CRAB TEAM

Community Science and Research to support green crab management

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Jeff Adams

Kate Litle

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Collaborative Management

Early Detection

Systematic Trapping Network

WSG Crab Team

Opportunistic Trapping

Intensive "Prospecting"

WDFW
Jamestown S'Klallam
Lummi
Padilla Bay NERR

Opportunistic Observation

Public
Managers

Assessment

Extensive Local Trapping

WDFW and/or Local management

Crab Team-supported
Local partners/volunteers

Management

Continued Monitoring

WSG Crab Team

Few Crabs

Repeat Assessments

WDFW
and/or
Local management

Many Crabs

Removal Trapping

USFWS
Makah

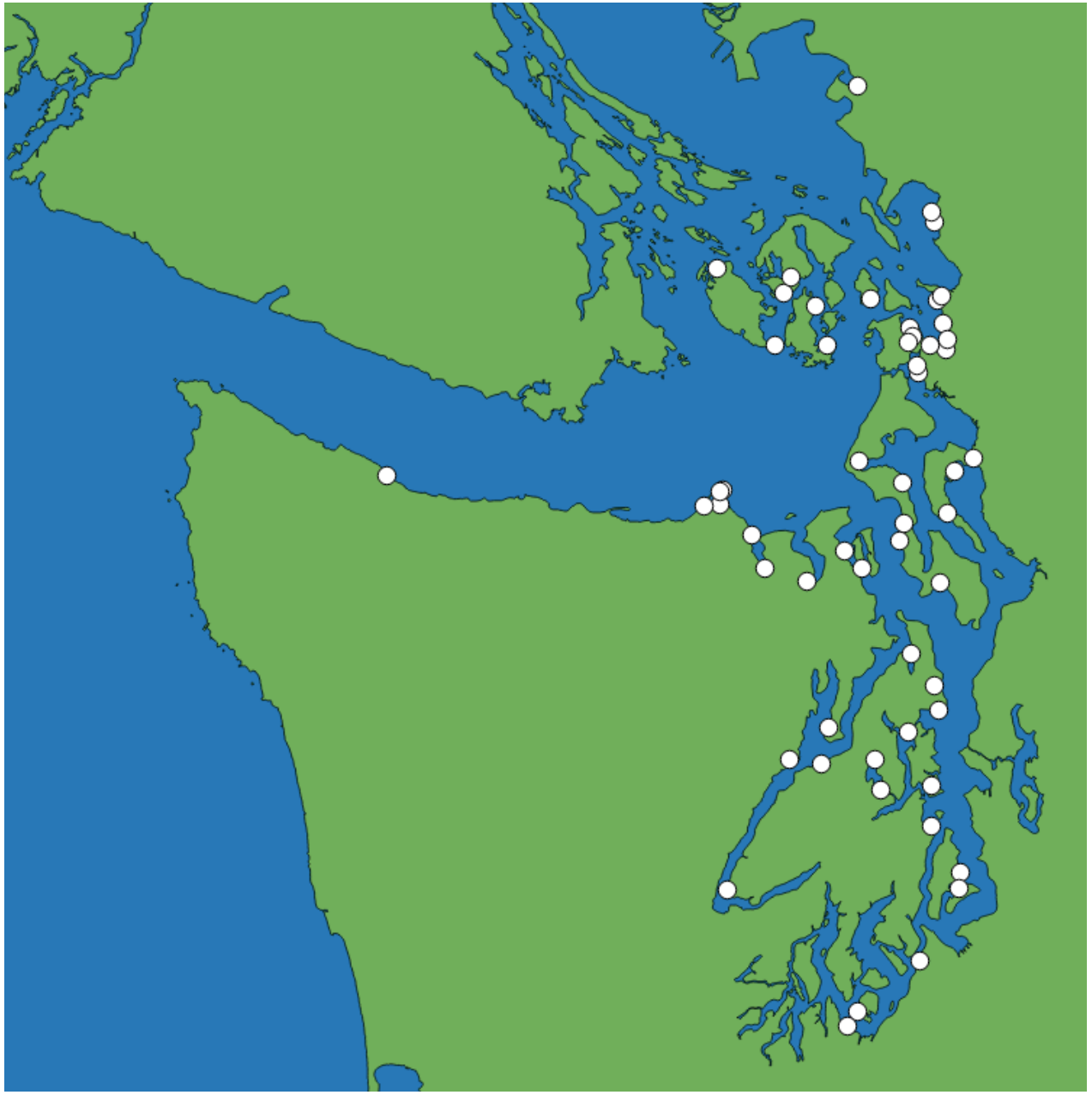
CRAB TEAM Goals

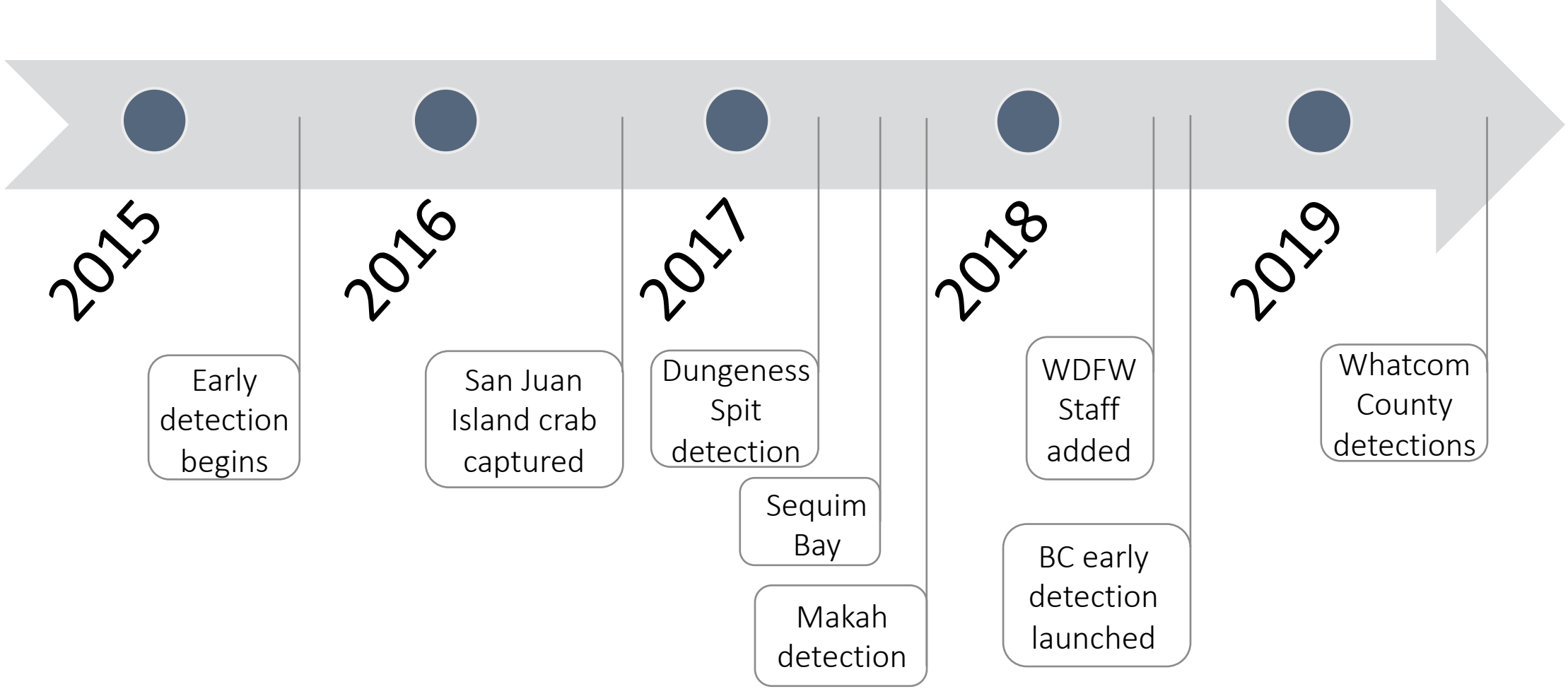
- Early detection & monitoring network
- Research to inform management
- Collaborate with management
- Capacity building
- Outreach

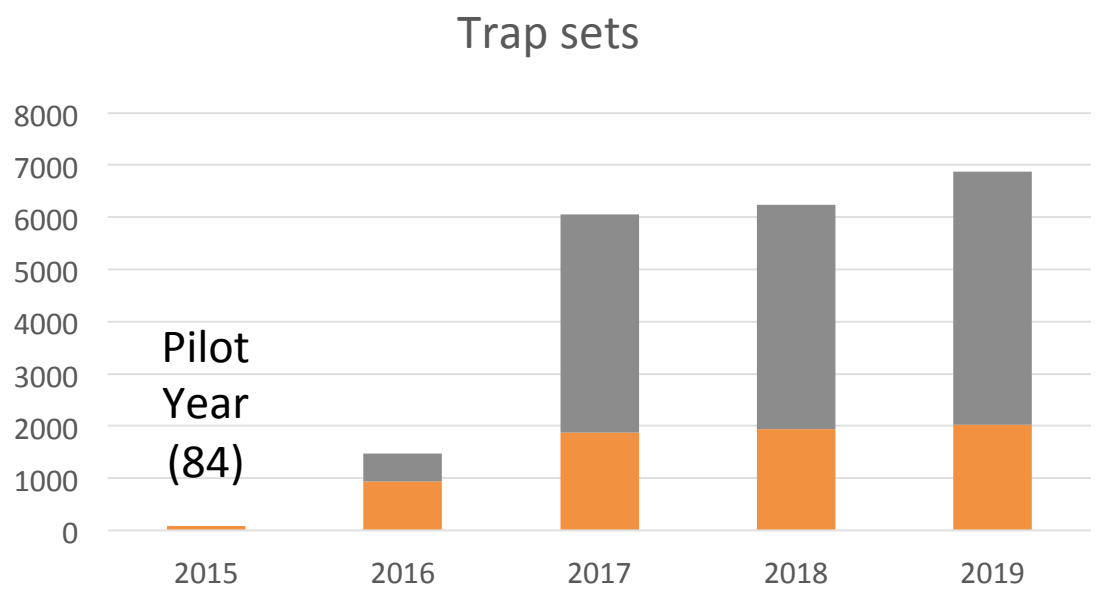
CRAB TEAM

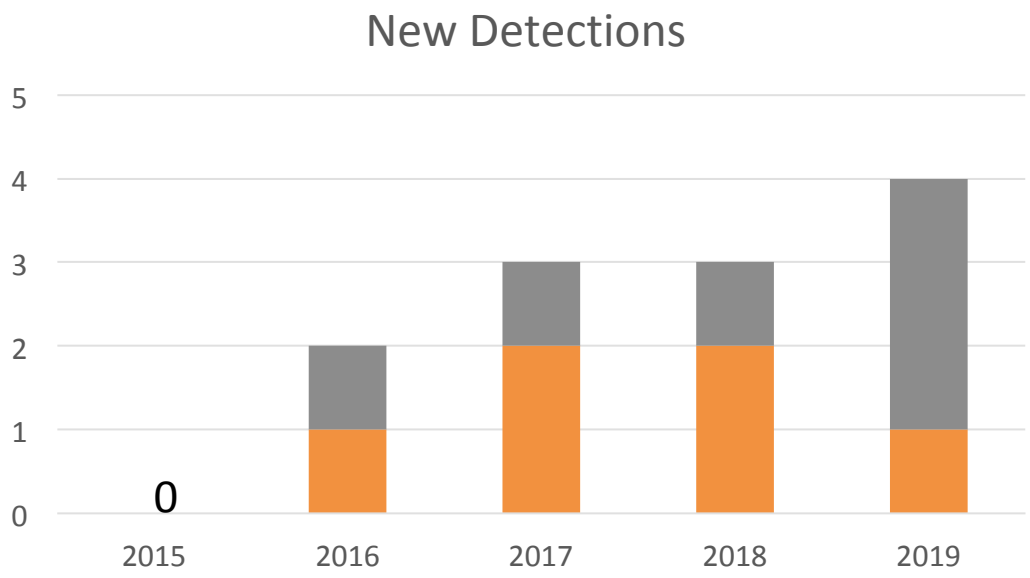
Early detection & monitoring network

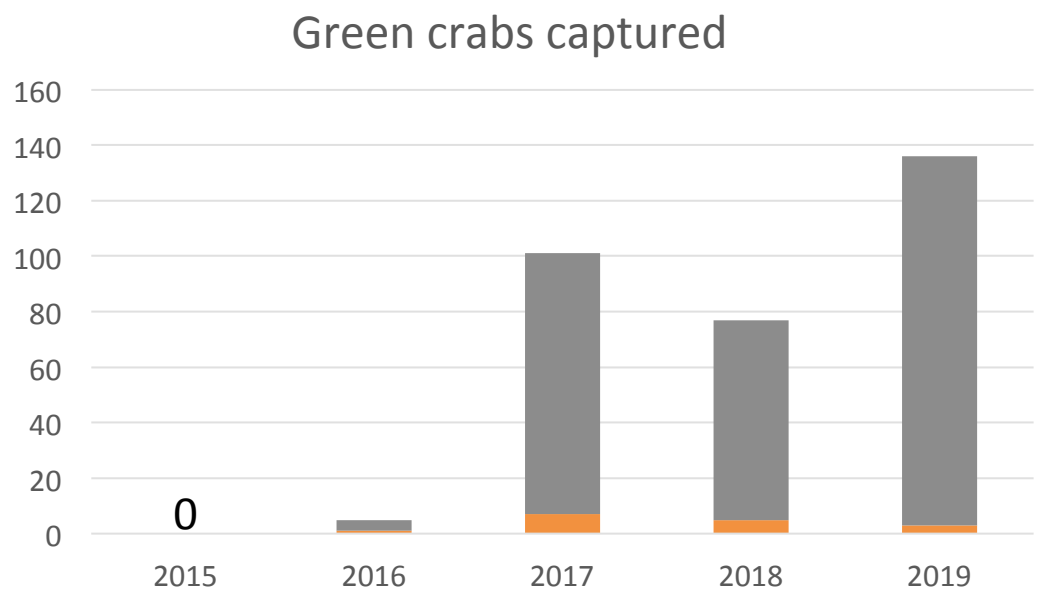
- Launched 2015
- 56 Sites
- Monthly sampling (Apr-Sept)
- Sensitive and consistent
- 200 volunteers, 50 managers

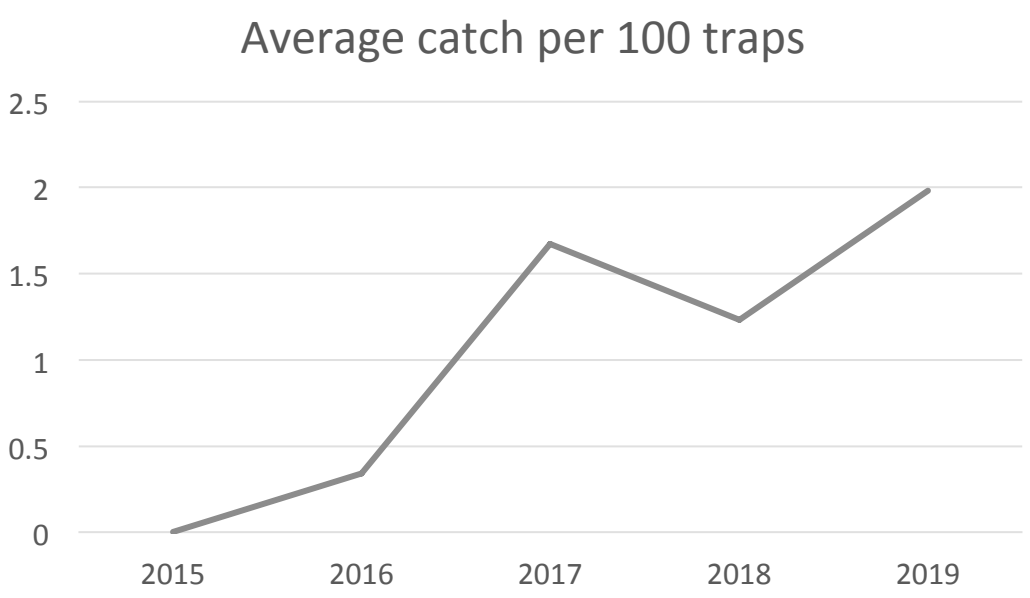


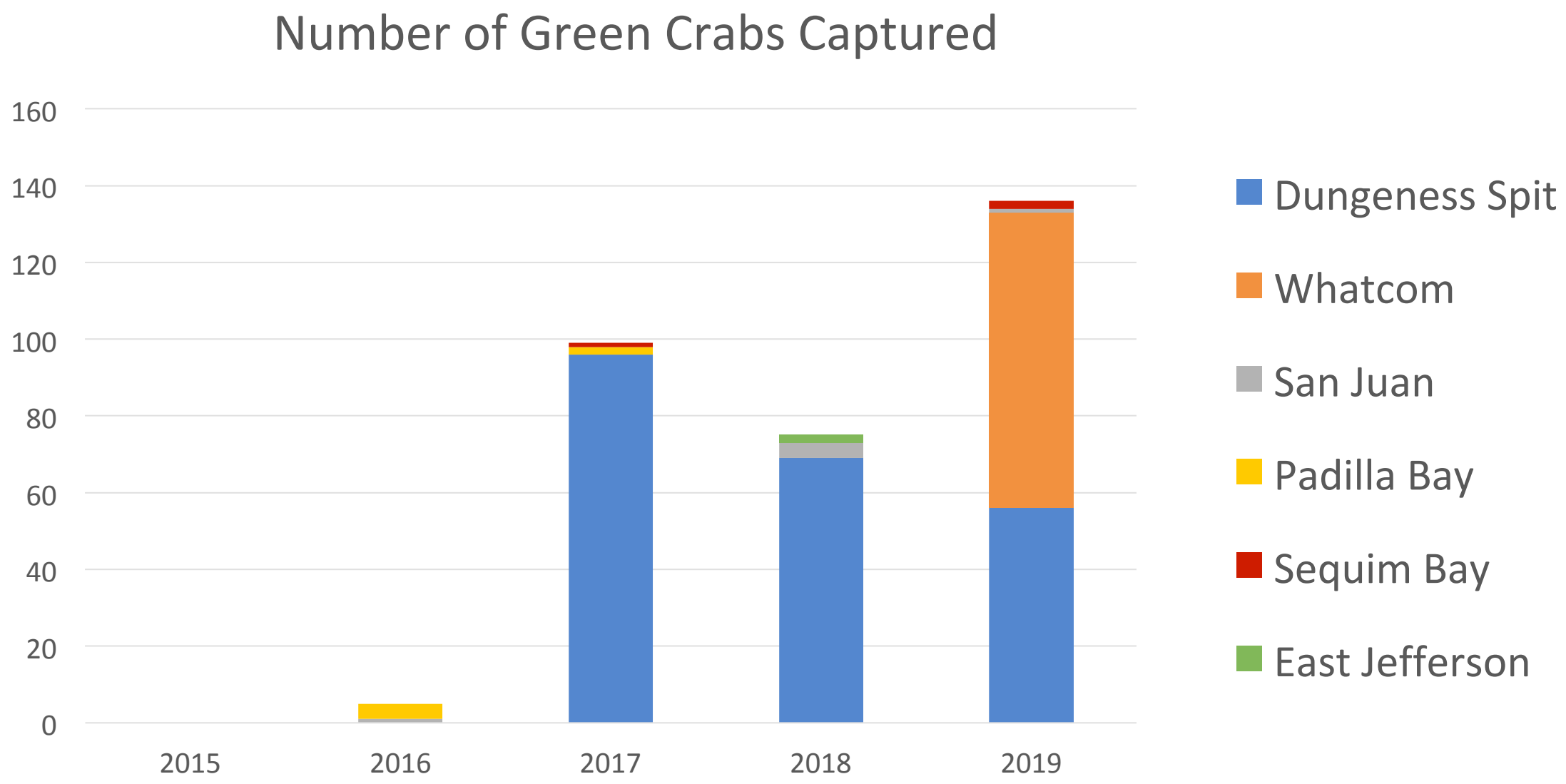

2015
Early detection begins
2016
San Juan Island crab captured
2017
Dungeness Spit detection
Sequim Bay
Makah detection
2018
WDFW Staff added
BC early detection launched
2019
Whatcom County detections


Trap sets
8000
7000
6000
5000
4000
3000
2000
1000
0
Pilot Year (84)
2015
2016
2017
2018
2019

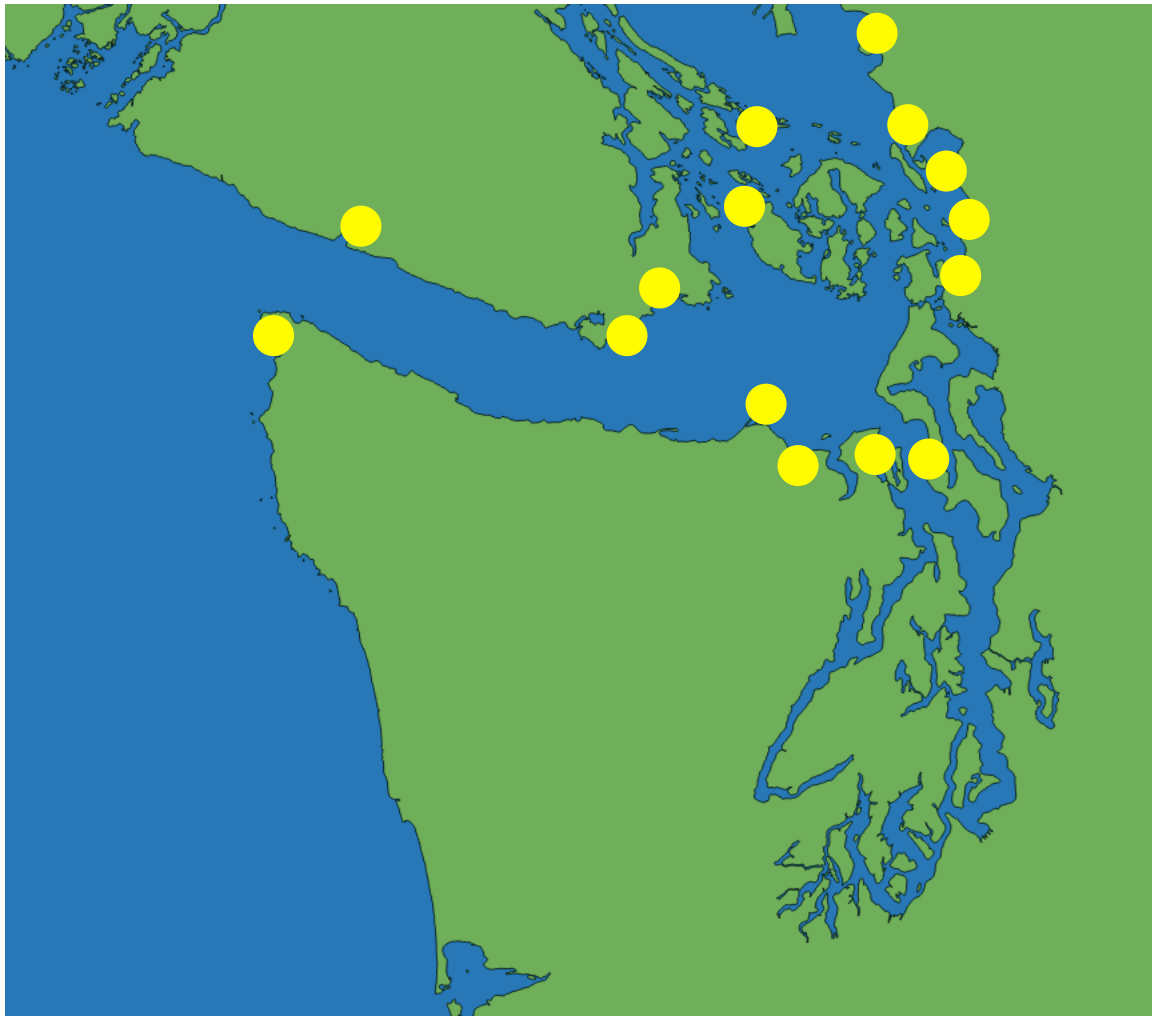

New Detections
5
4
3
2
1
0
0
2015
2016
2017
2018
2019


Green crabs captured
160
140
120
100
80
60
40
20
0
0
2015
2016
2017
2018
2019


Average catch per 100 traps
2.5
2
1.5
1
0.5
0
2015
2016
2017
2018
2019


Number of Green Crabs Captured
160
140
120
100
80
60
40
20
0
2015
2016
2017
2018
2019
Dungeness Spit
Whatcom
San Juan
Padilla Bay
Sequim Bay
East Jefferson

CRAB TEAM

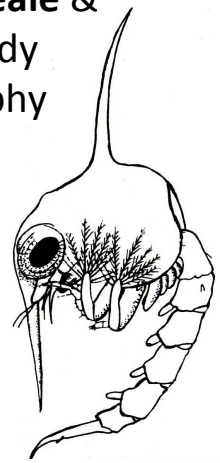


Research to inform management

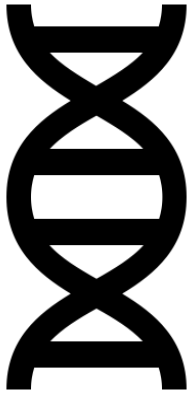
How might they be getting into and around the Salish Sea?

- Ruled out human-mediated movement
- Given timing, size, and location, larvae seem most likely dispersal

Elizabeth Brasseale &
Parker MacCready
UW Oceanography



Carolyn Tepolt – WHOI



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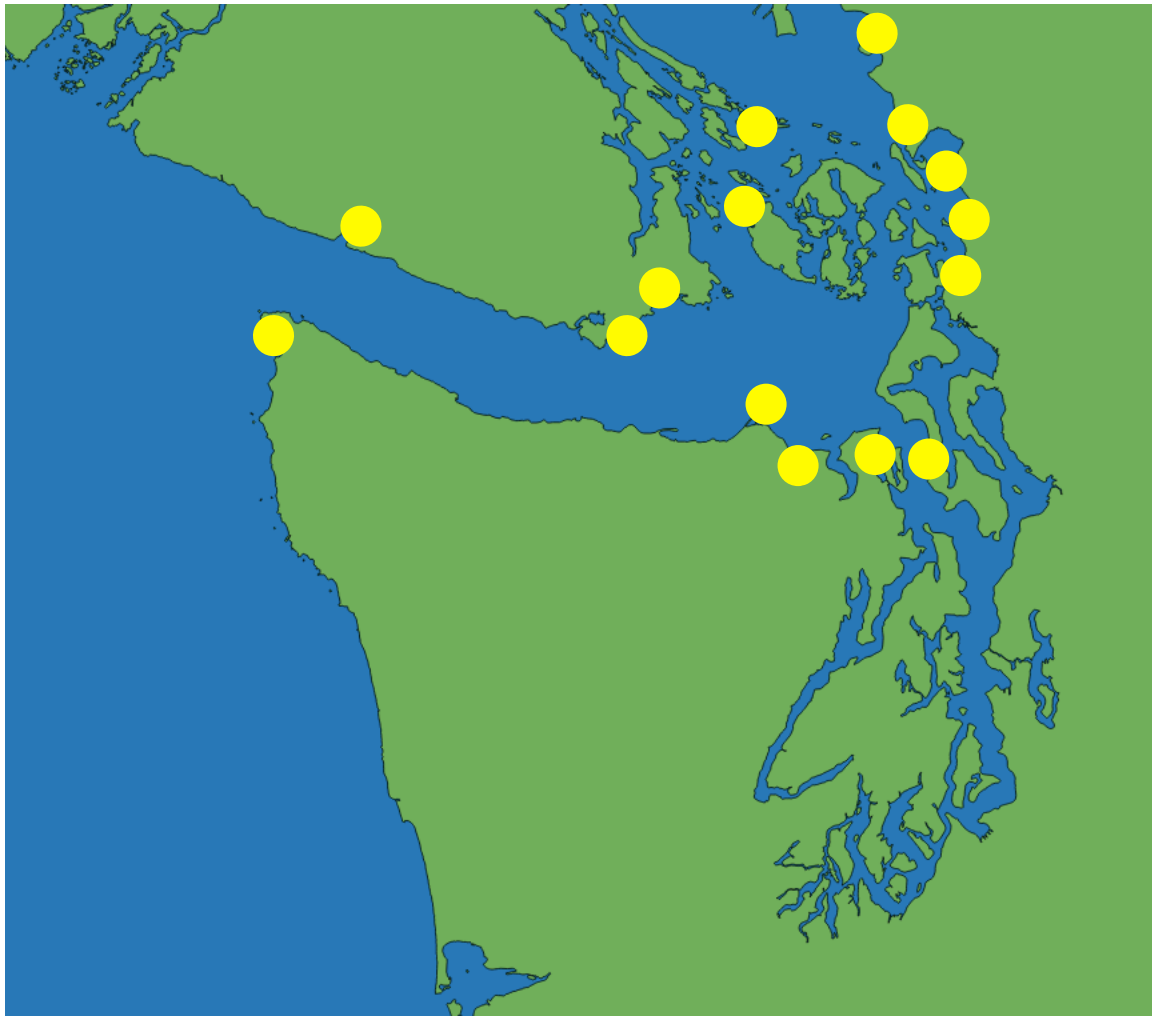

Research to inform management

How might they be getting into and around the Salish Sea?

- Getting into the Salish Sea from the coast is *rare, but can happen* – even from Coos Bay
- Larvae from Sooke are not flooding the Salish Sea
- Green crabs in Sooke are a genetic subset of West Coast
- Dungeness Spit EGC came from *somewhere* on the West Coast (other sites?)

CRAB TEAM

Research to inform management

Can we learn more about spread in the Salish Sea?

Tepolt et al. (WHOI)
Crab Team (UW)

How might temperature affect spread and success?

Can eDNA improve early detection?

Do green crabs have parasites here (yet)?

How much trapping do you need to detect green crabs?

What are green crabs eating?

Can ocean modeling predict future spread?

THANK YOU

STILLAGUAMISH TRIBE of INDIANS

SWINOMISH INDIAN TRIBAL COMMUNITY

ELWHA KLALLAM TRIBE

THE SUQUAMISH TRIBE

MAKAH INDIAN NATION
DIAHT, WAATCH, OSETT, TSOO-YESS, BAADAH

WASHINGTON DEPARTMENT OF NATURAL RESOURCES

U.S. FISH & WILDLIFE SERVICE
DEPARTMENT OF THE INTERIOR

THE GREAT SEAL · PORT GAMBLE
WASHINGTON STATE
S'KLALLAM NATION

JAMESTOWN S'KLALLAM TRIBE
THE STRONG PEOPLE

NATIONAL ESTUARINE RESEARCH RESERVE SYSTEM