^a	^a	^a
13	^a	Hard	^a	^a	^a	^a	^a
14	^a	Soft	^a	^a	^a	^a	^a
15	^a	Shell	^a	^a	^a	^a	^a
16	^a	Coral	^a	^a	^a	^a	^a
17	^a	Mixed	^a	^a	^a	^a	^a
18	^a	Silt	^a	^a	^a	^a	^a
19	^a	Barnacle	^a	^a	^a	^a	^a
20	^a	Mussels	^a	^a	^a	^a	^a

^a code not used

Table 5.–Southeast Alaska red king crab survey bycatch species code list.

Species code	Species	Species code	Species
110	Pacific cod	850	Scallop
127	Yellowfin Sole	892	Red sea urchin
129	Starry Flounder	894	California sea cucumber
130	Lingcod	910	Dungeness crab
145	Yelloweye rockfish	921	Red king crab
147	Quillback rockfish	922	Blue king crab
200	Halibut	923	Golden king crab
270	Pollock	931	Tanner crab
710	Sablefish	964	Coonstripe shrimp
870	Octopus	965	Spot shrimp
363	Neptunea species	381	Pychnopodia

Table 6.–Southeast Alaska red king crab survey parasite condition codes.

Code	Parasite
1	None
2	Briarosaccus, single scar
3	Briarosaccus, double scar
4	Briarosaccus, single externa
5	Briarosaccus, double externa
6	Bitter crab, <i>Hematodinium</i>
7	Microsporidian
8	Nemertean worms

Table 7.–Southeast Alaska red king crab survey female reproductive condition codes.

Code	Clutch condition	Egg development
1	Normal	Eyed eggs
2	<20% dead eggs in the clutch	Uneyed eggs
3	>20% dead eggs in the clutch	No eggs
4	Barren with silky setae	NA
5	Barren with matted setae and empty egg cases	NA

Note: codes come from Donaldson and Byersdorfer 2005. NA indicates not applicable.

Table 8.–Southeast Alaska red king crab survey sample goals by carapace width range category for male Tanner crab chela height measurements.

Carapace width	Sample goal
<106	25
106–114	25
115–122	25
123–131	25
132–152	25
>153	25

Table 9.–Southeast Alaska red king crab survey length-weight conversion formula coefficients.

Area	Intercept	Slope
Pybus Bay	-7.383	3.06
Gambier Bay	-6.695	2.921
Seymour Canal	-6.438	2.87
Peril Strait	-7.18	3.02
Juneau	-7.23	3.03
Lynn Sisters	-7.42	3.07
Excursion Inlet	-7.67	3.12

Note: Formula is $\text{Weight (lb)} = \exp[\text{Intercept} + \text{slope} * \ln(\text{carapace length})] * (2.2/1000)$.

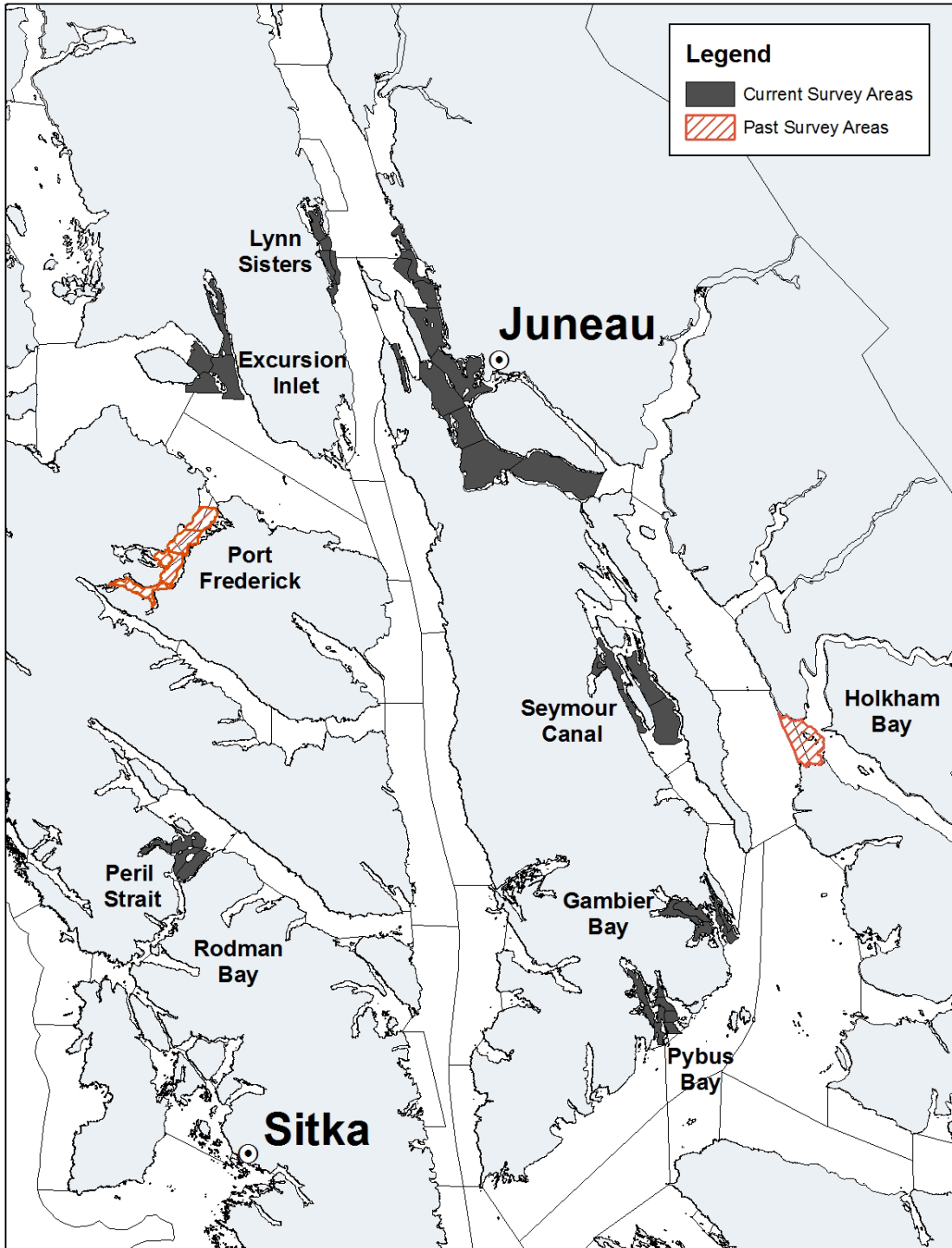


Figure 1.—Southeast Alaska summer crab pot survey areas.



Figure 2.—Crab carapace measurements, left: measuring carapace length, all king crab and right: measuring carapace width applicable to both Tanner (pictured) and Dungeness crab.

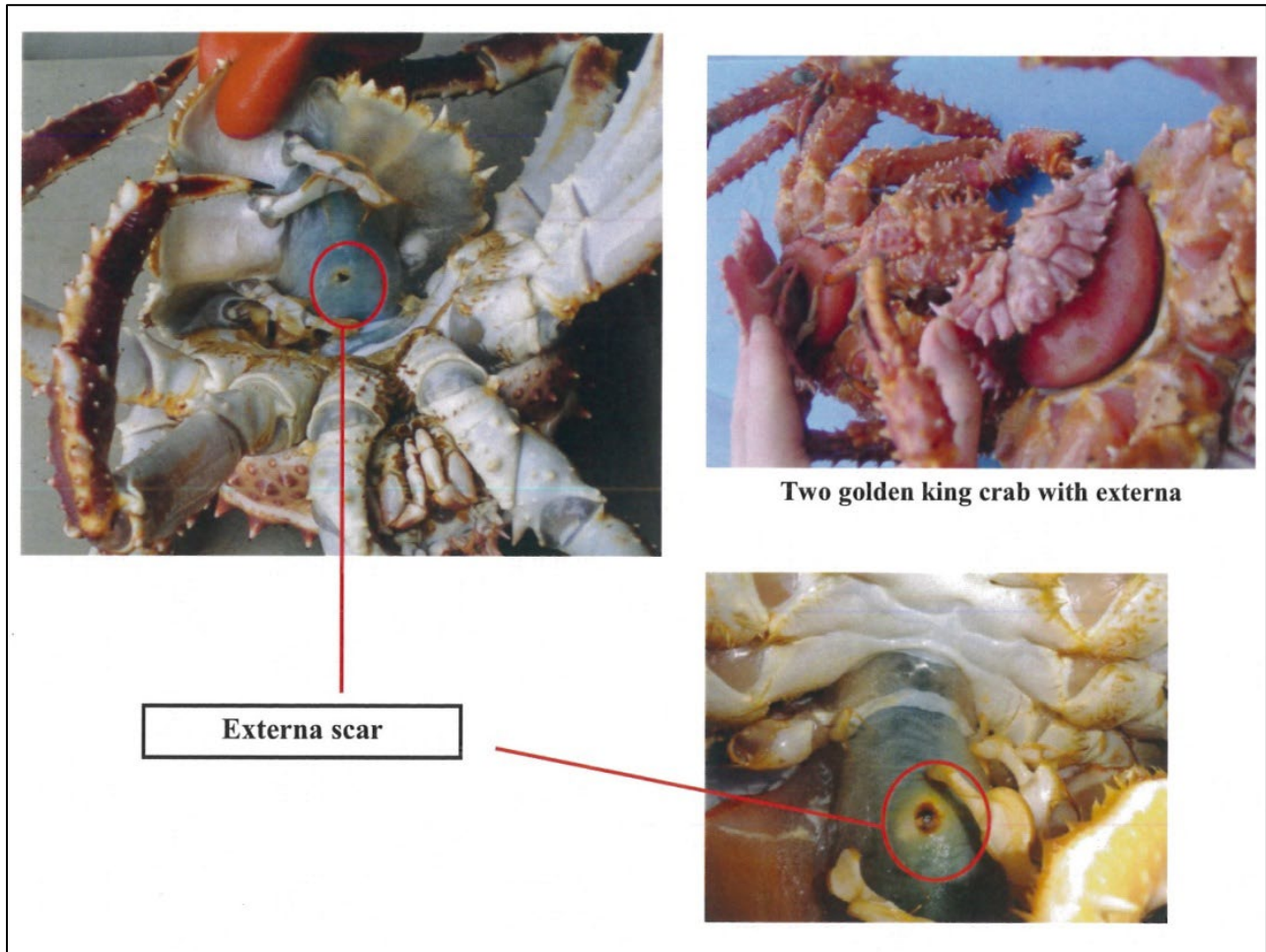
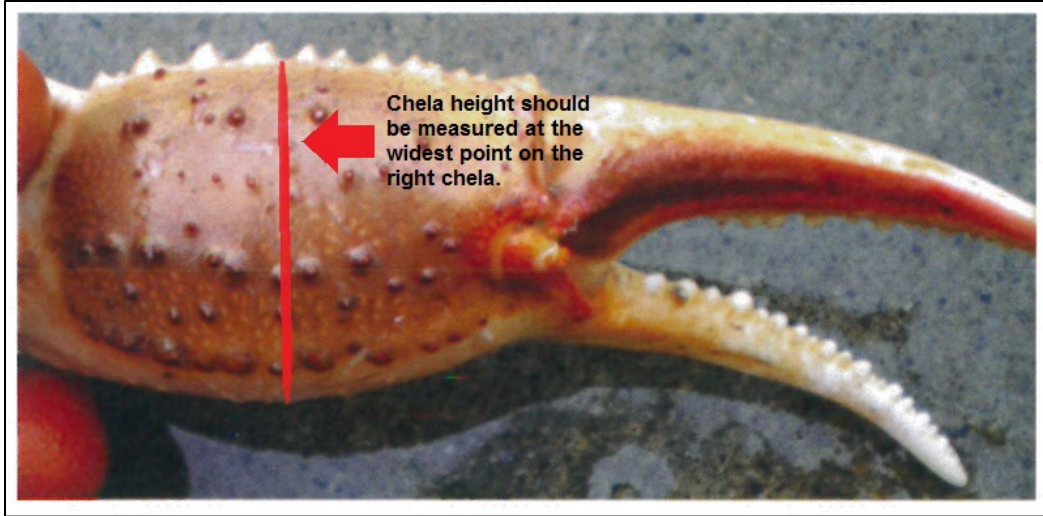


Figure 3.—*Briarosaccus* externa and externa scars on red and golden king crab.



Chela height should be measured at the widest point on the right chela.

Figure 4.—Chela height measurement location for male Tanner crab, right claw.

**APPENDIX A: INSTRUCTIONS FOR TAGGING RED KING
CRAB**

Appendix A1.–Instructions for Tagging RKC

Male RKC will be tagged to determine growth increments of different size classes and movement patterns in Pybus Bay, Gambier Bay, Peril Strait, Seymour Canal, and Excursion Inlet. Male RKC from three recruit size classes (juvenile, pre-recruit, and recruit) will be tagged using a numbered double T-bar tag in the isthmus muscle. These size classes include carapace lengths ranging from 112-160 mm. Tag numbers will be recorded on the specimen form (Appendix C) and, if a crab previously tagged is recaptured in a pot, “recap” will be noted in the comments section of the form.

Survey areas	Recruit status	Goal	Number tagged
Pybus/Gambier	Juvenile 112–129 mm	50	
Seymour/Excursion	Pre-Recruit 130–144 mm	50	
Peril Strait	Legal (recruit & post) >144 mm	50	

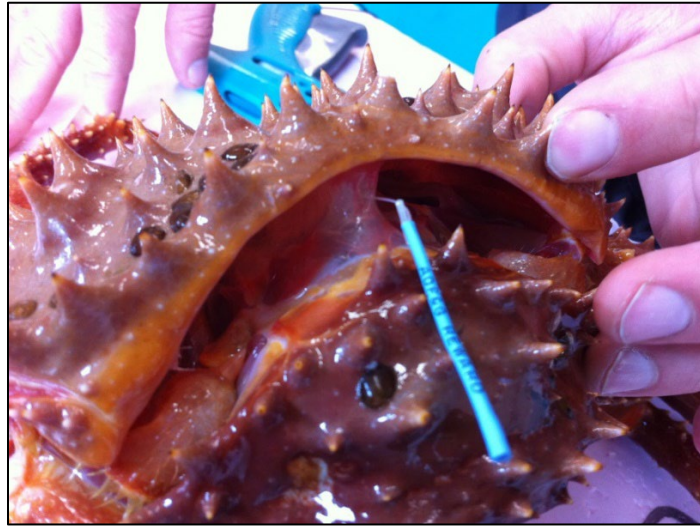
Instructions for Tagging RKC

Load tags vertically into the top of the tagging gun and make sure tags are not twisted together. Tags will need to be checked after each crab is tagged to ensure they will be properly released from the tagging gun.

Place the red king crab posteriorly facing you and gently lift the back of the carapace to expose the isthmus muscle, a white hollow pillar muscle. Insert the needle of the tag gun into the center of the isthmus muscle and punch the tag in. Gently pull on the double T-bar tag to ensure the tag is securely placed. If a crab is tagged in the wrong place and/or starts bleeding (white liquid) do NOT attempt to tag again, release the crab into the water and start over with a new specimen. Once a crab is tagged, the tag number is recorded on the crab specimen form and the crab is gently released back into the water.

If a crab tag is recaptured during the survey, write the tag number and a note stating “recap” in the comments section of the crab specimen form.

Appendix A2.-T-bar tag inserted into the isthmus muscle of a king crab specimen.



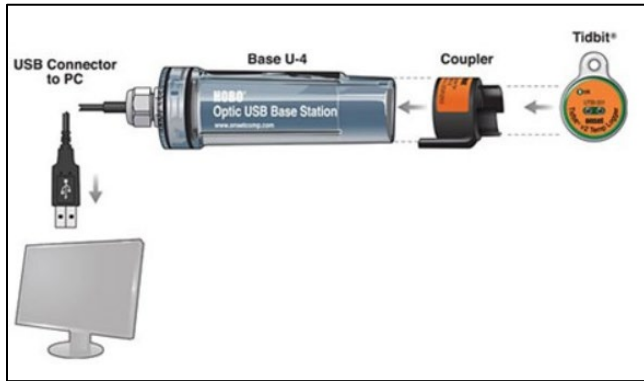
**APPENDIX B: HOBO WATER TEMPERATURE DATA
LOGGER INSTRUCTIONS**

- 1) One logger for each pot will be deployed on the first day of setting per trip.
- 2) Activate logger using optical USB base station attached to computer (Figure B3).
 - a. Name will be a unique number that matches the buoy number of the pot to which the logger will be attached
 - b. Time interval: 1 hour
- 3) One temperature logger will be placed on each deployed pot with a cable tie near the tunnel of the pot with buoy number facing out.
- 4) Write in comments column of skipper form, ‘Tidbit # X’ (where X is the number of the tidbit). This should be done by the crewmember in the wheelhouse documenting coordinates and associated data during the setting of pots each day.
- 5) Temperature loggers will be downloaded at the end of each leg, saved in Excel, and transferred to a file on the desktop of the R/V Medeia computer.
- 6) Files will be saved on a memory stick (or other media) aboard vessel; leave backup copy aboard R/V Medeia computer.
- 7) Files will be saved to: CF...Shellfish\Temperature\current year.
- 8) Detailed Data Download Instructions:
 - a. Files will be saved using the .dtf format and subsequently exported to a .txt format.
 - b. Export file:
 - i. File → Export → Custom.
 - ii. Date format: Month/Day/Year
 - iii. Date/Time Separator: Tab
 - iv. Time Format: Hr:Min:Sec
 - v. Data Separator: Tab
 - vi. Highlight “Temperature (*C)” only.
 - c. Save file as the tidbit number:
 - i. For example, Tidbit #8 should be saved as **8.txt**
 - d. Open .txt file in Excel:
 - i. File → Open (Do not double click the text file to open).
 - ii. Select “Finish” on the import menu.
 - e. Return to **Step a** and repeat for each Tidbit.
 - f. To be done post survey:
 - i. Within the Zander application click on “import Temperature Data”
 - ii. Click "Edit Temperature Data”
 - iii. Set the Discard Temperatures within X minutes to 30 minutes
 - iv. Import all the excel files from the entire leg by choosing all the excel files, the app will produce an average temperature for each pot at each location
 - v. Look through the results and check the temperature variance for each pot location, if greater than 2 check the raw data for any outliers
 - vi. If outlier occurs, check the raw data for the correct pot data or adjust the cutoff to remove the outlier.
 - vii. Delete all temperature data that does not correspond to time the pot was in the water.

- viii.
- ix. Do not include data that is within 15 minutes of pot set time (e.g., if pot is set at 1200hrs and there is a temperature reading at 1210hrs delete data point).
- x. Query Zander for skipper data, cut and paste into “Temperature Database” file on desktop.
- xi. Cut and paste temperature data in columns next to skipper data.
- xii. Copy down skipper data to match temperature data.
- xiii. Copy next line of skipper data (i.e., next pot) into “Temperature Database”
- xiv. Repeat steps i-vi until all temp data is entered.



Appendix B3.—Optic USB base station attached to computer.



APPENDIX C: SURVEY DATA FORMS

Appendix C2.-Crab Survey Specimen and Incidental Species Form.

CRAB SURVEY SPECIMEN Date _____ Page _____ of _____
 Year _____ Project _____ Trip # _____ Recorder _____
 Location _____ Pot # (Order) _____ Buoy# _____

Pot Condition	Substrate	Debris

Incidental Species

#	Species

Specimen #	Subsample Rate	910 DUNG 921 RKC 922 BKC 923 GKC 931 Bairdi Species Code	Sex	Size (mm)	Weight (gms)	Legal Size	Shell Condition	Abnormal carapace = 4	Female Egg Data			Parasite	Blackmat 1= Present	Tag #	Comments
									% Clutch Fullness	Development	Condition				
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Appendix C3.–Tanner Crab Chela Height Size Category Tally Sheet.

Male Tanner crab chela heights: This tally sheet can be printed used to track the number of male Tanner crab of each size category to be sampled in the field. Throughout the day, collect chela height for carapace length categories listed below:

Carapace size	<106	106-114	115-122	123-131	132-152	>152
Sample number	25	25	25	25	25	25

Carapace size	<106	106-114	115-122	123-131	132-152	>152
Sample number	25	25	25	25	25	25

VOLUNTEER AGREEMENT – Alaska Department of Fish & Game

This agreement is entered into between the State of Alaska Department of Fish and Game (State) whose address is _____ and _____

Volunteer Name _____ Address _____ Phone _____

WHEREAS, the volunteer desires to participate as an unpaid worker alongside, but not displacing, state employees, as follows:

Division: _____ Region: _____
Location: _____ Dates: _____ to _____

Description of Project and Duties:

Questions marked with *** are considered high risk and must be approved by the Division Director or Designee if 'Yes' is checked.

*** *Is the Volunteer a minor under the age of 18?* Yes No

If 'Yes' is checked above, please state the age of the minor volunteer _____

Parent(s) of the minor volunteer have read/will comply with the department's SOP No. III-524 Yes No

*** *Will activities require use or carrying of firearms and/or ammunition?* Yes No

If 'Yes' is checked above, the volunteer **MUST** complete the [State of Alaska Volunteer Qualification Inquiry - Firearm Possession](#) form and attach it to this form. In accordance with the Federal Omnibus Consolidated Appropriations Act of 1997 (PL 104-208), anyone convicted of a misdemeanor crime of domestic violence may not perform duties that require the use of or access to firearms and/or ammunition. Further, if 'Yes' is checked above, the volunteer **MUST** provide proof of training in firearm safety in the form of a certificate or other documentation reflecting completion of a formal class.

Will activities require travel in or operation of a state vehicle? Yes No

If 'Yes', indicate below:

Travel in: highway vehicle off-road vehicle small boat large boat aircraft*

*** *Operate:* highway vehicle* off-road vehicle* small boat*

Describe below the justification for and the limited circumstances under which the volunteer is authorized to operate a state vehicle or travel in a state aircraft:

*As a general rule, volunteers are *not* authorized to drive state vehicles, operate small boats, or travel in state aircraft. Under certain circumstances and with pre-approval, limited operation of state equipment or travel in state aircraft when necessary to further the volunteer's project/assignment may be allowable. Such use should be kept to a minimum and is allowable only if specified on this agreement form, approved by the regional supervisor (or equivalent), and only if the volunteer is properly licensed and trained to operate such vehicle/equipment. For additional details, see the following ADF&G Standard Operating Procedures: III-524, Volunteer Workers; III-004 Aircraft-Authorized Passengers; II-091 State-Owned Vehicles, Vessels, and Equipment.

WHEREAS, the State desires to allow the volunteer to participate in said program.

NOW, THEREFORE, the parties agree as follows:

The Volunteer agrees to participate without compensation for his/her activities in the Program under the direct supervision of state employee _____ (ADF&G Supervisor).

- For the duration of the Volunteer's participation in the program, the State agrees to provide to the volunteer medical coverage and disability compensation, in amounts comparable to that afforded employees under the Alaska Workers' Compensation Act (AWCA), if the volunteer suffers injury, illness or death that arises out of, and occurs while acting within the course and scope of performance of his/her volunteer duties. It is agreed that weekly compensation for disability or death will be based on the minimum rate of compensation under AS 23.30.175. It is agreed that compensation or medical coverage will not be provided when the volunteer may be eligible for coverage by any other health or disability policy, insurance, payment or benefit, (inc. Medicaid, Medicare, Social Security, or pension) or workers' compensation coverage by another employer. Disputes regarding payment of compensation and medical benefits under this agreement are agreed to be decided by the Alaska Workers' Compensation Board without stipulating to the Board's jurisdiction. The State is not subject to AWCA penalty, interest, Second Injury Fund (SIF), or other payment in regard to the volunteer.
- The State agrees to defend, indemnify, and hold harmless the Volunteer in the same manner and to the same extent the State protects its employees from any claim, demand, suit for property damages or personal injury including death allegedly caused by the Volunteer's activities if the Volunteer: a) at the time of the occurrence was acting in good faith within the course and scope of his/her volunteer duties in accordance with the directions of the supervisor; b) the volunteer provides immediate notice to the State of any claim; and c) the volunteer cooperates in the defense and does not stipulate to any judgment or settlement without the State's approval.
- The volunteer understands the State does not insure loss or physical damage to its employee's personal vehicle, equipment, or other personal property used while performing state work; nor will the State provide property insurance coverage for loss or physical damage to any volunteer's personal vehicle, equipment, or other personal property used while performing his/her volunteer duties.
- In consideration of the benefits received from participation in the program and the protection offered by this agreement, the volunteer: 1) accepts the remedy provided by the State, and dispute resolution by the Alaska Workers' Compensation Board, as his/her sole legal remedy from the State if the volunteer suffers injury, illness or death arising out of, and occurring while acting within the course and scope of, his/her volunteer duties; 2) transfers his/her right to recover from others who may be responsible for the injury, illness, or death to the State and/or its assigns upon payment of compensation or medical expenses by the State; and 3) agrees to cooperate and to do everything necessary to enable the State and/or its assigns to enforce the right to recover from others.

The Agreement is effective on the day when signed by the person designated below as the Regional Supervisor and filed with the Division of Risk Management. The Alaska Department of Fish and Game agrees to provide transportation to/from _____ and _____. The following provisions (lodging, food, camp and sampling supplies, etc.) will be supplied:

The volunteer acknowledges he/she has read this agreement, understands it, and agrees to be bound by its terms.

Person to be notified in event of serious illness or accident:

Name	Address	Phone	Relationship
_____	_____	_____	_____

SIGNATURES:

Volunteer: _____ **Date** _____
(or parent of minor volunteer)
ADF&G Supervisor: _____ **Date** _____
Regional Supervisor: _____ **Date** _____

Questions marked with *** on page 1 are considered high risk and must be approved by the Division Director or Designee if 'Yes' is checked.

Division Director or Designee: _____ **Date** _____
(Designee must be equivalent to Assistant Director or Division Operations Manager)

When complete, send the form to divisional headquarters office for distribution as described below.

Original or email: State of Alaska (SOA) Division of Risk Management by e-mail; Copies: ADF&G divisional headquarters, Volunteer, DAS Director when Division Director approval is needed.

Appendix C5.–Instructions for transferring pot coordinate data to R/V Medeia navigational computers.

Medeia computer

- Open “Site 200X.txt file.
- Open “Medeia template” file.
- Cut and paste lat/long into appropriate columns from text file to template file.
 - The lat/long column order is reversed in the template file. Make sure “latitude” is before “longitude” in the template file or Maptech will not recognize it.
- Cut and paste “strata” into “Notes/Strata” column.
- Enter name. This entry must start with 48sgw for Maptech to recognize it.
- Individually name each pot location an (e.g., 48sgwHolkham 1, 48sgwHolkham 2, 48sgwHolkham 3,....).
- Save as “marks32.txt” (This is the only file name Maptech recognizes).

Maptech

- Open Maptech (on Medeia wheelhouse computer).
- File> Import from File and browse for the folder where the “marks32” file is located.
- Select all marks for the site and import. It will give the number of marks imported successfully.
- Check the chart to make sure pot locations have in fact shown up in the appropriate spot.
- Repeat procedure for each site text file.
- Overwrite the “marks32” file each time.
- A detailed explanation of the Maptech import/export format in R:>..... /Tanner pot location maps /Transfer to Medeia> Maptech export format explanation.

Maxsea

- The Skipper of the Medeia will import pot locations from Maptech to Maxsea once they have created routes between pots.

APPENDIX D: 2024 SURVEY INFORMATION

Appendix D1.–2025 summer crab survey schedule.

The red king crab survey is composed of three legs conducted on the R/V *Medeia*. If any staffing changes occur mid-trip, due to illness or otherwise, the project leaders (Adam Messmer, Tessa Bergmann, and Zane Chapman) must be notified immediately.

R/V *Medeia* Vessel Crew

Position	Title	Crew
Captain	Boat Officer IV	Cedar Stark
First Mate	Boat Officer III	Jacob Eberhardt
Engineer	Boat Officer II	Rick Gotwald
Cook/Mate	Boat Officer I	Katy Hamilton

Leg 1: Juneau Area and Barlow Cove (9 days)
Dates: July 1–July 9, 2024
Vessel: R/V *Medeia*
Biologists: Zane Chapman (lead), Jan Rumble, Joe Stratman, and Alex Reich (biometrician)

Date	Day	Morning task	Afternoon task	# of Pots
7/1	Monday		Set pots Oliver’s Inlet	28
7/2	Tuesday	Pull pots	Set pots Young’s Bay/Pt. Hilda	28
7/3	Wednesday	Pull pots	Set pots Outer Pt./Young’s Bay	28
7/4	Thursday	Pull pots	Set pots Outside Auke Bay/Portland Trench	28
7/5	Friday	Pull pots	Set pots Auke Bay/Portland Trench	28
7/6	Saturday	Pull pots	Set pots Lower Favorite Ch.	28
7/7	Sunday	Pull pots	Set pots Eagle River/ Upper Favorite Ch.	28
7/8	Monday	Pull pots	Set pots Barlow Cove	28
7/9	Tuesday	Pull pots	Travel to Juneau	

Leg 2: Pybus Bay, Gambier Bay, and Seymour Canal (10 days)
Dates: July 13–July 22, 2024
Vessel: R/V *Medeia*
Biologists: Tessa Bergmann (lead), Adam Messmer, and Zane Chapman

-continued-

Appendix D1.–Page 2 of 2.

Date	Day	Morning Task	Afternoon Task	# of Pots
7/13	Saturday	Run to Pybus	Set pots Pybus	18
7/14	Sunday	Pull pots	Set pots Pybus	28
7/15	Monday	Pull pots	Set pots Pybus	25
7/16	Tuesday	Pull pots	Set pots Gambier	28
7/17	Wednesday	Pull pots	Set pots Gambier	28
7/18	Thursday	Pull pots	Set pots Gambier	25
7/19	Friday	Pull pots	Set pots Seymour	28
7/20	Saturday	Pull pots	Set pots Seymour	28
7/21	Sunday	Pull pots	Set pots Seymour	15
7/22	Monday	Pull pots	Travel to Juneau	

Leg 3: Excursion Inlet, Lynn Sisters, and Deadman Reach (10 days)

Dates: August 7–August 16, 2024

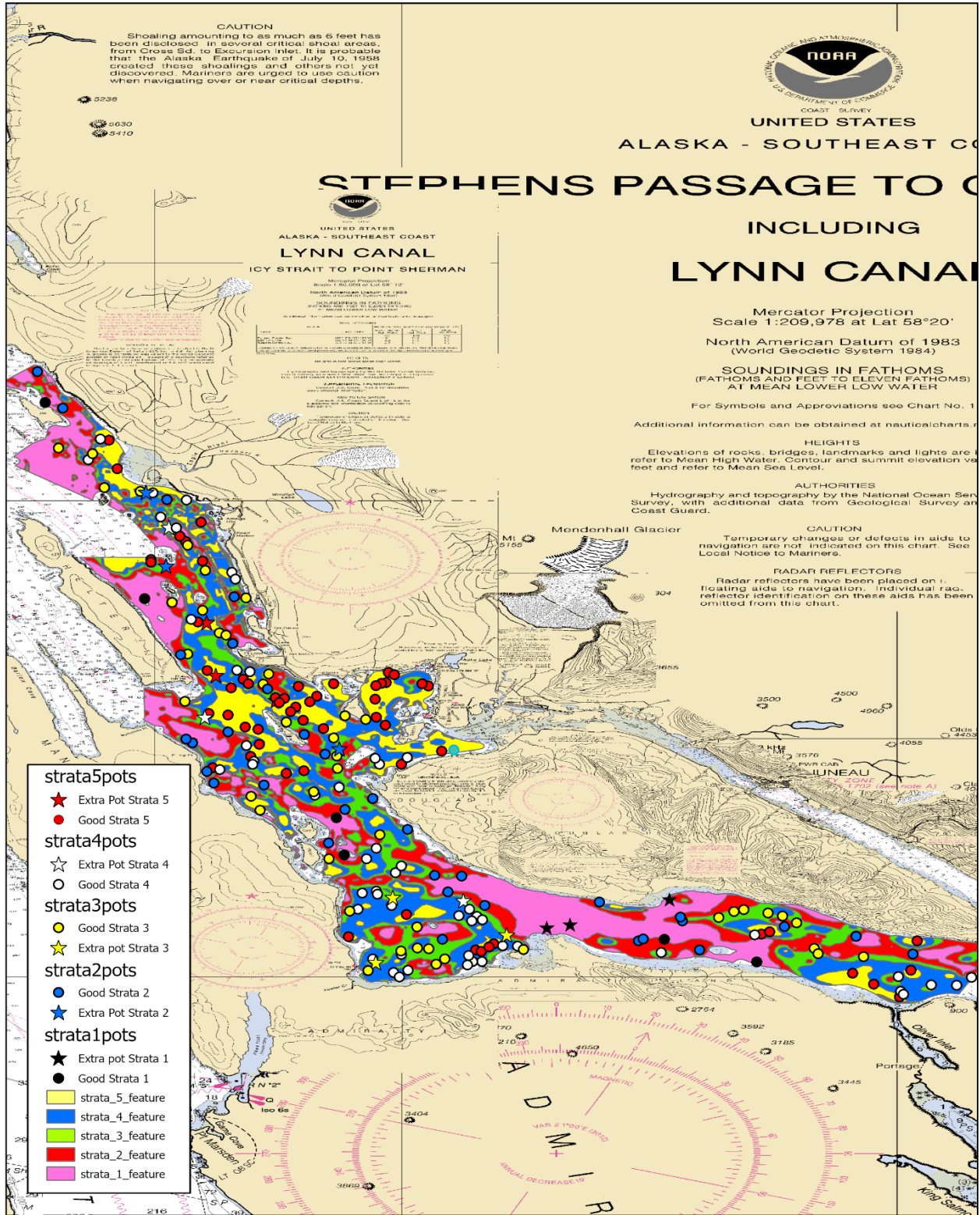
Vessel: R/V *Medeia*

Biologists: Adam Messmer (lead), Tessa Bergmann, and Zane Chapman

Date	Day	Morning Task	Afternoon Task	# of Pots
8/7	Wednesday	Travel to Deadman Reach	Travel to Deadman Reach	
8/8	Thursday	Travel to Deadman Reach	Set pots Deadman Reach	28
8/9	Friday	Pull pots	Set pots Deadman Reach	28
8/10	Saturday	Pull pots	Travel to Excursion	
8/11	Sunday	Travel to Excursion Inlet	Set pots Excursion Inlet	28
8/12	Monday	Pull pots	Set pots Excursion Inlet	28
8/13	Tuesday	Pull pots	Set pots Excursion Inlet	28
8/14	Wednesday	Pull pots	Travel to Lynn Sisters	
8/15	Thursday	Travel to Lynn Sisters	Set pots Lynn Sisters	28
8/16	Friday	Pull pots	Travel to Juneau	

**APPENDIX E: 2024 JUNEAU SURVEY AREA POT
LOCATIONS**

Appendix E1.—2024 Juneau Area red king crab survey pot locations.



Appendix E2.–2024 Pot location coordinates for Juneau survey area with strata and status.

Strata	Latitude	Longitude	Status
1	58.22092	-134.4865	Extra
1	58.20113	-134.5691	Extra
1	58.20331	-134.5534	Extra
1	58.193	-134.4899	Primary
1	58.25191	-134.7057	Primary
1	58.27816	-134.7109	Primary
1	58.17716	-134.4277	Primary
1	58.56884	-134.907	Primary
1	58.43163	-134.84	Primary
2	58.45419	-134.8255	Extra
2	58.50593	-134.839	Extra
2	58.32634	-134.7088	Extra
2	58.26995	-134.6627	Primary
2	58.33647	-134.7326	Primary
2	58.3227	-134.7186	Primary
2	58.3922	-134.8158	Primary
2	58.20581	-134.478	Primary
2	58.21662	-134.6108	Primary
2	58.20866	-134.4792	Primary
2	58.21919	-134.5338	Primary
2	58.23719	-134.6264	Primary
2	58.20208	-134.4092	Primary
2	58.22633	-134.6358	Primary
2	58.40008	-134.7805	Primary
2	58.18262	-134.3226	Primary
2	58.50069	-134.8249	Primary
2	58.2378	-134.6448	Primary
2	58.43277	-134.7797	Primary
2	58.28397	-134.705	Primary
2	58.30227	-134.7932	Primary
2	58.1857	-134.4662	Primary
2	58.19504	-134.3607	Primary
2	58.19292	-134.6394	Primary
2	58.3307	-134.8078	Primary
2	58.31047	-134.7979	Primary
2	58.33817	-134.7839	Primary
2	58.59052	-134.9121	Primary
2	58.56488	-134.895	Primary

-continued-

Strata	Latitude	Longitude	Status
2	58.30105	-134.7595	Primary
2	58.33316	-134.8119	Primary
2	58.26057	-134.7162	Primary
2	58.19193	-134.5073	Primary
2	58.29164	-134.6862	Primary
2	58.36818	-134.7571	Primary
2	58.19339	-134.5042	Primary
3	58.17667	-134.6843	Extra
3	58.2222	-134.6728	Extra
3	58.19603	-134.5961	Extra
3	58.37873	-134.7565	Primary
3	58.20932	-134.4104	Primary
3	58.34683	-134.691	Primary
3	58.18632	-134.6487	Primary
3	58.28328	-134.7622	Primary
3	58.17569	-134.6437	Primary
3	58.2046	-134.4008	Primary
3	58.26632	-134.6815	Primary
3	58.18098	-134.3558	Primary
3	58.21383	-134.4364	Primary
3	58.35958	-134.8129	Primary
3	58.43191	-134.7717	Primary
3	58.37159	-134.7601	Primary
3	58.21257	-134.443	Primary
3	58.31262	-134.7101	Primary
3	58.18597	-134.5849	Primary
3	58.29312	-134.7683	Primary
3	58.5093	-134.8671	Primary
3	58.20835	-134.4533	Primary
3	58.40746	-134.7896	Primary
3	58.17123	-134.6896	Primary
3	58.18242	-134.274	Primary
3	58.18496	-134.6674	Primary
3	58.42337	-134.801	Primary
3	58.39275	-134.8109	Primary
3	58.34964	-134.7051	Primary

-continued-

Strata	Latitude	Longitude	Status
3	58.24927	-134.7159	Primary
3	58.46891	-134.8109	Primary
3	58.1868	-134.3891	Primary
3	58.34496	-134.7447	Primary
3	58.29632	-134.726	Primary
3	58.45138	-134.7991	Primary
3	58.5368	-134.898	Primary
3	58.42878	-134.8215	Primary
3	58.50664	-134.8428	Primary
3	58.21275	-134.7018	Primary
3	58.20179	-134.6565	Primary
3	58.18297	-134.3864	Primary
3	58.53295	-134.875	Primary
3	58.17936	-134.6377	Primary
3	58.33411	-134.7126	Primary
3	58.32143	-134.7104	Primary
3	58.40599	-134.7851	Primary
3	58.21144	-134.4203	Primary
3	58.18703	-134.6563	Primary
4	58.34837	-134.7994	Extra
4	58.48133	-134.8236	Extra
4	58.22	-134.6253	Extra
4	58.31754	-134.7664	Primary
4	58.20964	-134.6284	Primary
4	58.209	-134.6161	Primary
4	58.1668	-134.3323	Primary
4	58.15652	-134.3307	Primary
4	58.20658	-134.6125	Primary
4	58.22549	-134.6934	Primary
4	58.24946	-134.6906	Primary
4	58.18843	-134.5987	Primary
4	58.48116	-134.8186	Primary
4	58.29939	-134.7088	Primary
4	58.5005	-134.8118	Primary
4	58.17747	-134.6129	Primary
4	58.16969	-134.6723	Primary

-continued-

Strata	Latitude	Longitude	Status
4	58.4887	-134.8292	Primary
4	58.44985	-134.7811	Primary
4	58.21421	-134.6965	Primary
4	58.38148	-134.7779	Primary
?	58.17732	-134.6191	Primary
?	58.44526	-134.7788	Primary
4	58.2939	-134.7253	Primary
4	58.22666	-134.6841	Primary
4	58.21404	-134.6212	Primary
4	58.18159	-134.6217	Primary
4	58.54324	-134.8698	Primary
4	58.17518	-134.6226	Primary
4	58.31544	-134.7671	Primary
4	58.32016	-134.6633	Primary
4	58.32864	-134.7714	Primary
4	58.15441	-134.3288	Primary
4	58.20582	-134.6196	Primary
4	58.50559	-134.8345	Primary
4	58.23952	-134.6711	Primary
4	58.24446	-134.6671	Primary
4	58.31563	-134.6819	Primary
4	58.1825	-134.6671	Primary
4	58.17942	-134.6863	Primary
4	58.31196	-134.7893	Primary
4	58.18834	-134.5887	Primary
4	58.38027	-134.7691	Primary
4	58.17126	-134.6627	Primary
4	58.1666	-134.6685	Primary
4	58.22469	-134.683	Primary
4	58.18365	-134.492	Primary
4	58.25665	-134.6841	Primary
4	58.16088	-134.2932	Primary
4	58.21678	-134.6736	Primary
4	58.41713	-134.8086	Primary
4	58.19609	-134.429	Primary
4	58.52868	-134.878	Primary

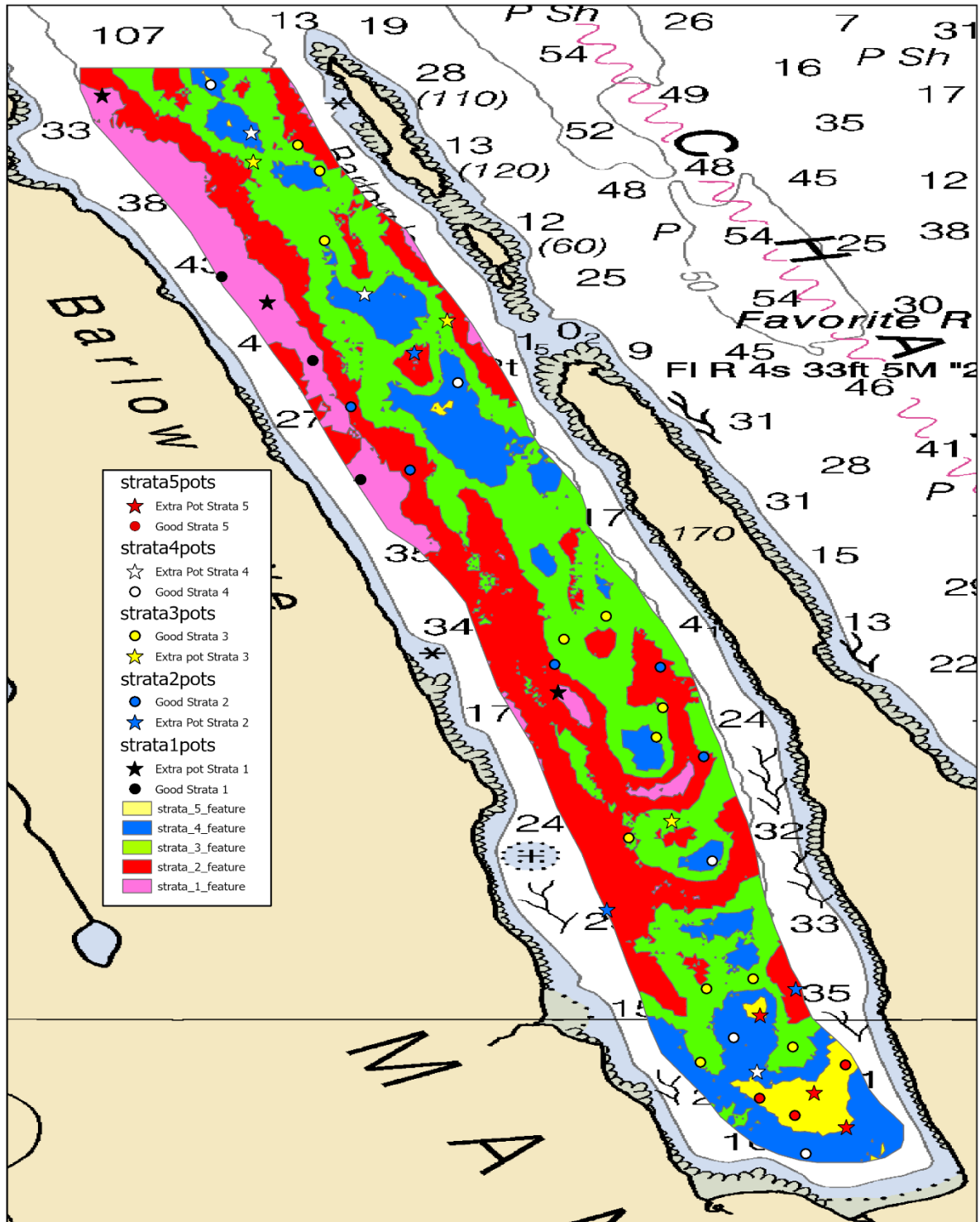
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Strata	Latitude	Longitude	Status
4	58.31966	-134.6848	Primary
4	58.16109	-134.3103	Primary
4	58.16625	-134.283	Primary
5	58.37764	-134.792	Extra
5	58.41474	-134.7982	Extra
5	58.36022	-134.7515	Extra
5	58.34175	-134.7722	Primary
?	58.36122	-134.6847	Primary
?	58.31311	-134.7941	Primary
5	58.32098	-134.7684	Primary
5	58.36895	-134.7816	Primary
5	58.32785	-134.6129	Primary
5	58.37997	-134.6757	Primary
5	58.54256	-134.8639	Primary
5	58.37194	-134.7126	Primary
5	58.35006	-134.7838	Primary
5	58.37265	-134.6773	Primary
5	58.32546	-134.6318	Primary
5	58.19664	-134.4246	Primary
5	58.35562	-134.7382	Primary
5	58.37516	-134.7735	Primary
5	58.30923	-134.7445	Primary
5	58.18559	-134.6169	Primary
5	58.31114	-134.7327	Primary
5	58.45779	-134.801	Primary
5	58.35109	-134.7967	Primary
5	58.36221	-134.7519	Primary
5	58.37231	-134.6806	Primary
5	58.19822	-134.4192	Primary
5	58.36171	-134.7458	Primary
5	58.19472	-134.7027	Primary
5	58.52232	-134.8585	Primary
5	58.36335	-134.7239	Primary
5	58.34048	-134.7195	Primary
5	58.47168	-134.8123	Primary
5	58.3429	-134.6778	Primary

-continued-

Strata	Latitude	Longitude	Status
5	58.15268	-134.3316	Primary
5	58.31566	-134.6669	Primary
5	58.37838	-134.6718	Primary
5	58.45897	-134.8356	Primary
5	58.3296	-134.7628	Primary
5	58.35868	-134.7492	Primary
5	58.21046	-134.6636	Primary
5	58.37023	-134.649	Primary
5	58.3702	-134.7363	Primary
5	58.45698	-134.8358	Primary
5	58.37066	-134.6841	Primary
	58.19202	-134.3197	Primary
5	58.38111	-134.7979	Primary
5	58.18978	-134.6049	Primary
5	58.34843	-134.6839	Primary
5	58.35243	-134.7416	Primary
5	58.37186	-134.6532	Primary
5	58.37191	-134.7701	Primary
5	58.41507	-134.8042	Primary
5	58.18464	-134.6134	Primary
5	58.35936	-134.7287	Primary
5	58.17129	-134.3241	Primary
5	58.34014	-134.7635	Primary
5	58.18762	-134.6081	Primary
5	58.3464	-134.7332	Primary
5	58.47519	-134.8161	Primary
5	58.48489	-134.8019	Primary
5	58.16928	-134.3631	Primary
5	58.16153	-134.3489	Primary

Appendix E3.-2024 Barlow Cove summer crab survey pot locations.

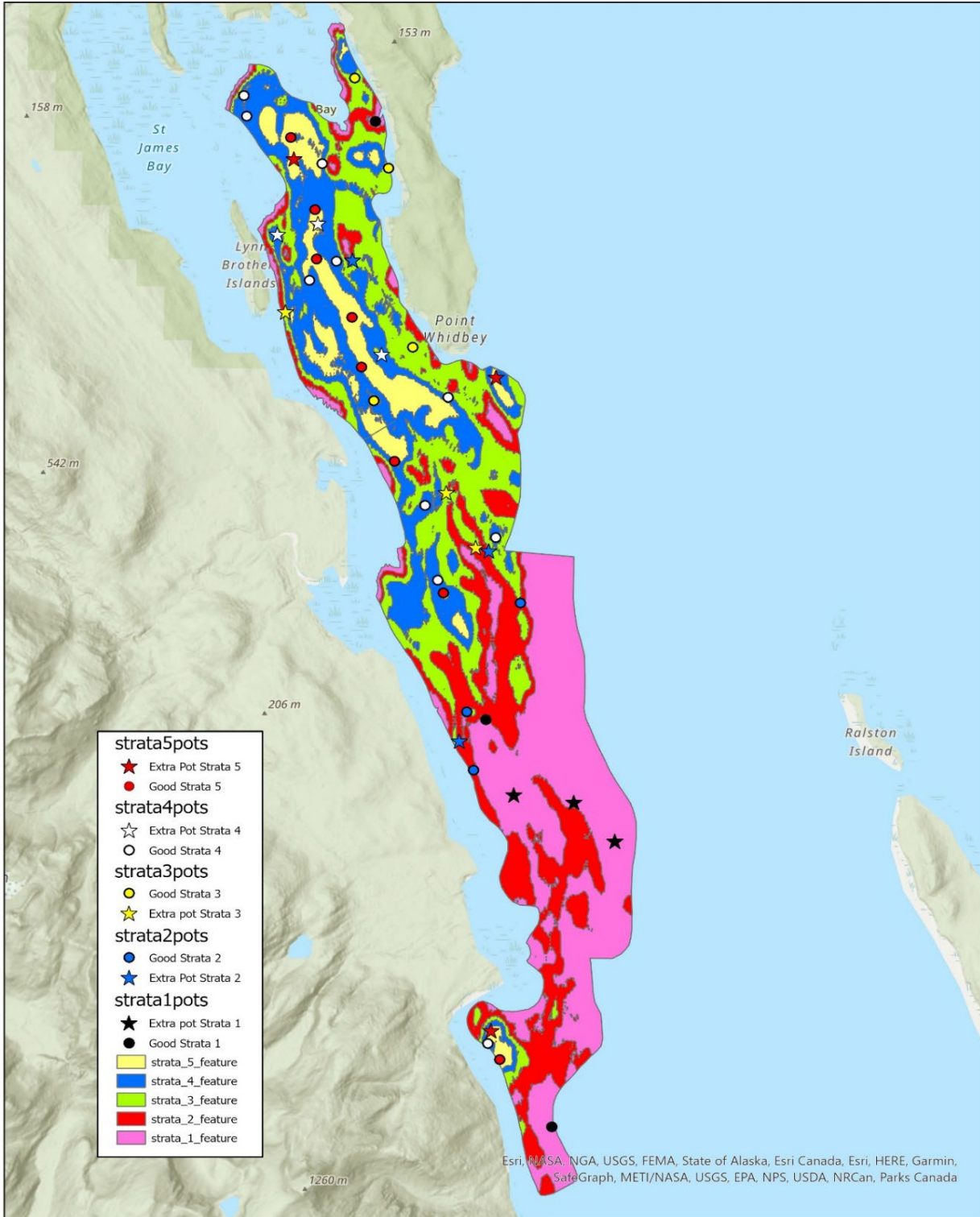


Appendix E4.–2024 Pot location coordinates for Barlow Cove area with strata and status.

Strata	Latitude	Longitude	Status
1	58.39766	-134.9264	Extra
1	58.35617	-134.8965	Extra
1	58.38328	-134.9156	Primary
1	58.37923	-134.9126	Primary
1	58.37094	-134.9095	Primary
2	58.33554	-134.8808	Extra
2	58.34104	-134.8933	Extra
2	58.37976	-134.9059	Primary
2	58.37601	-134.9101	Primary
2	58.3716	-134.9062	Primary
2	58.35791	-134.8897	Primary
2	58.35169	-134.8869	Primary
3	58.34722	-134.889	Extra
3	58.38201	-134.9037	Extra
3	58.3942	-134.9136	Primary
3	58.33149	-134.881	Primary
3	58.3924	-134.9121	Primary
3	58.38754	-134.9118	Primary
3	58.35303	-134.89	Primary
3	58.33555	-134.8867	Primary
3	58.35509	-134.8896	Primary
3	58.35986	-134.8961	Primary
3	58.36144	-134.8933	Primary
3	58.34604	-134.8918	Primary
3	58.33625	-134.8837	Primary
3	58.33045	-134.8871	Primary
4	58.32979	-134.8834	Extra
4	58.39506	-134.9166	Extra
4	58.38385	-134.9092	Extra
4	58.33213	-134.8849	Primary
4	58.37768	-134.9031	Primary
4	58.39839	-134.9193	Primary
4	58.32408	-134.8802	Primary
4	58.34443	-134.8864	Primary
5	58.33371	-134.8832	Extra
5	58.32592	-134.8775	Extra
5	58.32877	-134.8837	Primary
5	58.33024	-134.8776	Primary
5	58.32703	-134.8823	Primary

**APPENDIX F: 2024 LYNN SISTERS SURVEY AREA POT
LOCATIONS**

Appendix F1.–2024 Lynn Sisters summer crab survey pot locations.



Appendix F2.–2024 Pot location coordinates for Lynn Sisters survey area with strata and status.

Strata	Latitude	Longitude	Status
1	58.50573	-135.1054	Extra
1	58.51745	-135.1297	Extra
1	58.52066	-135.1103	Extra
1	58.528	-135.1188	Primary
1	58.50171	-135.0998	Primary
1	58.54842	-135.1139	Primary
2	58.52625	-135.1376	Extra
2	58.53574	-135.1291	Extra
2	58.54922	-135.1373	Extra
2	58.51015	-135.124	Primary
2	58.56163	-135.1477	Primary
2	58.50274	-135.1059	Primary
2	58.50305	-135.0959	Primary
2	58.46962	-135.1176	Primary
3	58.53288	-135.1229	Extra
3	58.54033	-135.1545	Extra
3	58.57743	-135.1526	Extra
3	58.571	-135.1676	Primary
3	58.58875	-135.1592	Primary
3	58.55883	-135.1467	Primary
3	58.58083	-135.1548	Primary
3	58.55766	-135.141	Primary
3	58.55738	-135.1495	Primary
3	58.56118	-135.1379	Primary
4	58.61035	-135.1908	Extra
4	58.54432	-135.1536	Extra
4	58.59298	-135.187	Extra
4	58.5863	-135.1786	Primary
4	58.5801	-135.1591	Primary
4	58.54427	-135.138	Primary
4	58.56824	-135.152	Primary
4	58.58027	-135.176	Primary
4	58.58617	-135.1826	Primary
4	58.57582	-135.1593	Primary
4	58.54331	-135.1488	Primary
4	58.56984	-135.1391	Primary
4	58.58858	-135.1636	Primary
5	58.60695	-135.1817	Extra
5	58.58501	-135.1673	Extra

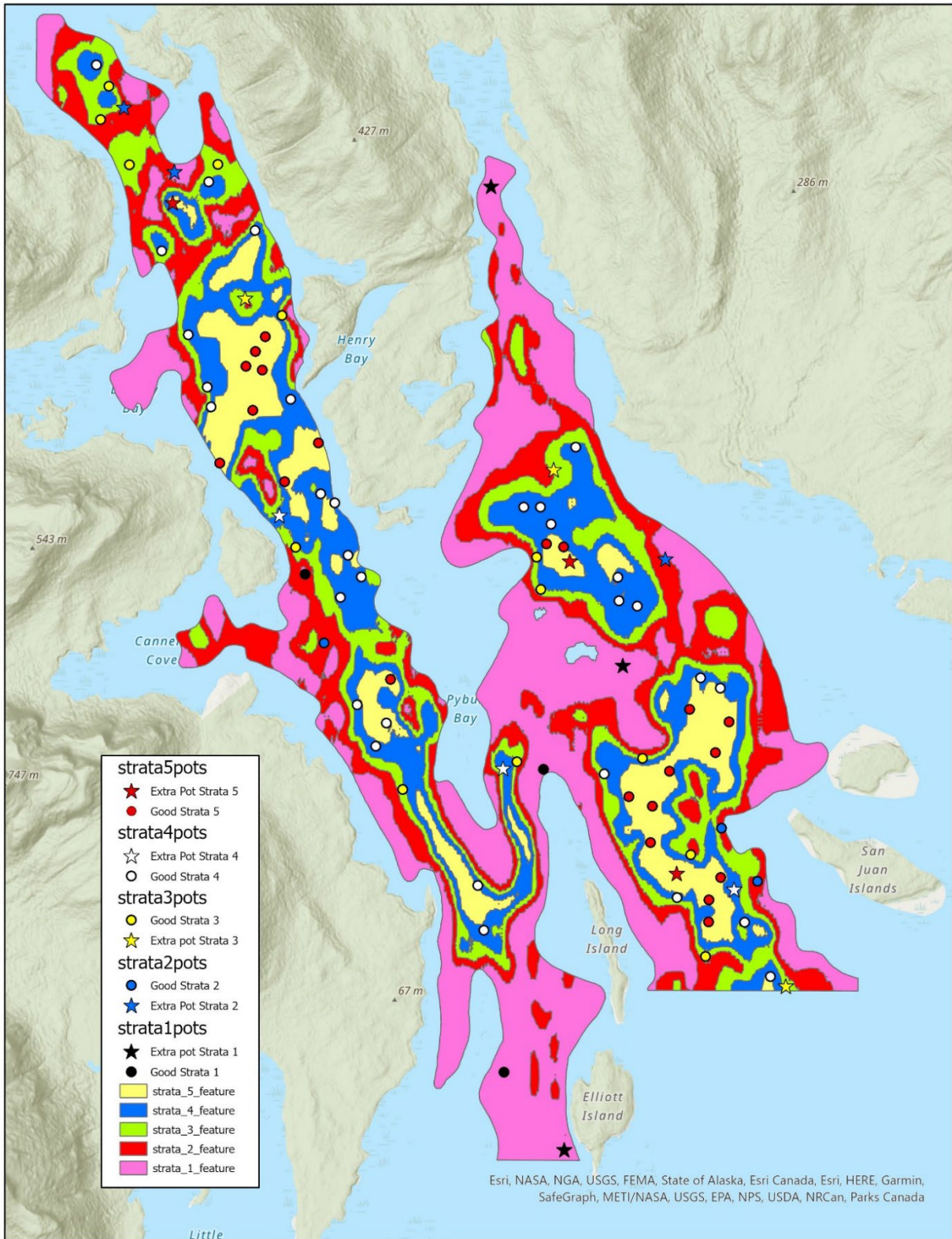
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Appendix F2.–Page 2 of 2.

Strata	Latitude	Longitude	Status
5	58.56382	-135.1537	Extra
5	58.54132	-135.1391	Primary
5	58.56844	-135.1587	Primary
5	58.58299	-135.1694	Primary

**APPENDIX G: 2024 PYBUS BAY SURVEY AREA POT
LOCATIONS**

Appendix G1.–2024 Pybus Bay summer crab survey pot locations.



Appendix G2.–2024 Pot location coordinates for Pybus Bay area with strata and status.

Strata	Latitude	Longitude	Status
1	57.31337	-134.0428	Extra
1	57.29037	-134.0612	Extra
1	57.33569	-134.0788	Extra
1	57.31791	-134.0407	Primary
1	57.30333	-134.0703	Primary
1	57.26803	-134.0751	Primary
2	57.34299	-134.1224	Extra
2	57.30967	-134.0354	Extra
2	57.27329	-134.0407	Extra
2	57.30254	-134.0584	Primary
2	57.34826	-134.146	Primary
2	57.3092	-134.0433	Primary
3	57.30672	-134.0327	Extra
3	57.34936	-134.1421	Extra
3	57.34301	-134.1454	Extra
3	57.27804	-134.0423	Primary
3	57.31802	-134.0531	Primary
3	57.33955	-134.0766	Primary
3	57.28116	-134.0445	Primary
3	57.32258	-134.0563	Primary
3	57.31775	-134.1182	Primary
3	57.35875	-134.1551	Primary
3	57.30679	-134.1015	Primary
3	57.30235	-134.1017	Primary
3	57.27454	-134.0315	Primary
3	57.27916	-134.0899	Primary
3	57.2928	-134.0789	Primary
3	57.3325	-134.0677	Primary
4	57.31237	-134.0547	Extra
4	57.32764	-134.1366	Extra
4	57.28082	-134.0798	Extra
4	57.31771	-134.0641	Primary
4	57.30105	-134.0464	Primary
4	57.29382	-134.0346	Primary
4	57.3399	-134.1398	Primary
4	57.31667	-134.0552	Primary
4	57.27732	-134.0276	Primary
4	57.3221	-134.07	Primary

-continued-

Strata	Latitude	Longitude	Status
4	57.29406	-134.0971	Primary
4	57.33508	-134.1209	Primary
4	57.34806	-134.1278	Primary
4	57.29618	-134.0583	Primary
4	57.32808	-134.0639	Primary
4	57.33515	-134.125	Primary
4	57.29928	-134.0986	Primary
4	57.32986	-134.0668	Primary
4	57.31147	-134.1127	Primary
4	57.29001	-134.0457	Primary
4	57.28672	-134.0892	Primary
4	57.27695	-134.0881	Primary
4	57.35181	-134.1492	Primary
4	57.31529	-134.1135	Primary
4	57.35106	-134.1383	Primary
4	57.29136	-134.0488	Primary
4	57.31623	-134.0584	Primary
4	57.32047	-134.0622	Primary
4	57.32395	-134.0698	Primary
4	57.28288	-134.0898	Primary
4	57.28952	-134.0796	Primary
4	57.28848	-134.0571	Primary
4	57.30493	-134.1105	Primary
4	57.32423	-134.0818	Primary
5	57.32955	-134.1385	Extra
5	57.32915	-134.1246	Extra
5	57.2886	-134.093	Extra
5	57.3287	-134.1182	Primary
5	57.30269	-134.0439	Primary
5	57.33078	-134.1188	Primary
5	57.29618	-134.0527	Primary
5	57.29909	-134.0402	Primary
5	57.31785	-134.0692	Primary
5	57.29896	-134.0356	Primary
5	57.34081	-134.1299	Primary
5	57.28177	-134.039	Primary
5	57.29316	-134.0489	Primary
5	57.33376	-134.1377	Primary

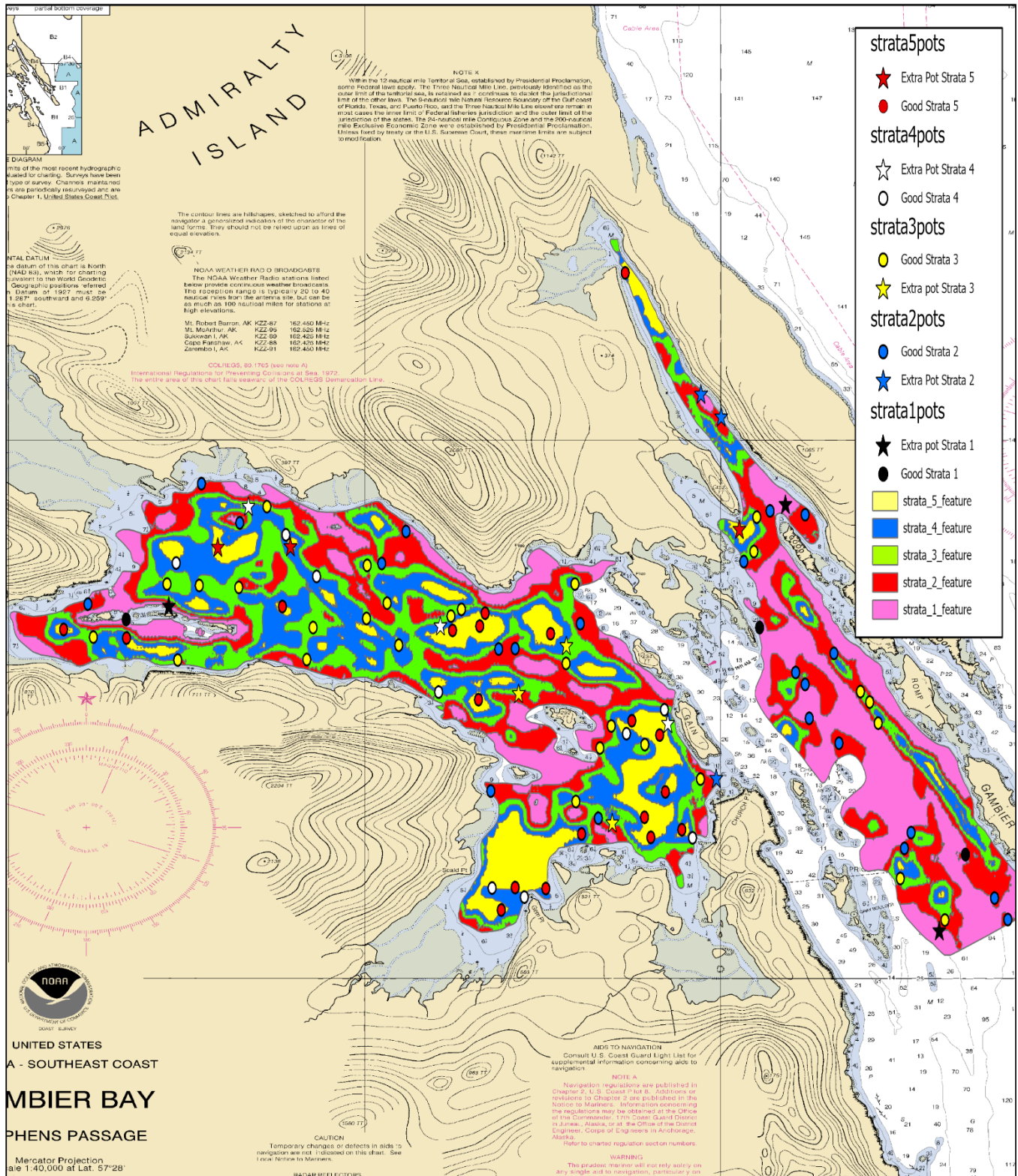
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Appendix G2.–Page 3 or 3.

Status	Latitude	Longitude	Status
5	57.336	-134.1301	Primary
5	57.30208	-134.0403	Primary
5	57.34001	-134.1363	Primary
5	57.27979	-134.0859	Primary
5	57.28965	-134.0495	Primary
5	57.29575	-134.0366	Primary
5	57.30168	-134.0355	Primary
5	57.28761	-134.0511	Primary
5	57.31903	-134.0595	Primary
5	57.3434	-134.1279	Primary

**APPENDIX H: 2024 GAMBIER BAY SURVEY AREA POT
LOCATIONS**

Appendix H1.-2024 Gambier Bay summer crab survey pot locations.



Appendix H2.–2024 Pot location coordinates for Gambier Bay area with strata and status.

Strata	Latitude	Longitude	Status
1	57.49005	-133.9015	Extra
1	57.47428	-134.0458	Extra
1	57.42405	-133.8655	Extra
1	57.47223	-134.0557	Primary
1	57.47098	-133.9075	Primary
1	57.43584	-133.8594	Primary
2	57.44763	-133.9177	Extra
2	57.50711	-133.9212	Extra
2	57.50359	-133.9165	Extra
2	57.49326	-134.0381	Primary
2	57.47462	-134.0647	Primary
2	57.48585	-133.9902	Primary
2	57.45309	-133.8889	Primary
2	57.48087	-133.996	Primary
2	57.46214	-133.8969	Primary
2	57.467	-133.8901	Primary
2	57.42912	-133.8526	Primary
2	57.45691	-133.8959	Primary
2	57.44142	-133.9453	Primary
2	57.46774	-133.9648	Primary
2	57.4884	-133.8969	Primary
2	57.48901	-133.9051	Primary
2	57.42579	-133.8495	Primary
2	57.43679	-133.8736	Primary
2	57.48114	-133.9113	Primary
2	57.48718	-134.0292	Primary
2	57.43925	-133.8721	Primary
2	57.46404	-133.8991	Primary
2	57.47159	-133.9495	Primary
2	57.44569	-133.9704	Primary
2	57.46761	-133.9686	Primary
3	57.46077	-133.9639	Extra
3	57.44075	-133.942	Extra
3	57.46818	-133.9528	Extra
3	57.4695	-134.0635	Primary
3	57.46824	-133.992	Primary
3	57.46605	-134.0135	Primary
3	57.43211	-133.8746	Primary

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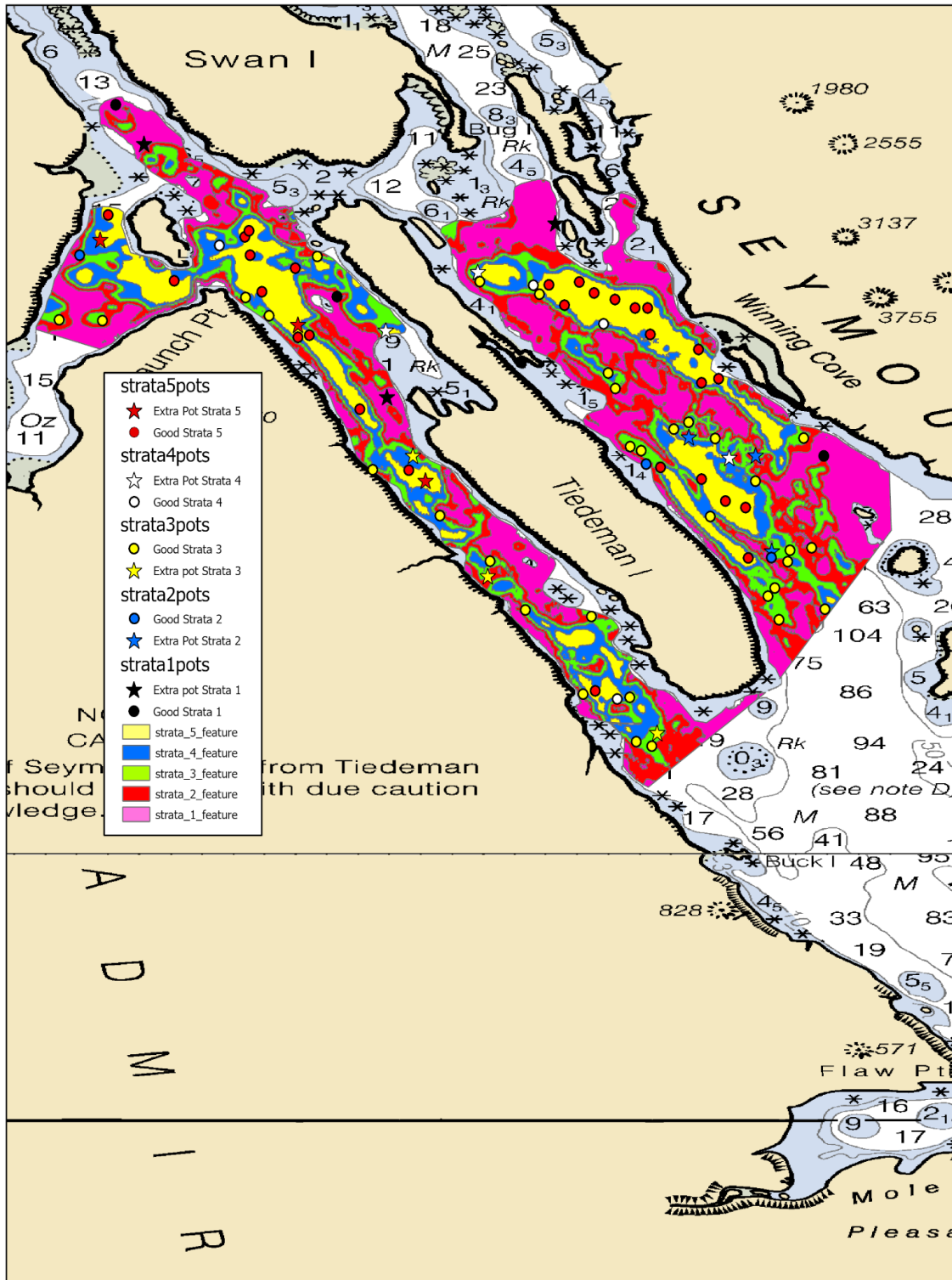
Strata	Latitude	Longitude	Status
3	57.47772	-134.0462	Primary
3	57.47272	-133.9798	Primary
3	57.44401	-133.9505	Primary
3	57.45287	-133.9344	Primary
3	57.48967	-134.0228	Primary
3	57.45232	-133.9449	Primary
3	57.48058	-133.9994	Primary
3	57.46108	-133.8839	Primary
3	57.47767	-133.9508	Primary
3	57.4775	-134.0387	Primary
3	57.4594	-133.8818	Primary
3	57.47238	-133.9995	Primary
3	57.47477	-133.9947	Primary
3	57.47099	-134.012	Primary
3	57.48806	-133.9082	Primary
3	57.47721	-134.0294	Primary
3	57.45615	-133.8798	Primary
3	57.45571	-133.9422	Primary
3	57.48271	-133.9088	Primary
3	57.46541	-133.9528	Primary
3	57.46592	-134.0437	Primary
3	57.42569	-133.8642	Primary
3	57.44754	-133.9214	Primary
3	57.47377	-133.9773	Primary
4	57.48975	-134.0271	Extra
4	57.45613	-133.929	Extra
4	57.47126	-133.9822	Extra
4	57.47887	-134.0112	Primary
4	57.48093	-134.0441	Primary
4	57.43844	-133.9232	Primary
4	57.42921	-133.9626	Primary
4	57.46096	-133.9827	Primary
4	57.48528	-134.0184	Primary
4	57.45821	-133.9298	Primary
4	57.43066	-133.9701	Primary
4	57.45453	-133.9387	Primary
5	57.48618	-133.9123	Extra
5	57.48341	-134.0343	Extra
5	57.4835	-134.0173	Extra
5	57.47119	-133.973	Primary

-continued-

Strata	Latitude	Longitude	Status
5	57.43903	-133.9492	Primary
5	57.43846	-133.933	Primary
5	57.43056	-133.9576	Primary
5	57.44552	-133.9296	Primary
5	57.47054	-133.9794	Primary
5	57.45433	-133.9309	Primary
5	57.44161	-133.9345	Primary
5	57.43075	-133.9647	Primary
5	57.45654	-133.9374	Primary
5	57.47316	-133.9718	Primary
5	57.47422	-134.0192	Primary
5	57.47063	-134.0704	Primary
5	57.43964	-133.9258	Primary
5	57.4272	-133.968	Primary
5	57.47003	-133.9565	Primary
5	57.52589	-133.939	Primary
5	57.45983	-133.9733	Primary
5	57.46934	-134.0556	Primary

**APPENDIX I: 2024 SEYMOUR CANAL SURVEY AREA POT
LOCATIONS**

Appendix II.-2024 Seymour Canal summer crab survey pot locations.



Appendix I2.–2024 Pot location coordinates for Seymour Canal area with strata and status.

Strata	Latitude	Longitude	Status
1	57.90995	-134.2654	Extra
1	57.84693	-134.2007	Extra
1	57.89018	-134.1558	Extra
1	57.83224	-134.0842	Primary
1	57.87191	-134.214	Primary
1	57.91966	-134.273	Primary
2	57.83694	-134.1202	Extra
2	57.80858	-134.0981	Extra
2	57.83239	-134.1024	Extra
2	57.88224	-134.2826	Primary
2	57.8303	-134.1316	Primary
2	57.80694	-134.0982	Primary
3	57.83908	-134.1206	Extra
3	57.86756	-134.2886	Extra
3	57.83236	-134.1061	Extra
3	57.85575	-134.2104	Primary
3	57.8387	-134.0913	Primary
3	57.82943	-134.1051	Primary
3	57.81415	-134.0896	Primary
4	57.86833	-134.2053	Extra
4	57.86606	-134.1496	Extra
4	57.86331	-134.196	Extra
4	57.87773	-134.2166	Primary
4	57.77103	-134.1329	Primary
4	57.88013	-134.1631	Primary
4	57.83524	-134.2032	Primary
4	57.83006	-134.0969	Primary
4	57.88114	-134.2351	Primary
4	57.85365	-134.1436	Primary
4	57.82699	-134.1976	Primary
4	57.87423	-134.2668	Primary
4	57.87967	-134.2239	Primary
5	57.77808	-134.1385	Extra
5	57.83801	-134.0975	Extra
5	57.88115	-134.2386	Extra
5	57.86922	-134.1489	Primary
5	57.85862	-134.1177	Primary
5	57.82445	-134.1248	Primary
5	57.86374	-134.1994	Primary
5	57.84345	-134.2089	Primary
5	57.8932	-134.2763	Primary
5	57.82322	-134.1225	Primary

-continued-

Strata	Latitude	Longitude	Status
5	57.87348	-134.2391	Primary
5	57.8747	-134.2607	Primary
5	57.86095	-134.2226	Primary
5	57.84478	-134.1045	Primary
5	57.81162	-134.1111	Primary
5	57.80713	-134.1059	Primary
5	57.87626	-134.268	Primary
5	57.8669	-134.1351	Primary
5	57.8708	-134.227	Primary
5	57.88277	-134.2332	Primary
5	57.87075	-134.2604	Primary
5	57.86752	-134.2226	Primary
5	57.88695	-134.2384	Primary
5	57.81456	-134.1144	Primary
5	57.87357	-134.2266	Primary
5	57.87262	-134.2591	Primary
5	57.86318	-134.1359	Primary
5	57.87265	-134.1485	Primary
5	57.87277	-134.2547	Primary
5	57.77144	-134.1449	Primary
5	57.78833	-134.1504	Primary
5	57.88335	-134.242	Primary
5	57.83037	-134.1171	Primary
5	57.8719	-134.1406	Primary
5	57.83278	-134.1201	Primary
5	57.83524	-134.1247	Primary
5	57.78746	-134.1535	Primary
5	57.86728	-134.2292	Primary
5	57.85925	-134.1502	Primary
5	57.85856	-134.2167	Primary
5	57.86455	-134.1322	Primary
5	57.87044	-134.1422	Primary
5	57.81816	-134.1185	Primary
5	57.87838	-134.2359	Primary
5	57.86938	-134.2237	Primary
5	57.82722	-134.1944	Primary

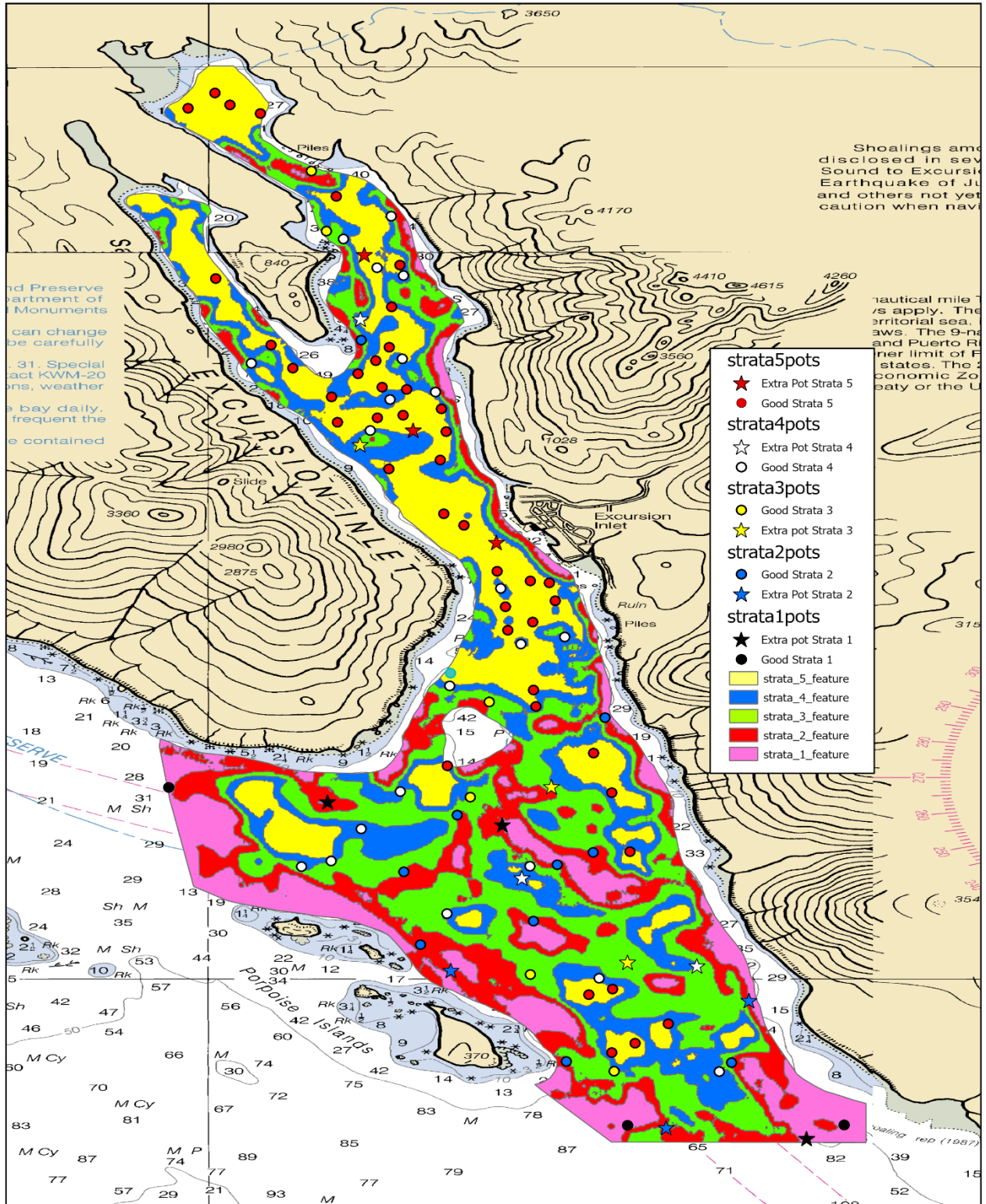
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Appendix I2.–Page 3 of 3.

Strata	Latitude	Longitude	Status
5	57.78026	-134.1399	Primary
5	57.87465	-134.1484	Primary
5	57.81894	-134.108	Primary
5	57.86631	-134.1466	Primary
5	57.81558	-134.1055	Primary
5	57.79613	-134.0833	Primary
5	57.82767	-134.1161	Primary
5	57.82294	-134.1115	Primary

**APPENDIX J: 2024 EXCURSION INLET SURVEY AREA
POT LOCATIONS**

Appendix J1.- 2024 Excursion Inlet summer crab survey pot locations.



Appendix J2.—2024 Pot location coordinates for Excursion Inlet area with strata and status.

Strata	Latitude	Longitude	Status
1	58.36576	-135.4794	Extra
1	58.30423	-135.3967	Extra
1	58.36155	-135.4492	Extra
1	58.30665	-135.4276	Primary
1	58.3684	-135.5068	Primary
1	58.30671	-135.3902	Primary
2	58.30623	-135.4209	Extra
2	58.33495	-135.4581	Extra
2	58.32944	-135.4066	Extra
2	58.33966	-135.4633	Primary
2	58.36335	-135.457	Primary
2	58.35655	-135.4335	Primary
2	58.31834	-135.4382	Primary
2	58.45009	-135.4736	Primary
2	58.353	-135.4662	Primary
2	58.31812	-135.4097	Primary
2	58.34398	-135.4438	Primary
2	58.38112	-135.4315	Primary
2	58.35428	-135.4398	Primary
3	58.36852	-135.4408	Extra
3	58.43101	-135.4738	Extra
3	58.33644	-135.4276	Extra
3	58.36664	-135.4547	Primary
3	58.47007	-135.4796	Primary
3	58.38399	-135.4515	Primary
3	58.33425	-135.4444	Primary
3	58.31656	-135.4299	Primary
3	58.48104	-135.4822	Primary
4	58.33577	-135.4156	Extra
4	58.45395	-135.4737	Extra
4	58.35184	-135.4458	Extra
4	58.40472	-135.4495	Primary
4	58.33355	-135.4325	Primary
4	58.4467	-135.4665	Primary
4	58.46339	-135.4709	Primary
4	58.31651	-135.4118	Primary
4	58.46861	-135.4766	Primary
4	58.47279	-135.4684	Primary
4	58.44589	-135.4925	Primary

-continued-

Strata	Latitude	Longitude	Status
4	58.35495	-135.4788	Primary
4	58.34535	-135.4588	Primary
4	58.43925	-135.4686	Primary
4	58.36765	-135.4668	Primary
4	58.43361	-135.472	Primary
4	58.35392	-135.4839	Primary
4	58.39459	-135.446	Primary
4	58.35403	-135.4444	Primary
4	58.3608	-135.4736	Primary
4	58.3959	-135.4385	Primary
4	58.46195	-135.4663	Primary
4	58.44067	-135.4608	Primary
4	58.38697	-135.4583	Primary
5	58.43365	-135.4646	Extra
5	58.41315	-135.4502	Extra
5	58.46573	-135.473	Extra
5	58.46141	-135.4987	Primary
5	58.40614	-135.4444	Primary
5	58.45619	-135.4683	Primary
5	58.44151	-135.47	Primary
5	58.37235	-135.4587	Primary
5	58.44503	-135.4854	Primary
5	58.44395	-135.4742	Primary
5	58.39861	-135.444	Primary
5	58.43341	-135.4589	Primary
5	58.35668	-135.4272	Primary
5	58.36745	-135.4303	Primary
5	58.44636	-135.4711	Primary
5	58.32519	-135.4206	Primary
5	58.43977	-135.4787	Primary
5	58.40791	-135.4501	Primary
5	58.49249	-135.5035	Primary
5	58.49531	-135.4989	Primary
5	58.43759	-135.4597	Primary
5	58.49151	-135.491	Primary
5	58.44115	-135.4657	Primary
5	58.39709	-135.4483	Primary
5	58.42819	-135.4599	Primary

-continued-

Strata	Latitude	Longitude	Status
5	58.43595	-135.4708	Primary
5	58.44921	-135.4892	Primary
5	58.3862	-135.4439	Primary
5	58.40141	-135.4487	Primary
5	58.37468	-135.4335	Primary
5	58.41626	-135.4558	Primary
5	58.31993	-135.4304	Primary
5	58.38317	-135.4434	Primary
5	58.42659	-135.4688	Primary
5	58.47637	-135.4779	Primary
5	58.40577	-135.4411	Primary
5	58.4351	-135.4777	Primary
5	58.32165	-135.4263	Primary
5	58.33054	-135.4343	Primary
5	58.49313	-135.4962	Primary
5	58.43638	-135.4663	Primary
5	58.41841	-135.4594	Primary
5	58.44882	-135.4687	Primary
5	58.38929	-135.4582	Primary
5	58.33155	-135.4302	Primary
5	58.4025	-135.4401	Primary
5	58.46384	-135.4669	Primary

**APPENDIX K: 2024 DEADMAN REACH SURVEY AREA
POT LOCATIONS**

Appendix K2.–2024 Pot location coordinates for Deadman Reach area with strata and status.

Strata	Latitude	Longitude	Status
1	57.55514	-135.6595	Extra
1	57.56393	-135.4863	Extra
1	57.58397	-135.5124	Extra
1	57.5288	-135.5588	Primary
1	57.55387	-135.5539	Primary
1	57.55984	-135.5092	Primary
2	57.52274	-135.5576	Extra
2	57.51118	-135.5356	Extra
2	57.57848	-135.4871	Extra
2	57.54788	-135.4771	Primary
2	57.55767	-135.6631	Primary
2	57.56283	-135.4968	Primary
2	57.57344	-135.4885	Primary
2	57.55342	-135.4682	Primary
2	57.57238	-135.5445	Primary
2	57.57344	-135.4937	Primary
3	57.55716	-135.653	Extra
3	57.57494	-135.6235	Extra
3	57.59426	-135.5607	Extra
3	57.54503	-135.5451	Primary
3	57.56124	-135.6493	Primary
3	57.56491	-135.6337	Primary
3	57.55933	-135.5863	Primary
3	57.56787	-135.6194	Primary
3	57.56593	-135.5262	Primary
3	57.55221	-135.5298	Primary
3	57.55017	-135.542	Primary
4	57.56718	-135.6285	Extra
4	57.56351	-135.5935	Extra
4	57.56329	-135.5599	Extra
4	57.56504	-135.5869	Primary
4	57.52702	-135.5156	Primary
4	57.53344	-135.5204	Primary
4	57.54792	-135.4974	Primary
4	57.56527	-135.574	Primary
4	57.53122	-135.5134	Primary

-continued-

Strata	Latitude	Longitude	Status
4	57.56414	-135.5455	Primary
4	57.52122	-135.5294	Primary
4	57.53941	-135.4891	Primary
4	57.53203	-135.5186	Primary
4	57.56083	-135.5758	Primary
4	57.53049	-135.5239	Primary
4	57.54203	-135.543	Primary
5	57.54588	-135.5	Extra
5	57.5649	-135.58	Extra
5	57.52416	-135.5252	Extra
5	57.52996	-135.5077	Primary
5	57.5719	-135.6148	Primary
5	57.58124	-135.5342	Primary
5	57.56381	-135.5768	Primary
5	57.5211	-135.5404	Primary
5	57.52951	-135.5282	Primary
5	57.55315	-135.4817	Primary
5	57.5511	-135.4857	Primary
5	57.58141	-135.5308	Primary
5	57.54114	-135.4917	Primary
5	57.52547	-135.5211	Primary
5	57.5244	-135.5157	Primary
5	57.54082	-135.505	Primary
5	57.56992	-135.5977	Primary
5	57.52737	-135.5387	Primary
5	57.55117	-135.4796	Primary
5	57.53865	-135.5116	Primary
5	57.56796	-135.5918	Primary
5	57.51957	-135.5348	Primary
5	57.53376	-135.5007	Primary
5	57.56753	-135.5956	Primary
5	57.51793	-135.5363	Primary
5	57.53493	-135.5484	Primary
5	57.53732	-135.4942	Primary
5	57.53171	-135.5036	Primary