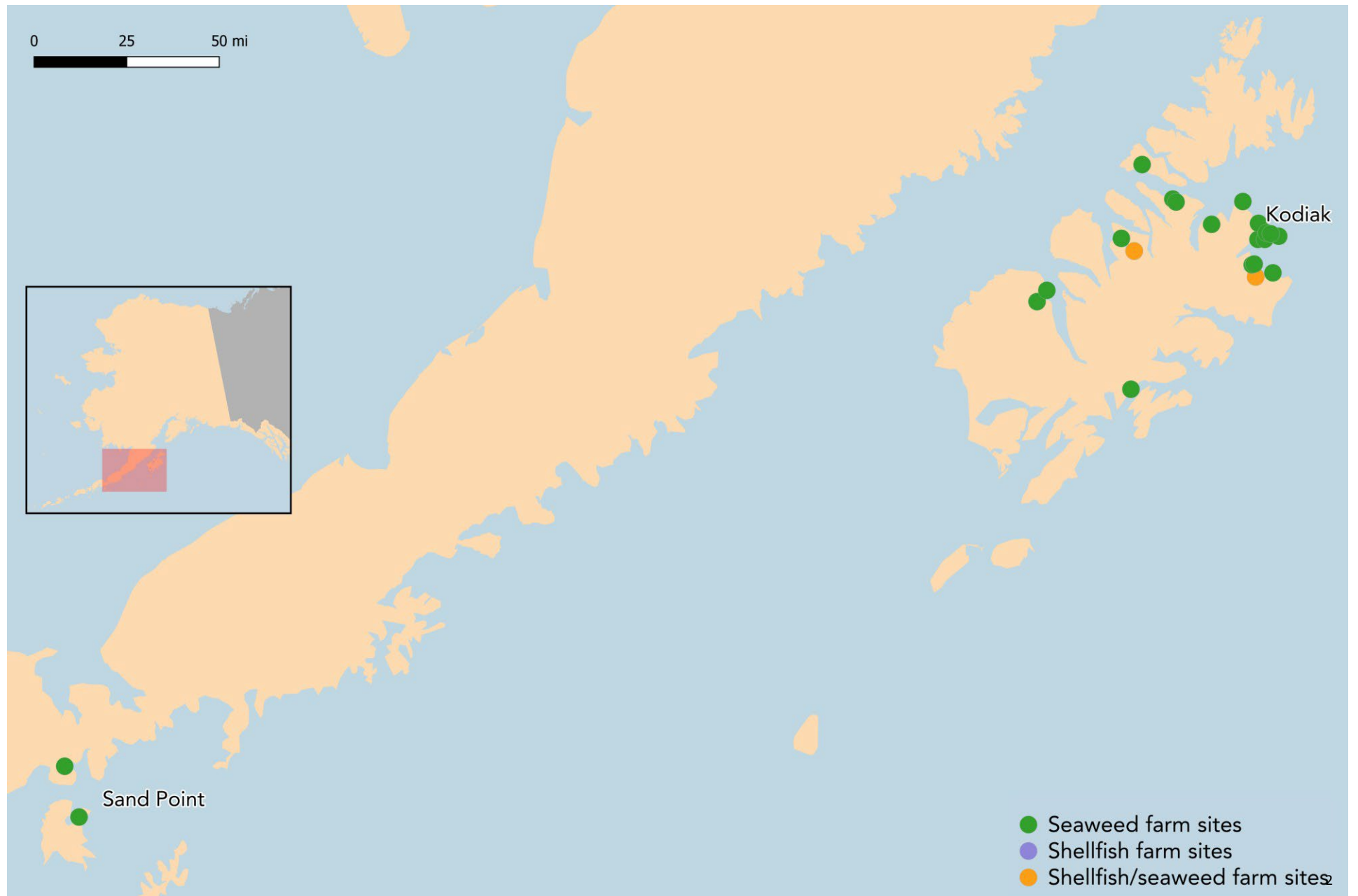


# Presentation Outline

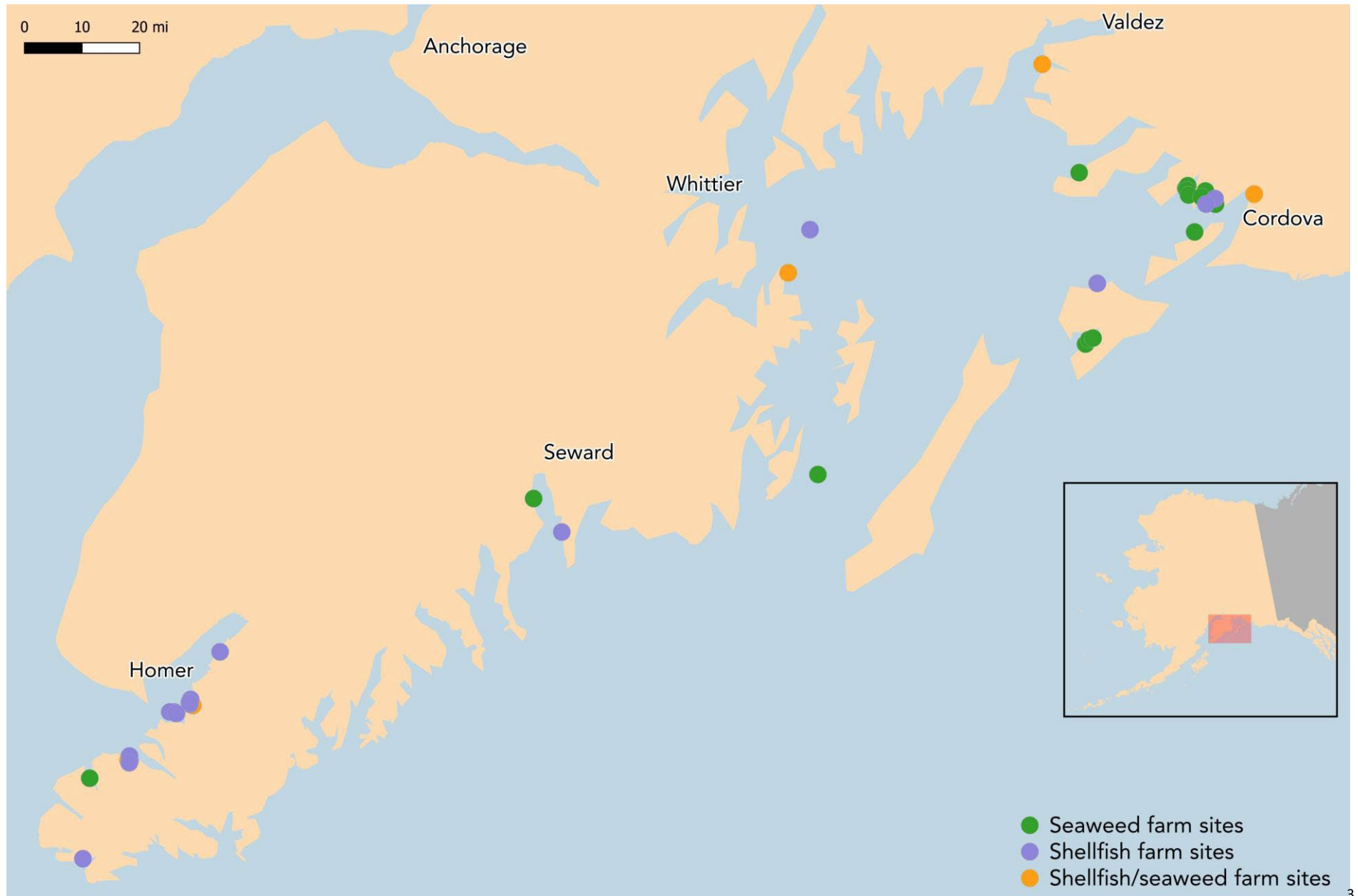
- Current Mariculture Industry
- Possible Growth Scenarios
- Alaska Mariculture Cluster BBRC Grant goals and strategies
- Carbon sequestration project



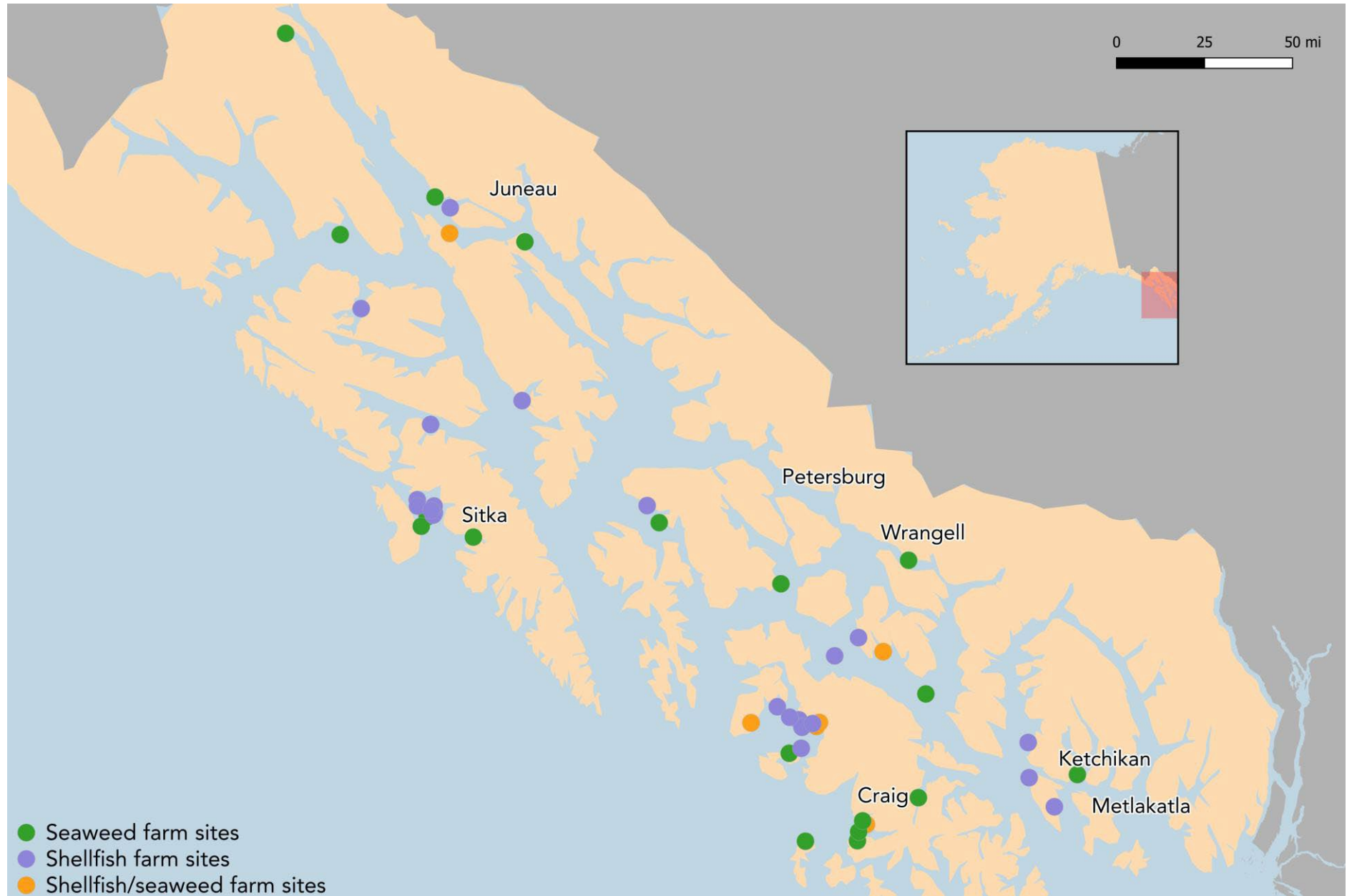
# Kodiak/ Aleutians



# Cook Inlet/ Prince William Sound



# Southeast

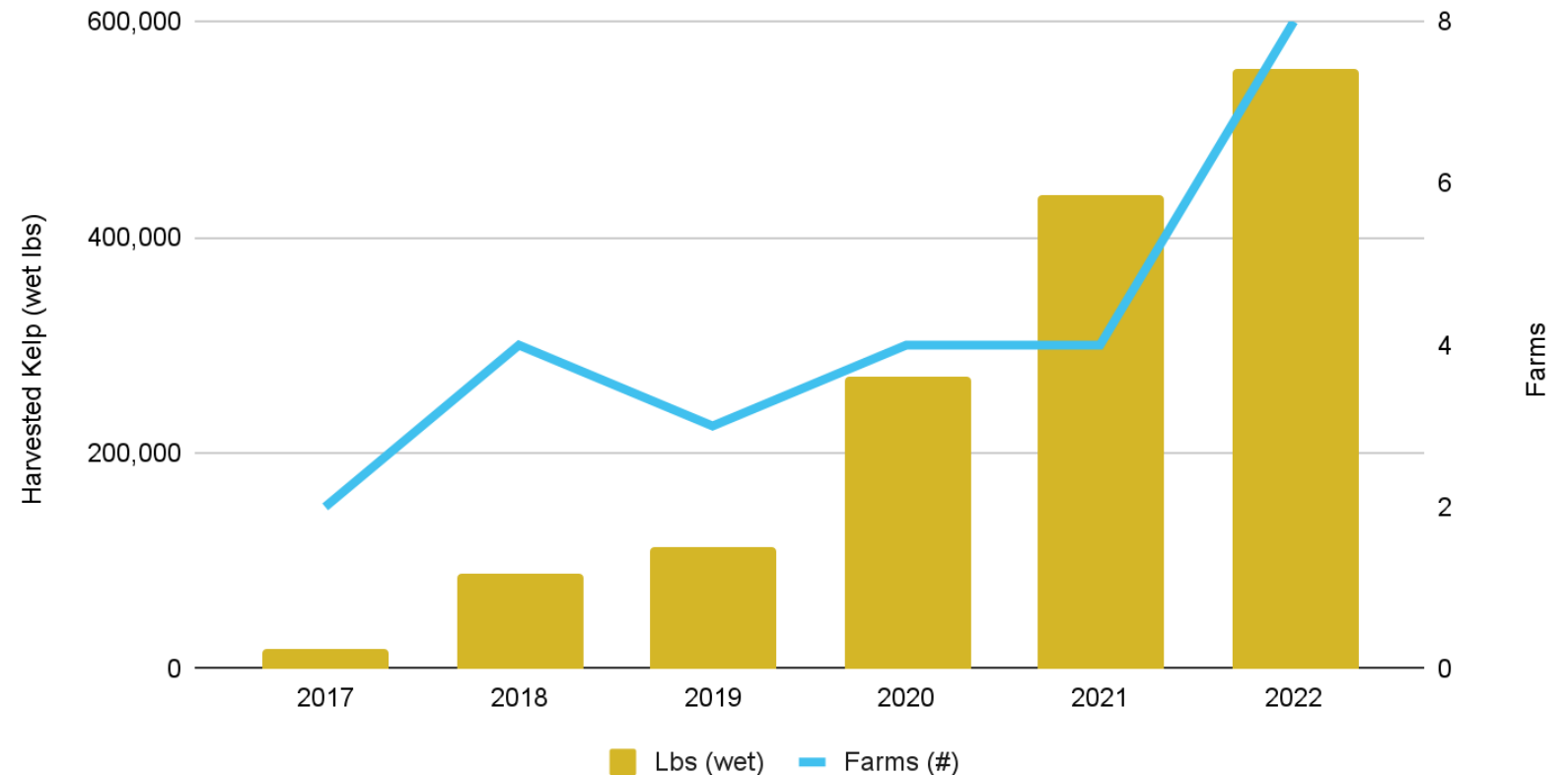


# Alaska Seaweed Sector Overview

- 8 producing farms in 2022
- 24 permitted
- 23 under review
- 560,000 pounds in 2022
- 80,000+ pounds wild harvest

## Alaska: Kelp harvest

Wet lbs, 2017-22



# Alaska Oyster Sector Overview

- \$1.1 million in sales in 2022 at roughly 13 farms

2M

1M

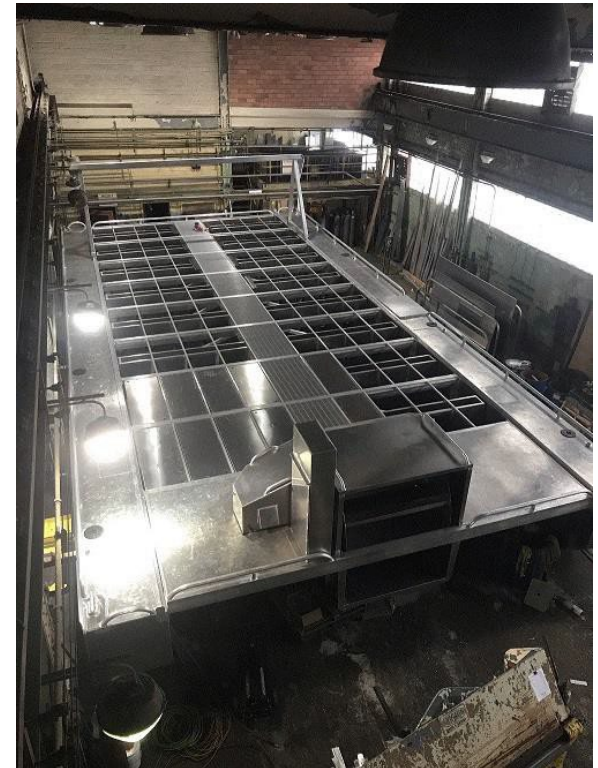
1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

■ Oyster Production ■ Oyster Sales

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# Mariculture Hatchery and Nursery Sector Overview

- 4 seaweed hatcheries
  - 420,000 feet seeded string in Fall 2021
- 6 oyster nursery/FLUPSY operators
  - Currently using imported larvae/seed
  - ~9 million oyster seeds for farms
- Technologies in flux
- Various other species being tested



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## Presentation Outline

- **Current Mariculture Industry**
- Possible Growth Scenarios
- Economic Impacts of **Alaska Mariculture Cluster BBBRC Grant**

**\$1.5 million**



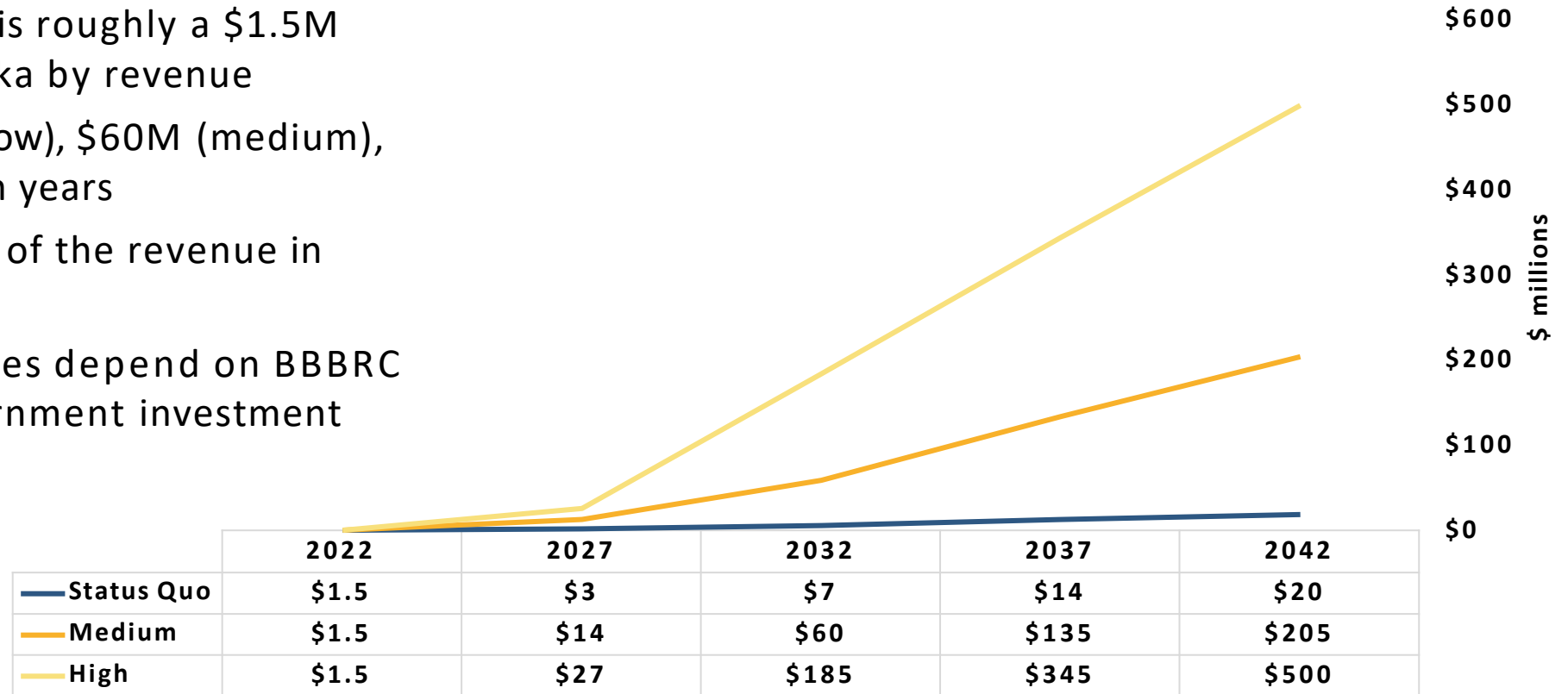
**\$49 million**





# Industry Development Trajectory - Sales

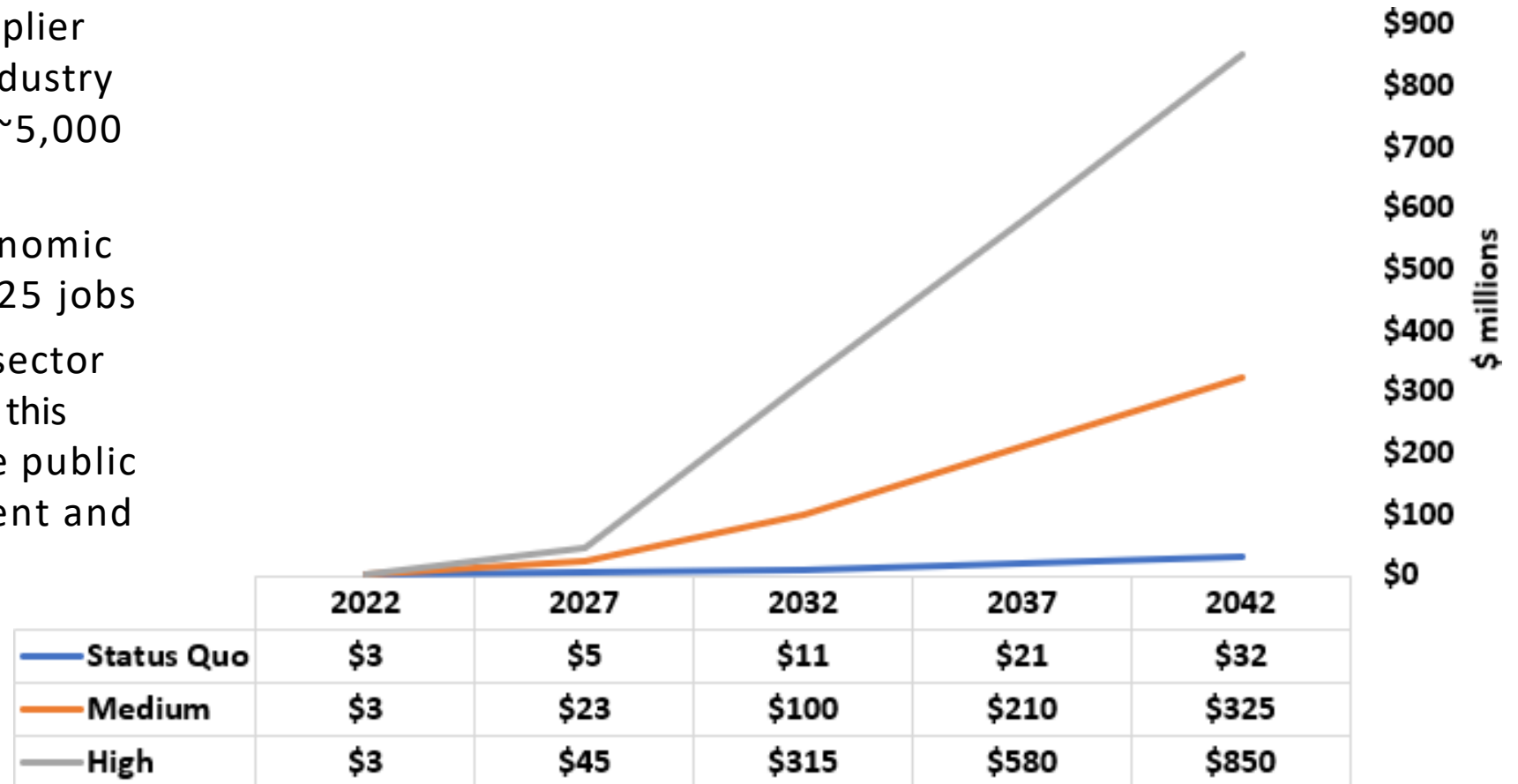
- Currently mariculture is roughly a \$1.5M dollar industry in Alaska by revenue
- Could grow to \$7M (low), \$60M (medium), or \$185M (high) in ten years
- Seaweed the majority of the revenue in these models
- Medium and High cases depend on BBBRC award or similar government investment



Alaska Mariculture Industry Revenue Projections (\$millions)

# Industry Development Trajectory - Economic Output

- Economic Output with multiplier effects up to \$850 million industry in 20 years (high case) with ~5,000 jobs
- Medium case is \$325 in economic output in 20 years with ~1,825 jobs
- \$100s of millions in private sector investment needed achieve this growth as well as aggressive public sector economic development and policy support



# Project #4 Research and Development

- Carbon sequestration program development - \$1+ million
  - Increase readiness for Alaskans to participate in seaweed-related carbon markets as/if they develop
  - Ocean modeling to identify where along Alaska's coast there is the most potential; ocean carbon dynamics and reservoirs that could be leveraged for long term storage
  - Identify regulatory, permitting, and policy barriers and issues
  - Build local capacity to partner with national and global measurement, reporting, and verification (MRV) efforts

# Thank you!

Send questions to:

[dan@seconference.org](mailto:dan@seconference.org)

<https://www.alaskamariculturecluster.org>



# Project #7 Equipment & Technology

## \$26 million

- \$16 million EDA grant funds
  - \$9 million equipment purchases (SEC)
  - \$6 million subawards and contracts
- \$10 million in-kind match
  - DEC – personnel costs
  - Valdez – grain terminals
  - Chugach Regional Resources Commission – facility maintenance

# Project #7 Equipment & Tech



- \$4 million – nursery/hatchery equipment
  - Algae production systems, kelp hatchery equipment and supplies, oyster FLUPSYs, oyster and shellfish nursery equipment and supplies, etc.
- \$3 million – processing equipment
  - Kelp washing, blanching, drying, etc.
  - Oyster tumbling, sorting
  - Freezing, cooling, materials handling, etc.
- \$2 million – DEC toxin testing equipment

# Project #7 Equipment & Tech

- \$6.2 million in subawards and contracts
  - DEC toxin testing – \$1.2 million (subaward)
  - Processing feasibility studies - \$1 million (RFPs forthcoming)
  - Research into new mariculture species – \$1 million (RFPs forthcoming)
  - Kelp and oyster seed services – \$3 million (RFPs forthcoming)

# Economic Impacts of Alaska Mariculture Cluster Grant

|  | Jobs Created | Economic Output | Private Investment Leveraged |
|--|--------------|-----------------|------------------------------|
| <b>Year 4</b>  |              |                 |                              |
| Annual Economic Impacts of Spending of BBBRC Grant Funding                         | 191          | \$15.4M         | -                            |
| Annual Impacts at Year 4 of Moving from Status Quo to Medium Industry Size         | 127          | \$17.9M         | \$42M                        |
| <b>Total Estimated Annual Economic Impacts at Year 4</b>                           | <b>318</b>   | <b>\$33.3M</b>  | <b>\$42M</b>                 |
| <b>Year 10</b>   |              |                 |                              |
| <b>Annual Impacts at Year 10 of Moving from Status Quo to Medium Industry Size</b> | <b>495</b>   | <b>\$87.5M</b>  | <b>\$134M</b>                |
| <b>Year 20</b>   |              |                 |                              |
| <b>Annual Impacts at Year 20 of Moving from Status Quo to Medium Industry Size</b> | <b>1,665</b> | <b>\$294.3M</b> | <b>\$268M</b>                |

Note: Jobs and output numbers include direct, indirect, and induced impacts.