



RC40
Cordova District Fishermen United
2021 Board of Fisheries
Prince William Sound Meeting

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This RC is submitted to show what CDFU believes are flaws with ADFG's new harvest plan and will focus on the new "Central district" and "South Western" district.

1. First thing we would like to address is that tanner crab in PWS have historically been highly migratory.

Crab populations constantly migrate between these proposed districts. How then can we ever get an accurate biomass assessment for any one area?

2. Under this new management strategy, if thresholds are attained and any one area opens at the minimum harvest level when the rest of the areas remain closed, the allowable harvest will be too low to get a processor to open their plant during the off season.

3. Page 1 shows the Commissioner's permit area. Please note that almost all of the harvest in the four years this fishery has been executed has come from the Western district. Page 2 shows the new "Central" district. Note that much of it lies within the traditional Western district. Page 3 shows the Department's estimated abundance in this area is only 8,214 Th crab. If you skip to page 6 you will see that this abundance estimate was derived from a trawl survey catch of only 7 Th crab.

Page 4 shows the new proposed "Southwestern" district. Notice that all of this district lies within the Commissioner's permit fishery area. Page 5 shows the Department's estimated abundance in

this area to be only 6,242 Th crab. Again, if you skip to page 6 you will see that this abundance estimate was derived from a trawl survey that only captured 4 Th crab!



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How is it possible that in 2 years of trawl surveys the Department only managed to capture a combined total of **11** Th crab? If you turn to page 7, you will see that in this same time period fishermen in the Commissioner's permit fishery managed to harvest **88,843** legal crab. The average harvest over the last four years in these areas is 55,040 legal crab.

4. CDFU feels that the Department has done an excellent job of managing this Commissioner's permit fishery sustainably. The fleet has been supportive of all the in-season time and area restrictions that the Department enacted over the course of this fishery. Any time an area showed a concerning trend in daily CPUE, the department closed that area on 24hrs notice. In addition, some years certain subdistricts that had isolated populations of crab that had been fished in previous years were closed for the whole season to let these isolated stocks rebuild.

5. If you turn to page 9 you will see ADFG's acceptable harvest rates. On page 10 if we assume that the Department has managed this fishery responsibly at the minimum harvest rate of 15%. and use the harvest data from the Commissioner's permit fishery to cross check this data, essentially working backwards with these equations:

$$TL = TH(.15)$$

$$TL/.15 = TH$$

These equations represent ADF&G's acceptable rate of TL harvest at the minimum abundance levels of TH.



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Here, if we plug in any TL total harvest value from the Commissioner's permit fishery in the last four years to ADF&G's equation and solve, you get dramatically larger population biomass estimates from each Commissioner's permit harvest according to ADF&G's own methods.

With data from the Commissioner's permit fishery, executed in the Western district only, we end up with biomass estimates of Th crab as follows:

2018 315,960 Th crab

2019 496,046 Th crab

2020 437,046 Th crab

2021 225,353 Th crab

4 year average 366,933 Th crab

How is it possible that the Department's only biomass estimates for this same area is only **14,456 Th crab**? (combined trawl survey estimates from Central and Southwestern districts).

How is it possible for there to be such a large discrepancy between biomass estimates generated with the trawl survey and those generated with commercial catch? Which one is more accurate?

The one using data derived from a total of 11 crab over 2 years? Or the one that was derived from over 275,000 crab over a period of 4 years; data that was supplied by multiple vessels and thousands of pot lifts.

Prince William Sound Area Tanner Crab New Bottom Trawl Assessment

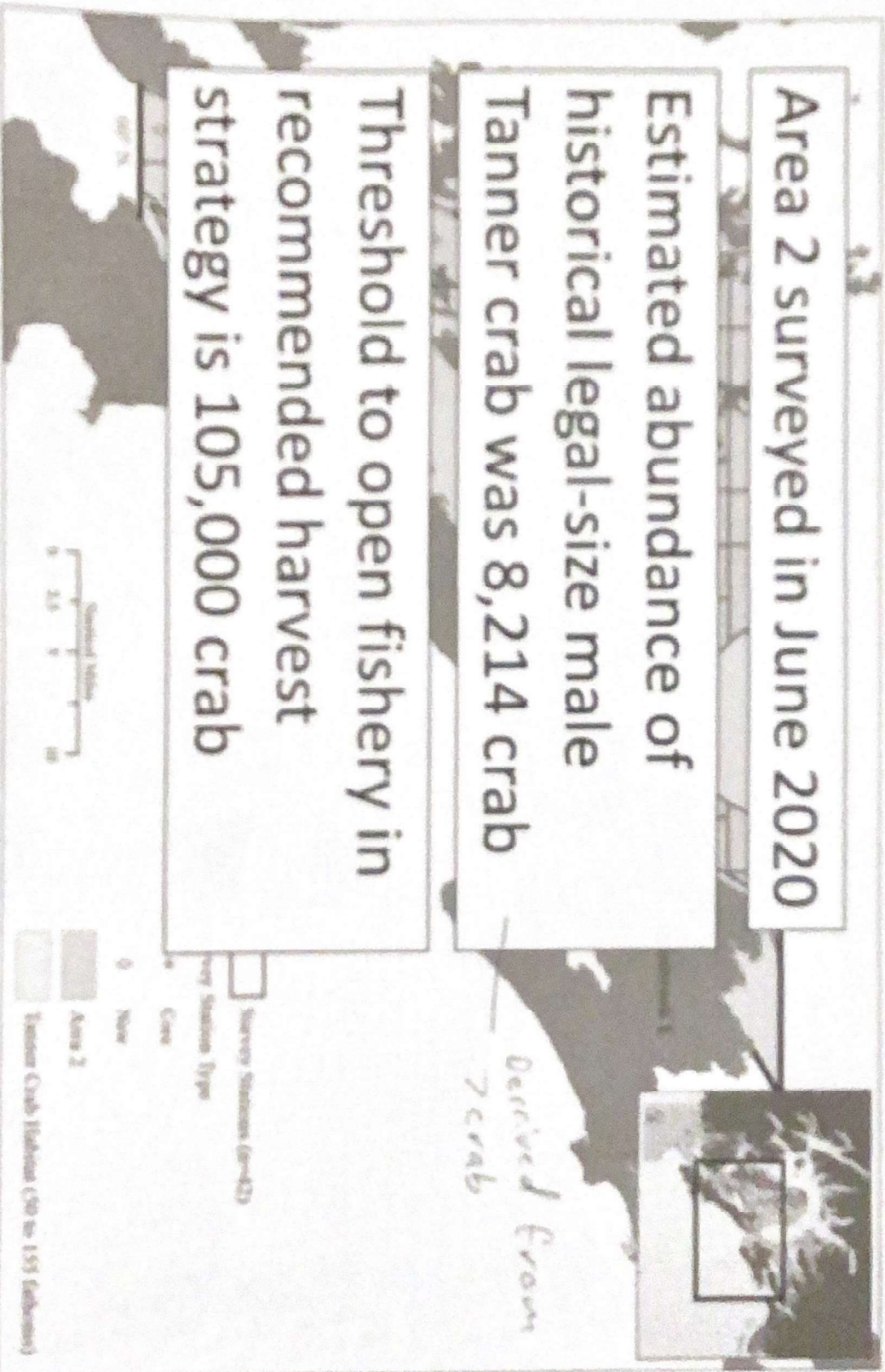
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Area 2

Area 2 surveyed in June 2020

Estimated abundance of historical legal-size male Tanner crab was 8,214 crab

Threshold to open fishery in recommended harvest strategy is 105,000 crab



Prince William Sound Area Tanner Crab New Bottom Trawl Assessment Area 3

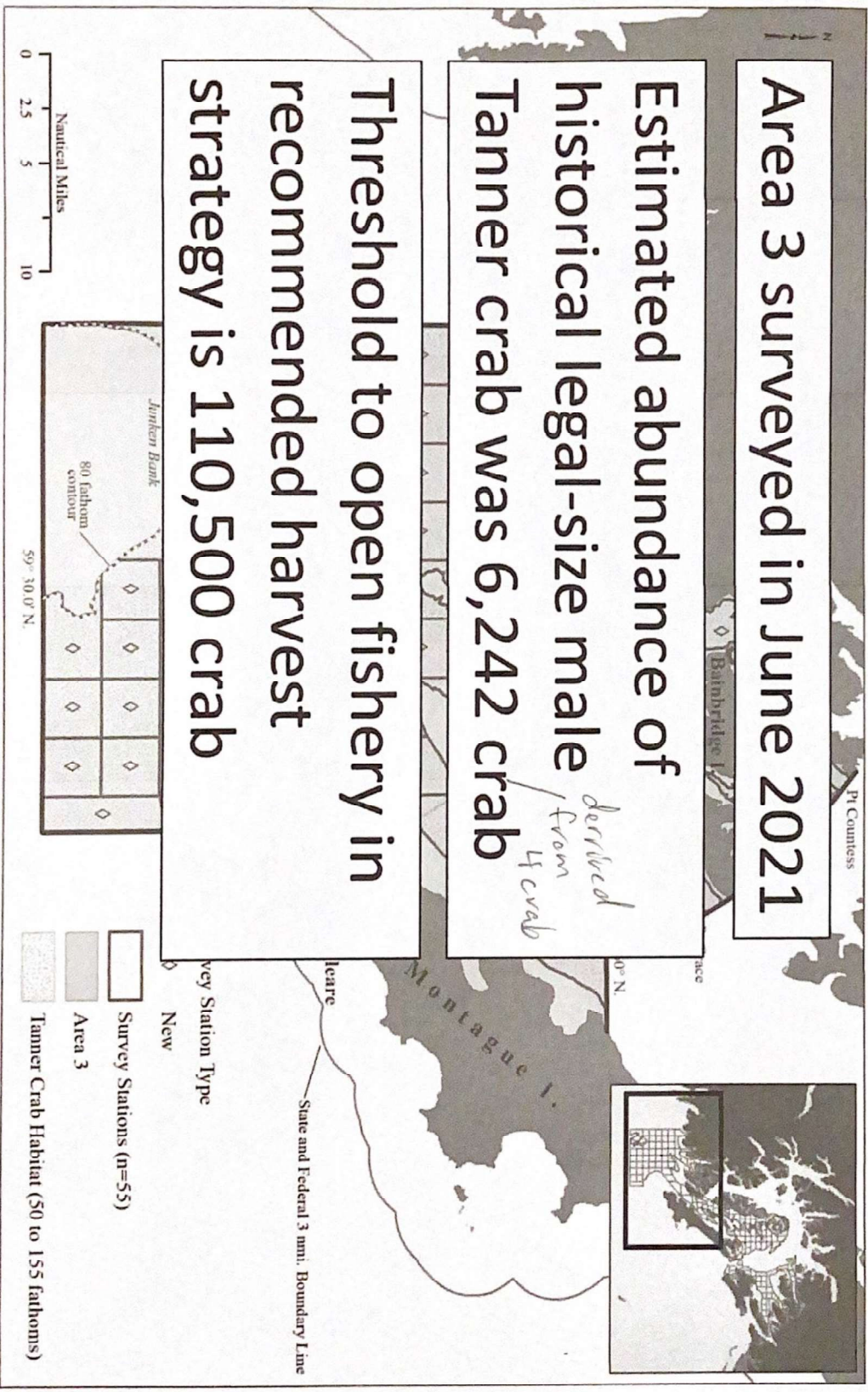
45

Area 3 surveyed in June 2021

Estimated abundance of historical legal-size male Tanner crab was 6,242 crab

derived from 4 crab

Threshold to open fishery in recommended harvest strategy is 110,500 crab



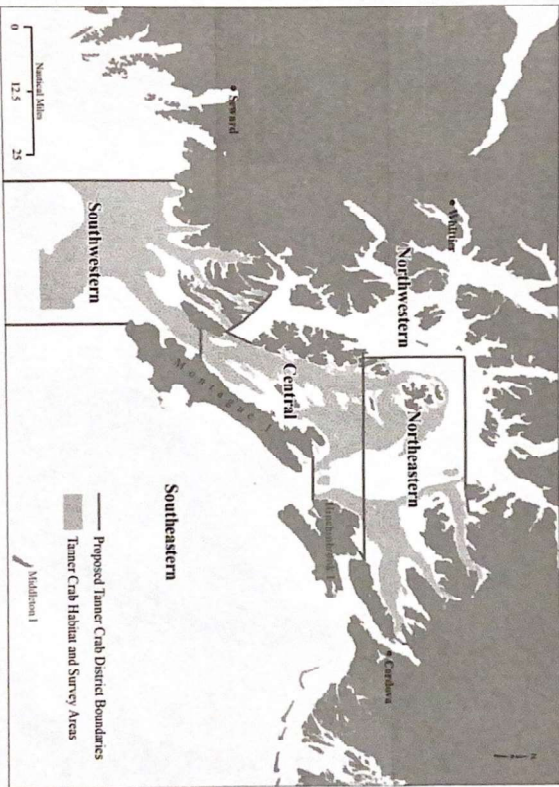
2020 and 2021 abundance estimates for new proposed crab districts:

2020 - Central District

Group	Catch (n=)	Abundance est.
Historical legal-size males	7	8,187
Legal-size males	30	35,914

2021 - Southwestern District

Group	Catch (n=)	Abundance est.
Historical legal-size males	4	6,242
Legal-size males	26	40,289



2020 and 2021 abundance estimates for new proposed crab districts. The map shows the distribution of Tanner Crab Habitat and Survey Areas. The districts are: Northwestern, Northeastern, Central, and Southwestern. The map also shows the locations of Seward, Madeline, Cordova, and Adak. The scale bar indicates 0, 12.5, and 25 Nautical Miles. The legend identifies 'Proposed Tanner Crab District Boundaries' and 'Tanner Crab Habitat and Survey Areas'.

1001 males vs 8187 males

11.2 average

THX5, 11L

6

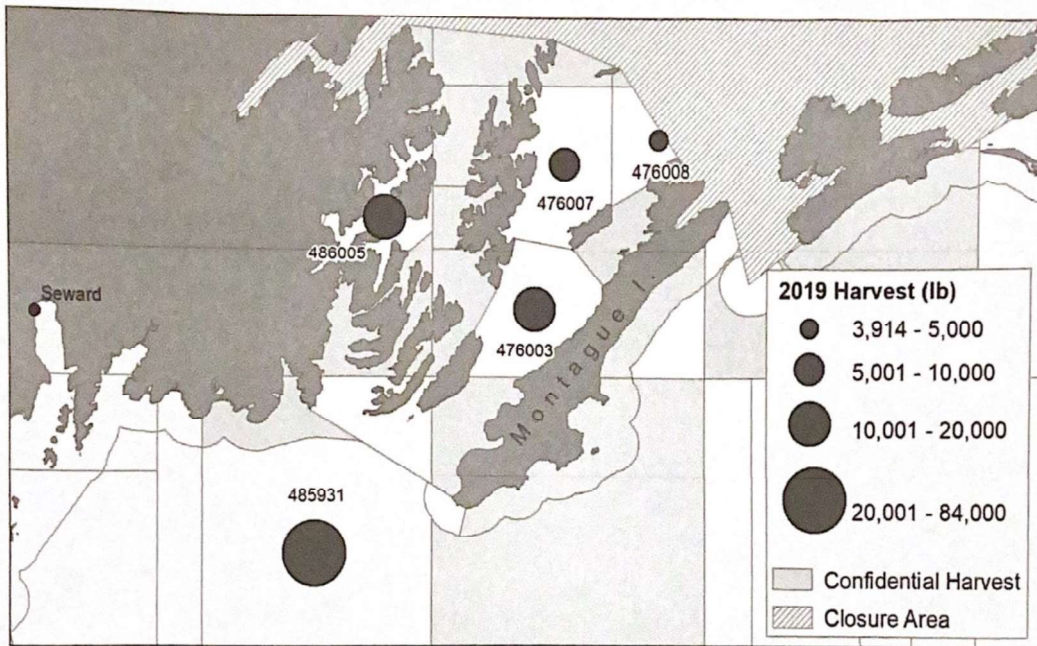


Figure 13.—Prince William Sound Area commissioner’s permit Tanner crab harvest by statistical area, 2019.

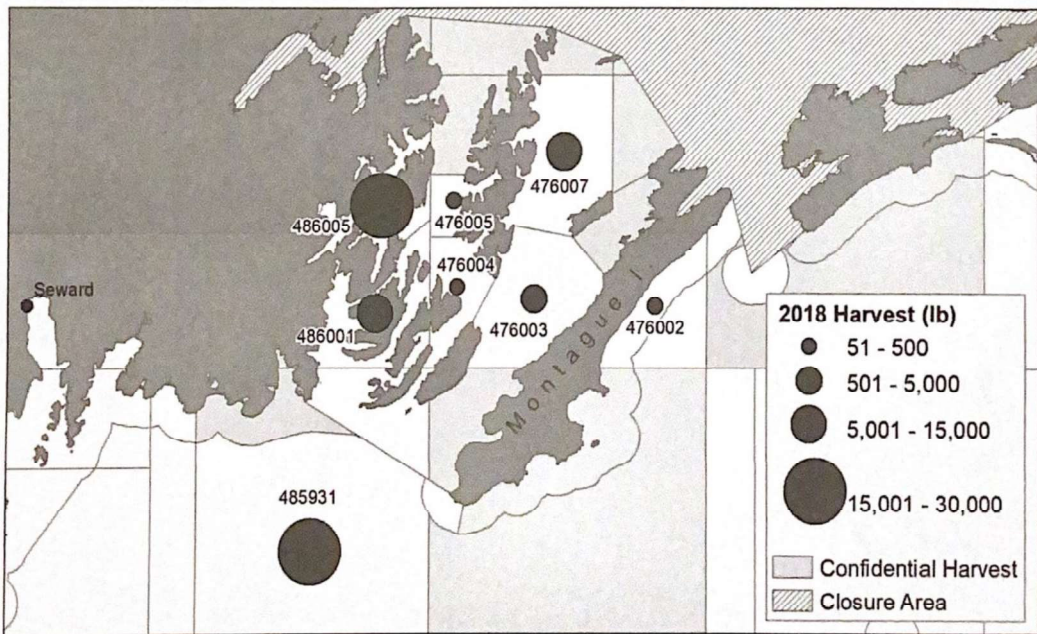


Figure 14.—Prince William Sound Area commissioner’s permit Tanner crab harvest by statistical area, 2018.

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Prince William Sound Area Tanner Crab Recommended Harvest Strategy

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Area 1

Abundance Estimate	Harvest Rate	Harvest
93,300 to <139,900	15%	14,000 to 21,000
139,900 to <186,600	20%	28,000 to 37,300
≥186,600	25%	46,700+

Harvest in
any one Area
At Minimum levels
want justify
any processor
opening

Area 2

Abundance Estimate	Harvest Rate	Harvest
105,000 to <157,500	15%	15,800 to 23,600
157,500 to <210,000	20%	31,500 to 42,000
≥210,000	25%	52,500+

Area 3

Abundance Estimate	Harvest Rate	Harvest
110,500 to <165,800	15%	16,600 to 24,900
165,800 to <221,000	20%	33,200 to 44,200
≥221,000	25%	55,300+

Abundance estimates are numbers of historical
legal-size crab (≥5.3 inch)

Harvest is numbers of legal-size crab (≥5 inch)

Table 1.-Prince William Sound Commissioner's Permit Tanner crab fishery harvest and effort information, 2018-2021.

Year	Pot lifts	Harvest (No. of crab)	Harvest (lb)	CPUE (crab per pot)	Vessels
2018	3,736	47,394	83,338	12.7	14
2019	4,841	74,407	124,707	15.4	14
2020	5,885	64,557	108,859	11.0	22
2021	2,923	33,803	56,351	11.6	10
Average	4,346	55,040	93,314	13.0	15

Note: CPUE is catch per unit effort.

366,933

Table 2.-Prince William Sound Commissioner's Permit Tanner crab fishery registration, participation, pot limit, and start date, 2018-2021.

Year	No. of CFEC permits purchased	No. of Commissioner's permits issued	No. of permit holders that participated	Pot limit	Percent of participation (participants/CP issued)	Start date
2018	21	18	15	50	83%	Mar 1
2019	28	25	14	25	56%	Mar 1
2020	27	26	22	25	85%	Mar 2
2021	17	13	10	25	77%	Mar 2

Note: CFEC is Commercial Fishery Entry Commission and CP is commissioner's permit.

Harvest of T1 crab shall be 15% of total estimated Biomass of T_h if T_h is 200,000 - 300,000 crab

Assuming ADFG is managing CPF sustainably If we work Backwards using CPF Harvest as our Input to reach total estimated Biomass of T_h in the western district get the following.

$$(T_L \div .15 = T_h)$$

$$2019 = 496,046.00$$

$$2020 = 437,046.00$$

$$4 \text{ yr average} = 366,933.00$$

This is only for the western district.