RKC Mark Recapture Update

2013: Excursion/St. James

2014: Pybus

2015: Seymour Canal

St. James 2013

- **Mark:** 167 pot lifts, 36 crab tagged.

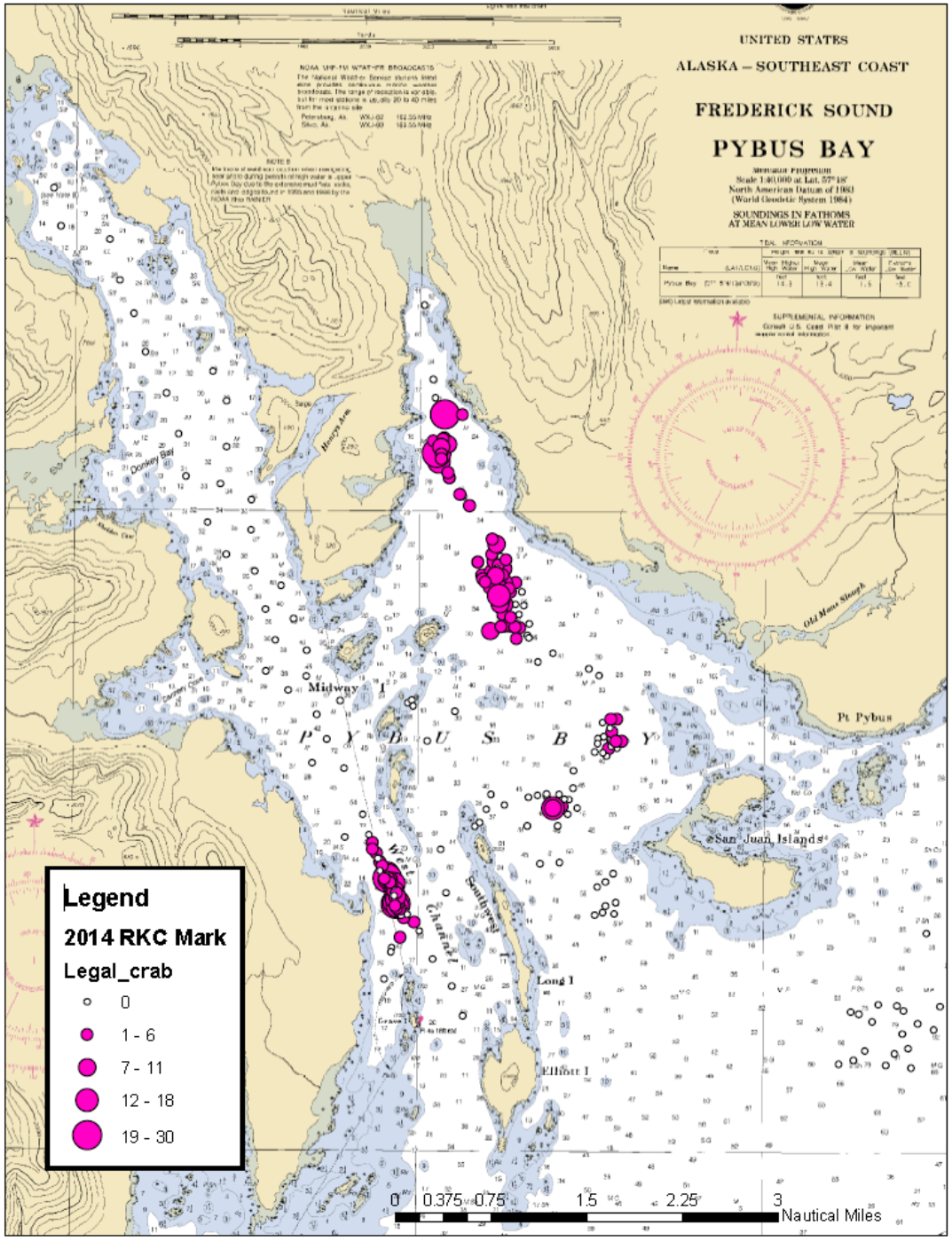
- Not enough tagged to produce a viable estimate.

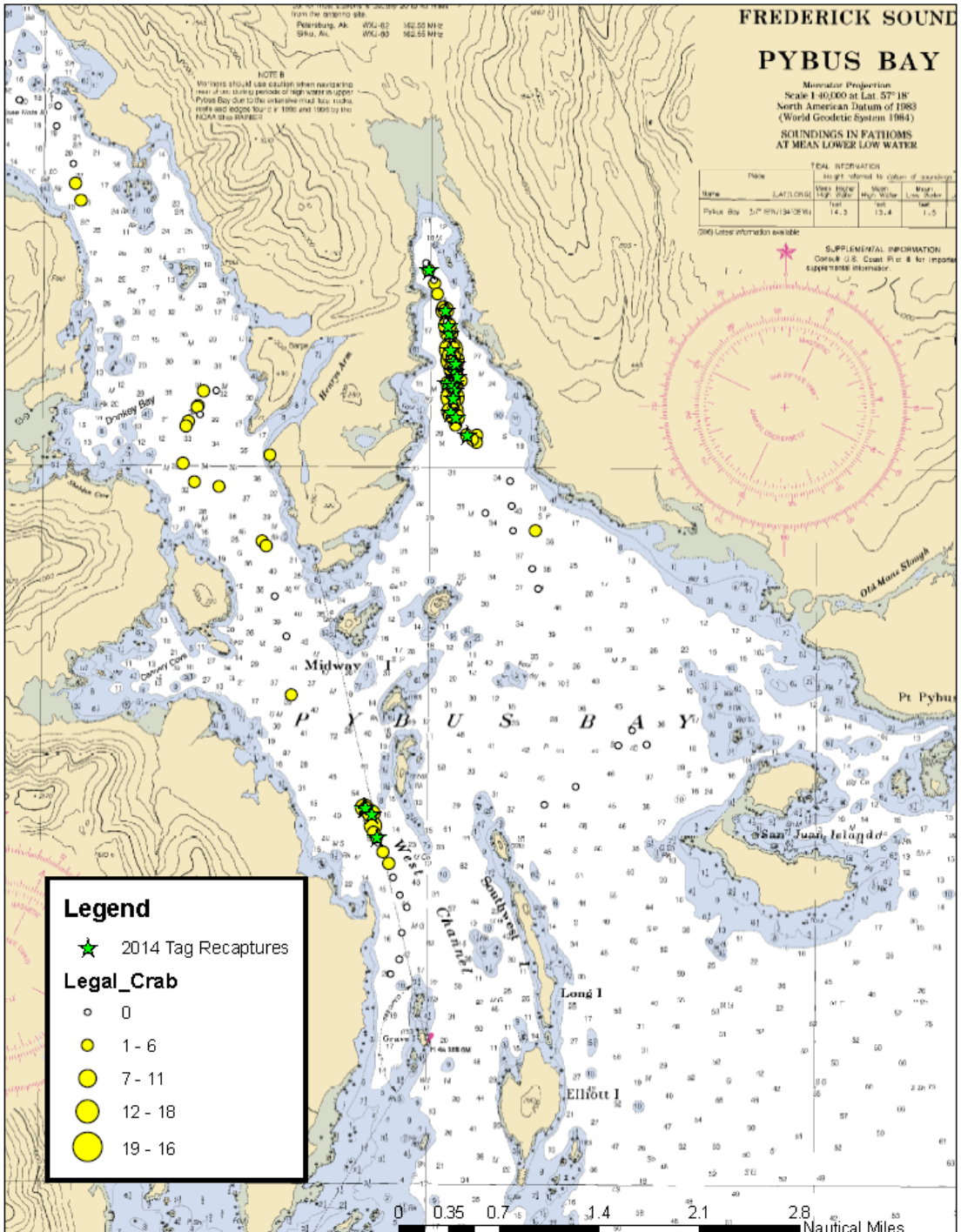
Excursion 2013

- **Mark:** 206 pot lifts, 198 crab marked.
- **Recapture:**
- First attempt- Two boats canceled.
- Second attempt -95 pot lifts for 11 legal males (no tags), Trip terminated early because the head of the inlet was froze over.
- Third attempt- 28 pots set with a 48hr soak (concentrated in the areas that were previously froze over) for 52 legal crab one of which was a recapture. Unfortunately many crab showed sings of recently molting.

Pybus 2014

- **Mark:** Two boats, 244 pots hauled, 590 crab tagged.
- **Recapture:** One boat, 586 crab caught from 100 pots, 36 recaptures.
- Adjustment: 3.9 times the CSA
- Previous adjustment from 2010 – 3.02
- Funding cut.

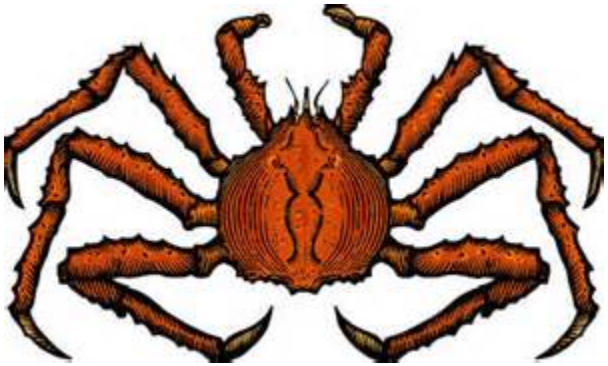

UNITED STATES
ALASKA – SOUTHEAST COAST
FREDERICK SOUND
PYBUS BAY
SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER
Midway I
Pt Pybus
San Juan Islands
Long I
Elliott I
Legend
2014 RKC Mark
Legal_crab
0
1 - 6
7 - 11
12 - 18
19 - 30
0 0.375 0.75 1.5 2.25 3
Nautical Miles

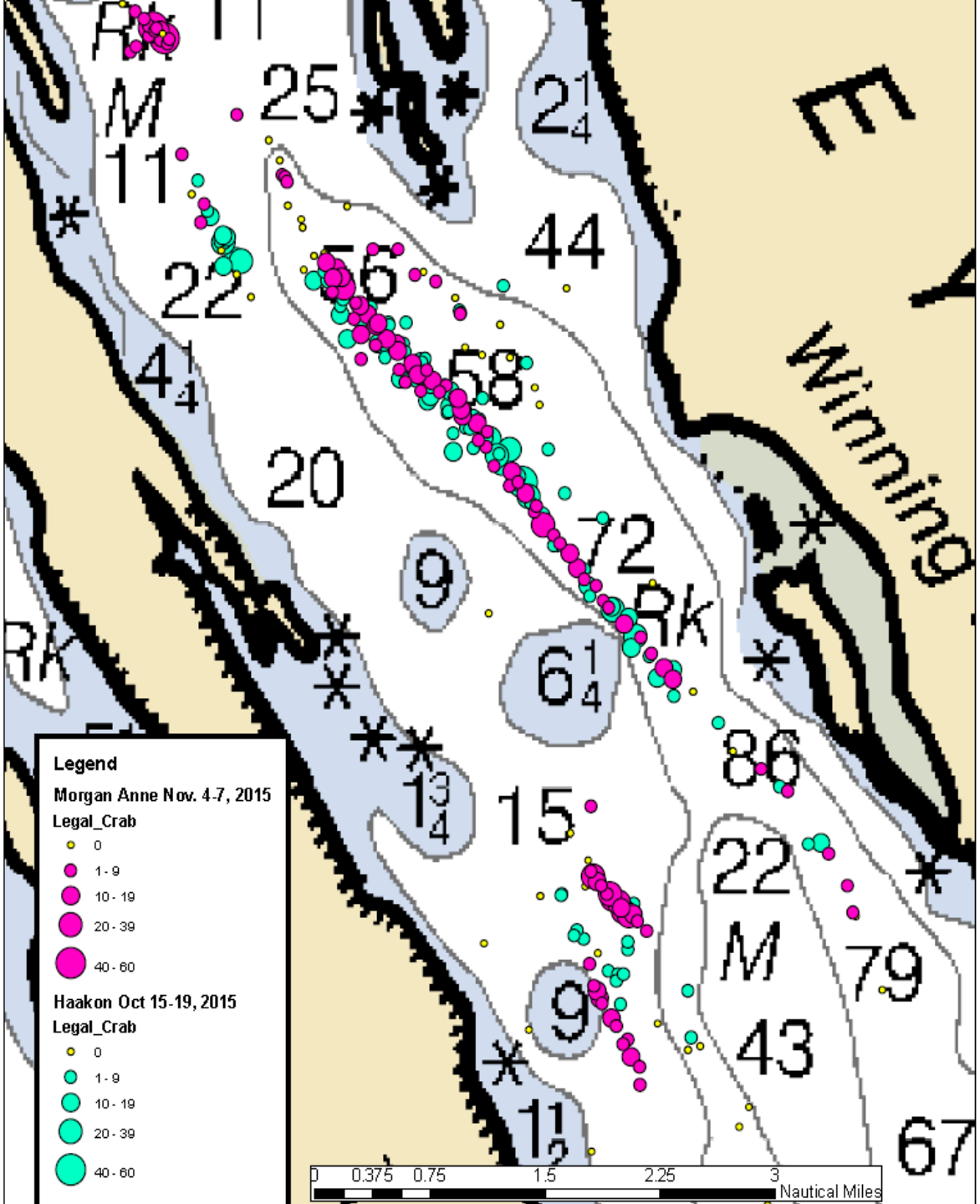

FREDERICK SOUND
PYBUS BAY
Mercator Projection
Scale 1:40,000 at Lat. 57°18'
North American Datum of 1983
(World Geodetic System 1984)
SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER
Midway I
P Y B U S B A Y
Pt Pybus
San Juan Islands
West I
Southwest I
Channel
Long I
Elliott I
Old Mans Slough
Legend
2014 Tag Recaptures
Legal_Crab
0
1 - 6
7 - 11
12 - 18
19 - 16
0 0.35 0.7 1.4 2.1 2.8
Nautical Miles

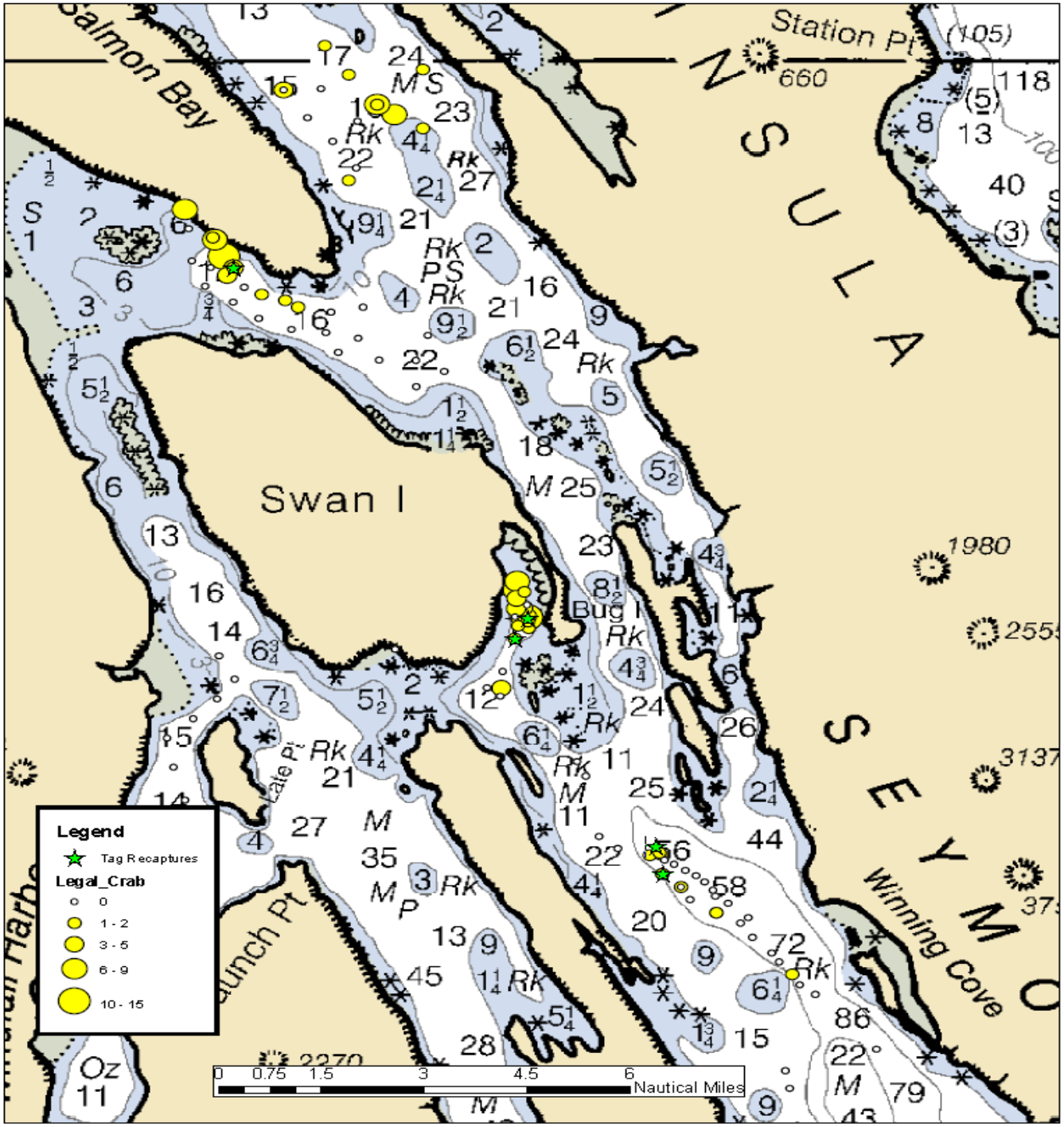
Seymour 2015

- **Mark:** Two boats, two separate trips, two weeks apart. 314 pots, 2091 crab tagged

- **Recapture:** Five weeks after mark, 107 pots, 153 crab caught, 6 recaptures.




Legend
Morgan Anne Nov. 4-7, 2015
Legal_Crab
0
1 - 9
10 - 19
20 - 39
40 - 60
Haakon Oct 15-19, 2015
Legal_Crab
0
1 - 9
10 - 19
20 - 39
40 - 60
0 0.375 0.75 1.5 2.25 3
Nautical Miles
Wimming
RK
M
11
25
22
56
44
58
20
72
9
86
15
22
79
43
67


Salmon Bay
Station Pt
(105)
660
(5)
118
8
13
40
(3)
Swan I
Bug I
1980
Wimming Cove
Launch Pt
Late P
Oz
11
Legend
Tag Recaptures
Legal_Crab
0
1 - 2
3 - 5
6 - 9
10 - 15
0 0.75 1.5 3 4.5 6
Nautical Miles

Issues

- Such a low overall catch of tagged crab in recapture event points to violations of the assumptions for this estimate.
  - Crab are not in the same locations as when the mark occurred.
  - Crab could be moving out of the sampling area therefore violating the idea that this is a "closed population"
  - Movement of crab out of the sample area would also bias the population estimate.

Where we are at now.

- Possibility of using a portion of the second mark as the recapture. (506 caught, 24 tags)
- The adjustment factor is at least 5 times more than the CSA in Seymour. (2015 CSA 29,062lbs.)
- We are still working on analysis to determine the correct adjustment factor to use.

Thanks to all the vessels that participated.

- F/V Chikamin
- F/V Morgan Anne
- F/V Angjenl
- F/V Sundance
- F/V Haakon
- F/V Outlook
- F/V Aleutian Dream
- F/V Guardian
- F/V Pillar Bay

And all their crew!