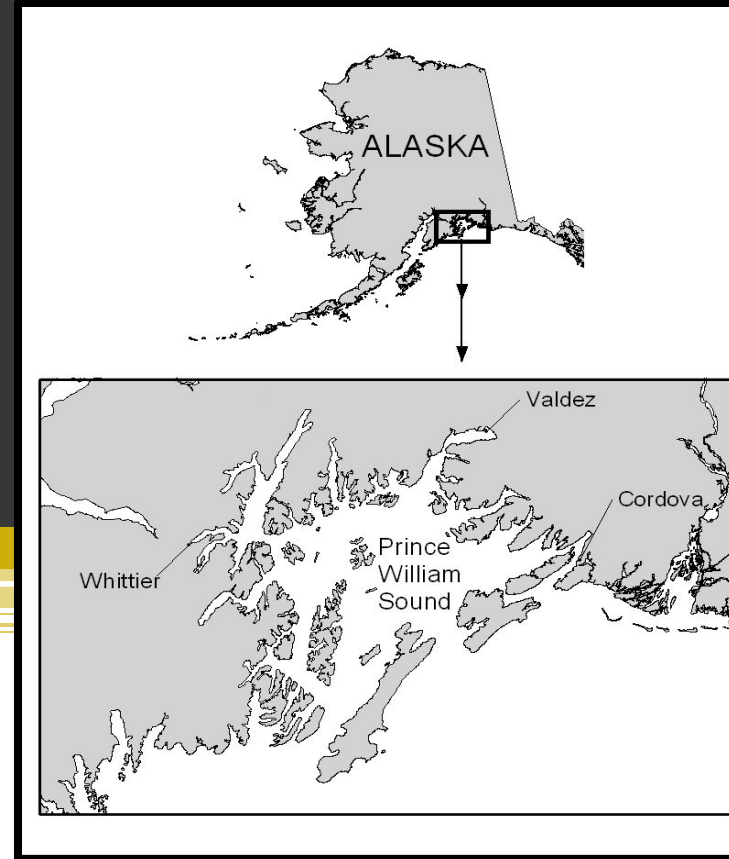


# PRINCE WILLIAM SOUND (PWS) Shrimp Pot Fisheries



**Mike Thalhauser**  
Division of Sport Fish

**Alaska Department of Fish and Game**



# Presentation Outline

- Biology and Life History
- How we come up with Guideline Harvest Levels
- Shrimp Pot Fisheries
  - Commercial
  - Noncommercial



# Biology of Pandalid Shrimp

- **Five species of Pandalid Shrimp in PWS**
  - **Northern or Pink**



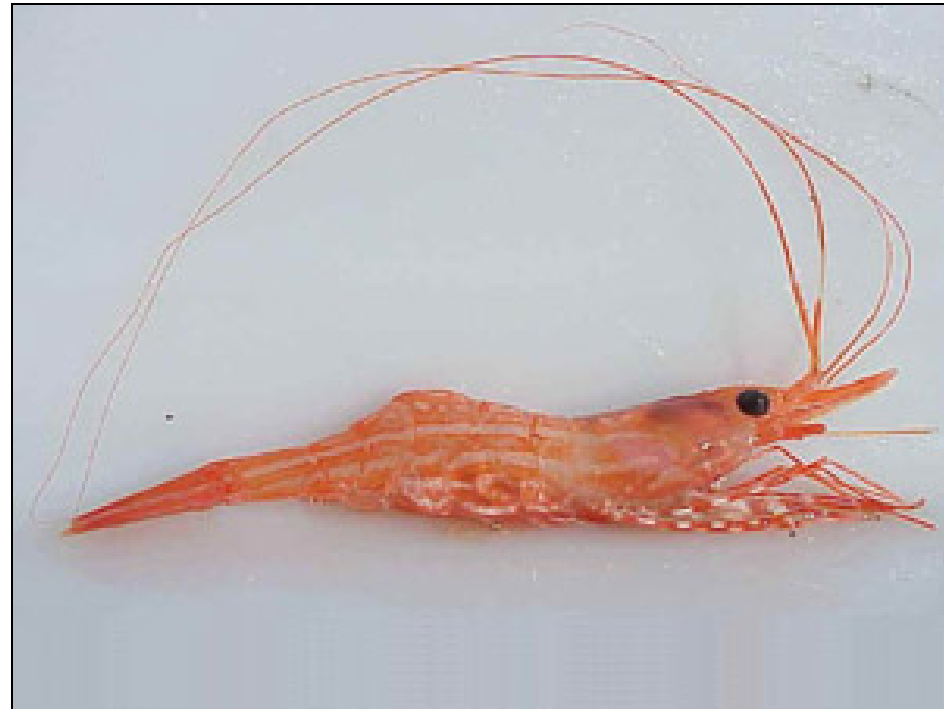
# Biology of Pandalid Shrimp

- Five species of Pandalid Shrimp in PWS
  - Humpy



# Biology of Pandalid Shrimp

- **Five species of Pandalid Shrimp in PWS**
  - **Sidestripe**





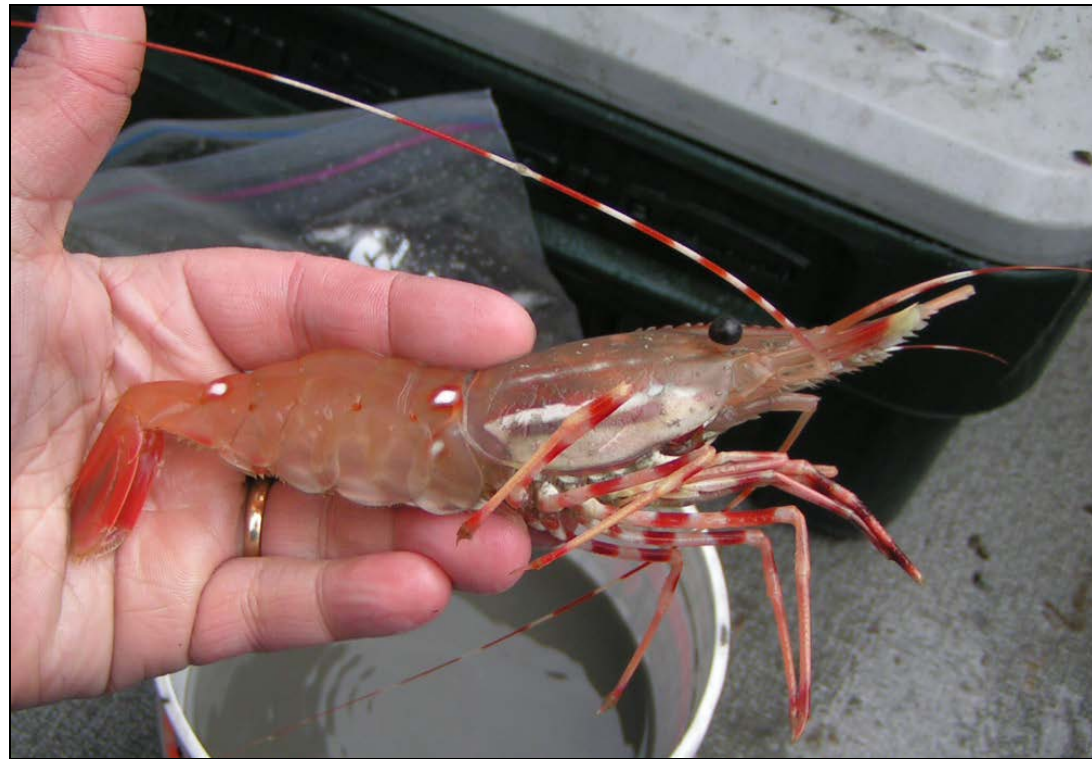
# Biology of Pandalid Shrimp

- **Five species of Pandalid Shrimp in PWS**
  - **Coonstripe**



# Biology of Pandalid Shrimp

- **Five species of Pandalid Shrimp in PWS**
  - **Spot**

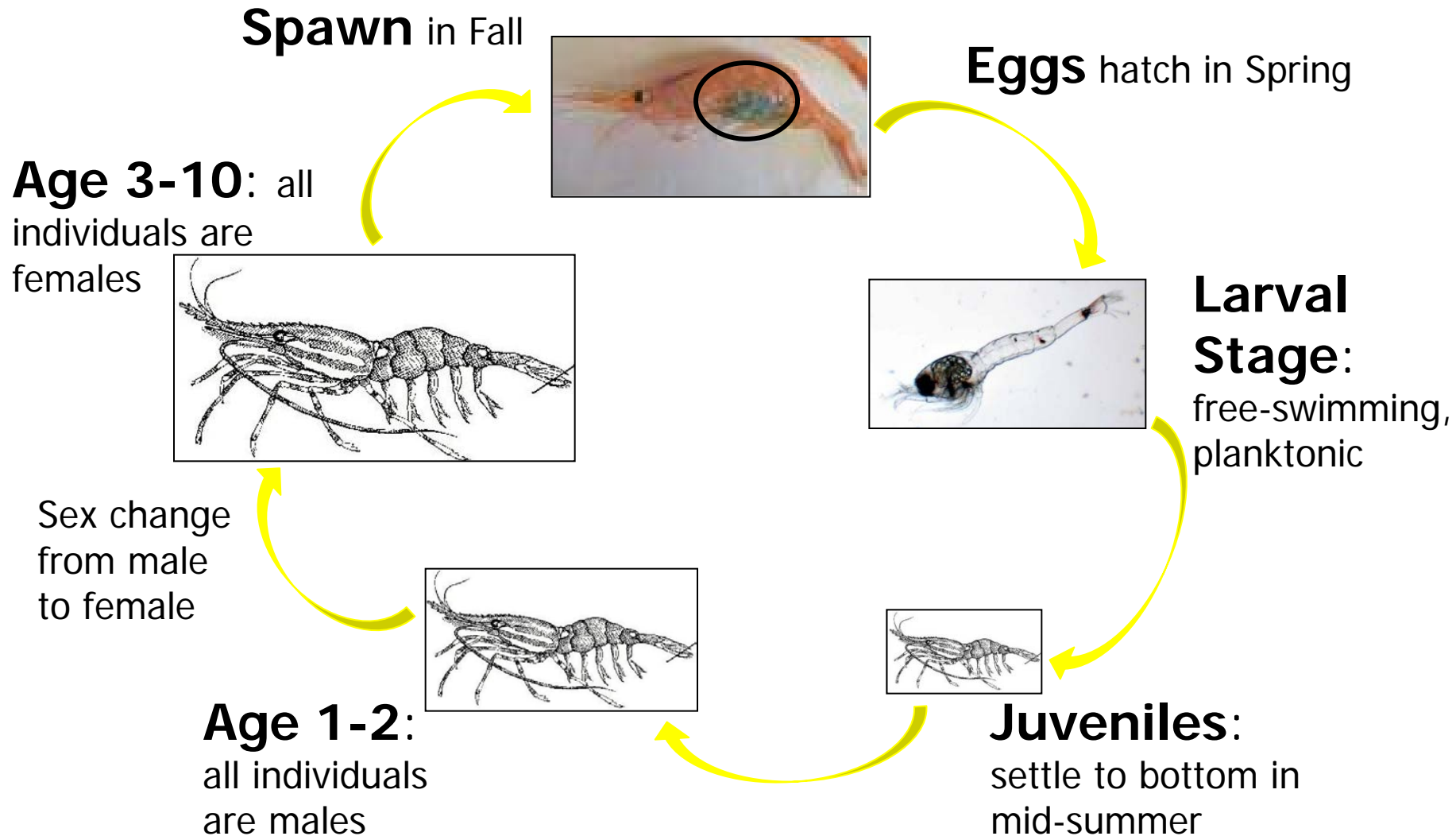


**Don't Worry... There is no test..**

**-> They are all the same on the harvest report**

# Life Cycle of Pandalid Shrimp

Protandrous Hermaphrodites



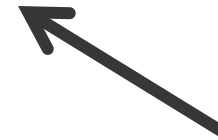
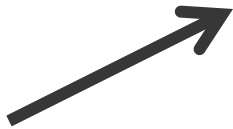
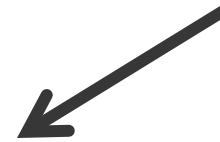


# Ecology: Habitat by Species

- Northern, Humpy, and Sidestripe Shrimp
  - Deep, flat muddy terrain, 60 – 5000 ft
  - Range; throughout the polar regions; Bering Sea to Oregon
- Spot and Coonstripe shrimp
  - Shallow to moderate depths 20 – 2000 ft
  - Rocky terrain with steep drop offs
  - Moderate to strong currents
  - Ranges; AK. peninsula to Southern California

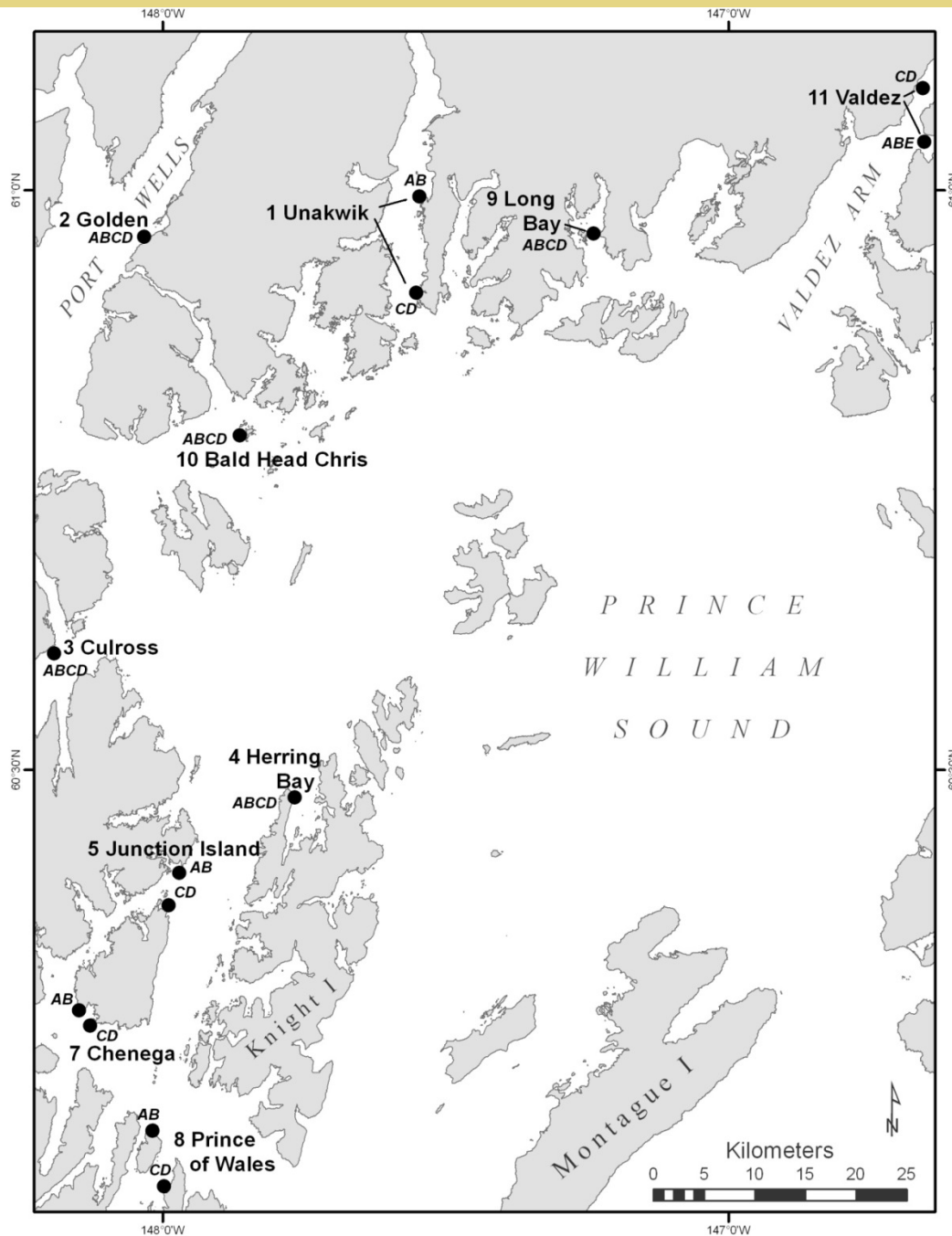
# Ecology: What shrimp eat

- **Opportunistic scavengers:** Use antennae to actively search for food: invertebrates, algae, detritus....



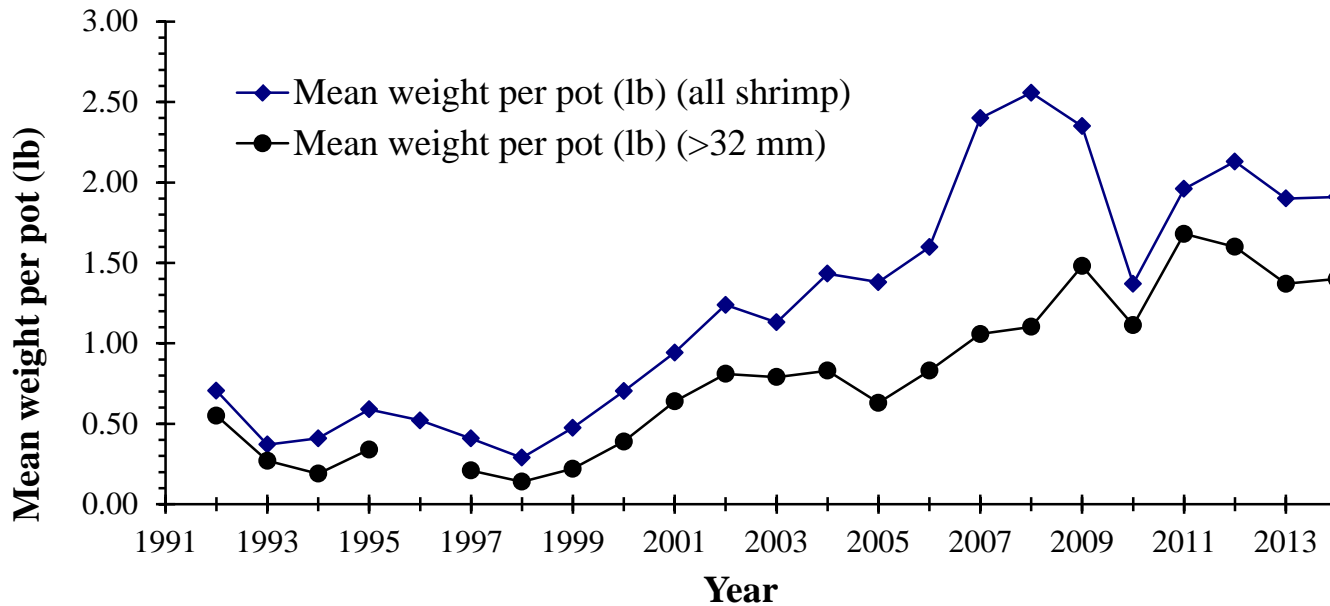
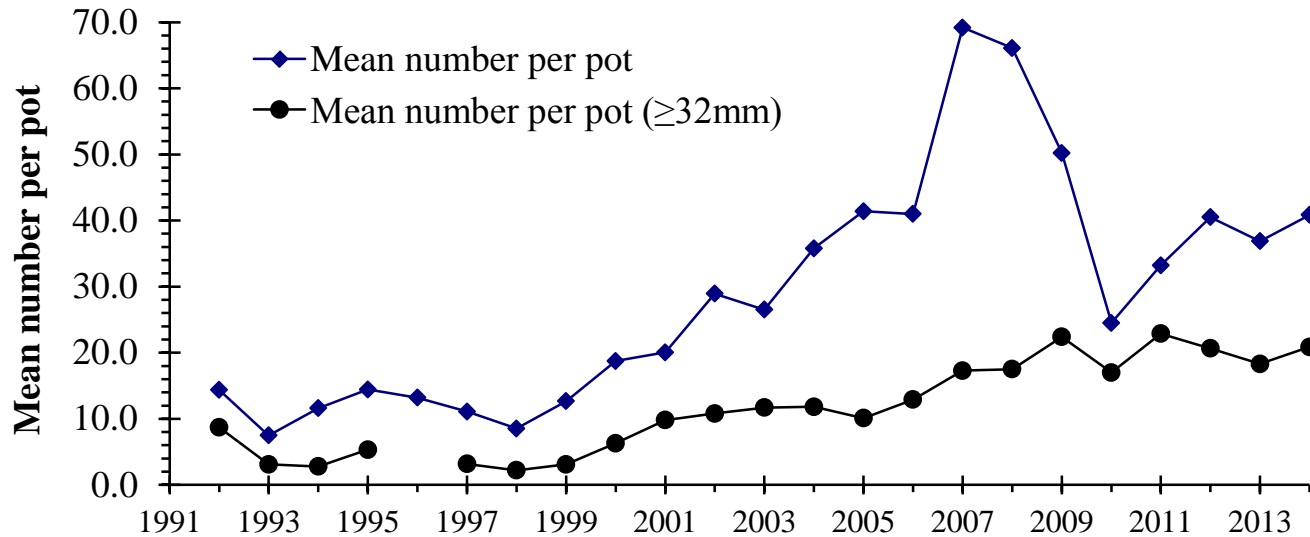
# Guideline Harvest Level (GHL) Development

- **Surplus Production Model**
  - Relative survey abundance
  - Survey CPUE
  - Total catch weight
  - Previous year's harvest from commercial and noncommercial fisheries
- **Model provides total allowable harvest (TAH) and GHLs for commercial (40%) and noncommercial fisheries (60%)**



# PWS ADF&G Spot Shrimp Survey Site Locations

# PWS Spot Shrimp Survey Results





# 2015 Shrimp Pot Guideline Harvest Levels

- Total Allowable Harvest: 167,000 lb
- Commercial fishery: 67,000 lb
- Noncommercial fishery: 100,000 lb





# PWS Commercial Shrimp Pot Fishery



# **PWS Commercial Shrimp Pot Fishery**

## **Management Components**

- 1) Total allowable harvest must be at least 110,000 lb for a commercial fishery to open
- 2) Allocation is 40% of total allowable harvest
- 3) Season dates April 15 through September 15
- 4) Fishery-dependent gear limits (100 pot maximum)
  - Set at between 20 and 50 pots



# PWS Commercial Shrimp Pot Fishery

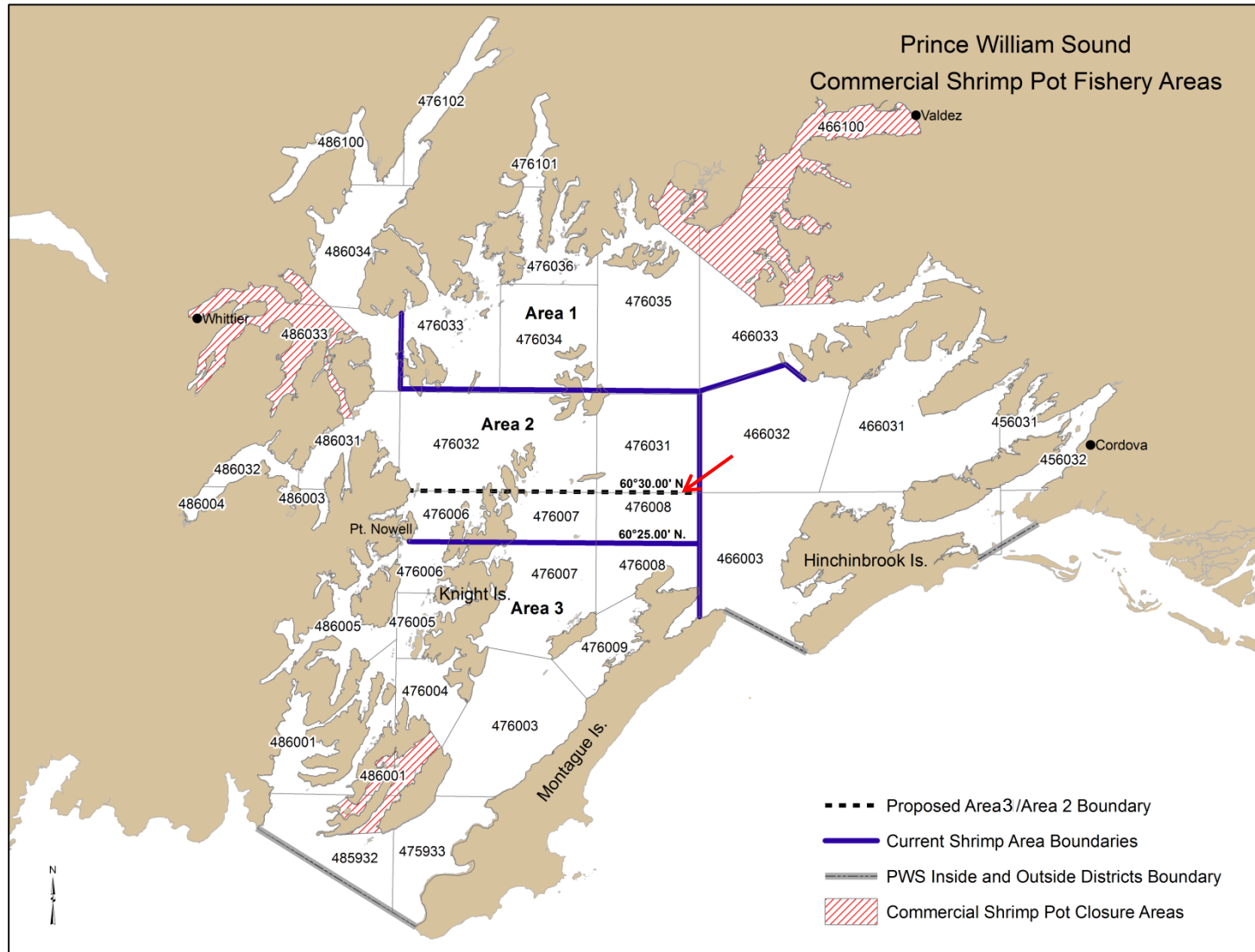
## Current Management Components (continued)

- 5) Limited hours of gear operation
- 6) Stringent reporting requirements
- 7) Fishery rotates among three areas
- 8) No more than 50% of GHL from any one statistical area  
(changed from 25% to 50% at the 2015 BOF meeting)



# PWS Commercial Shrimp Pot Fishery

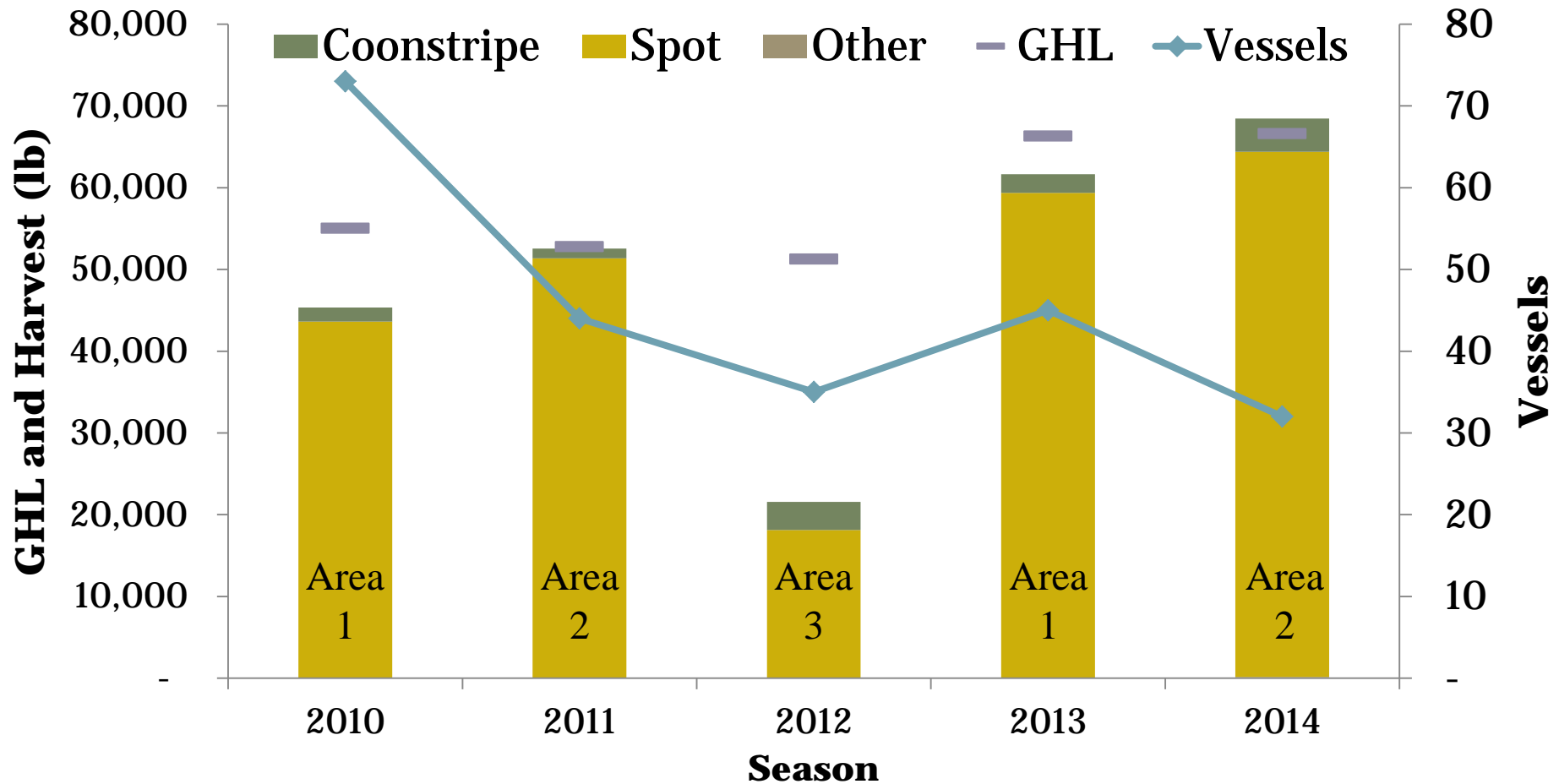
## Area Boundaries and Statistical Areas





# PWS Commercial Shrimp Pot Fishery

## Harvest and Effort



# PWS Noncommercial Shrimp Pot Fishery

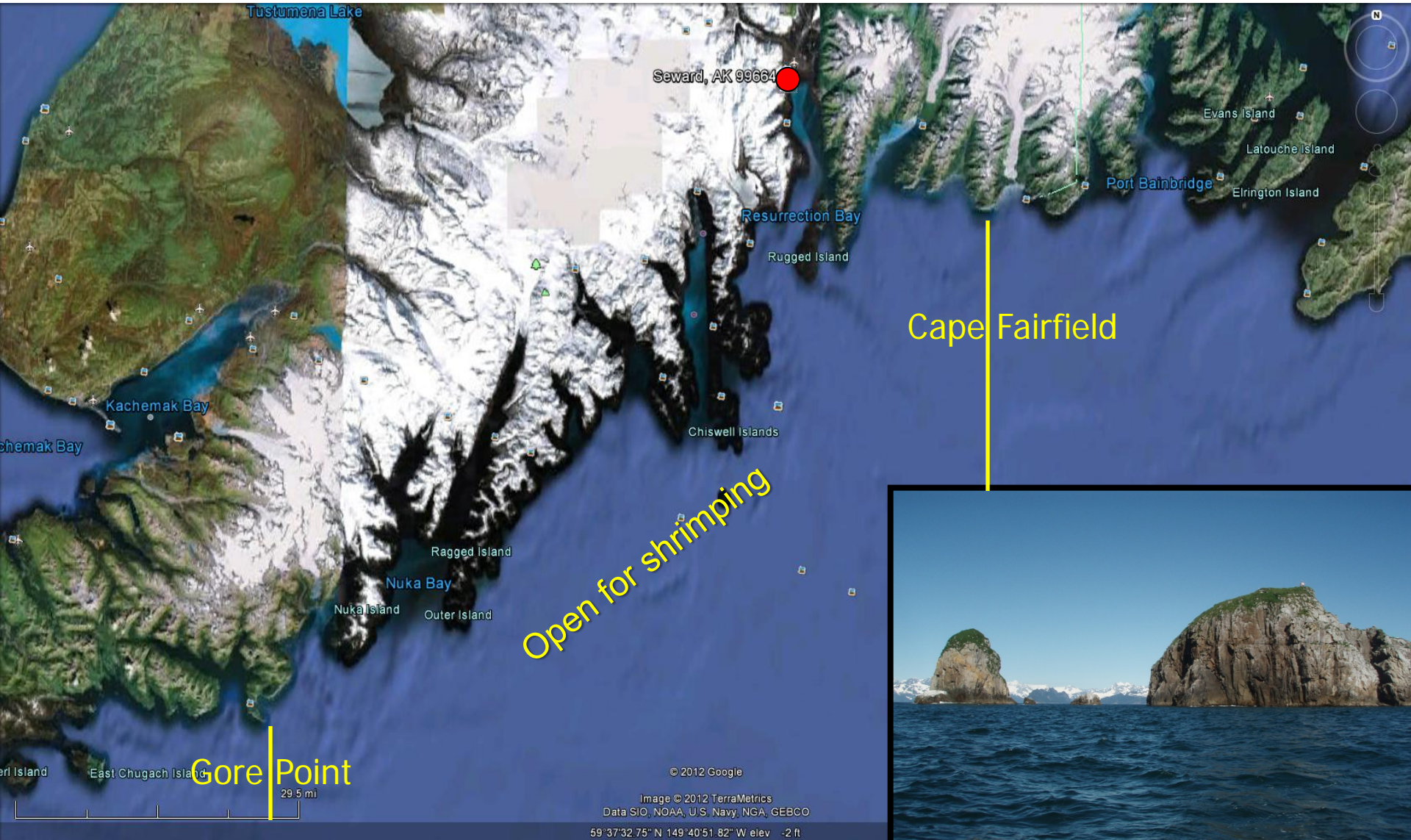




# PWS Area



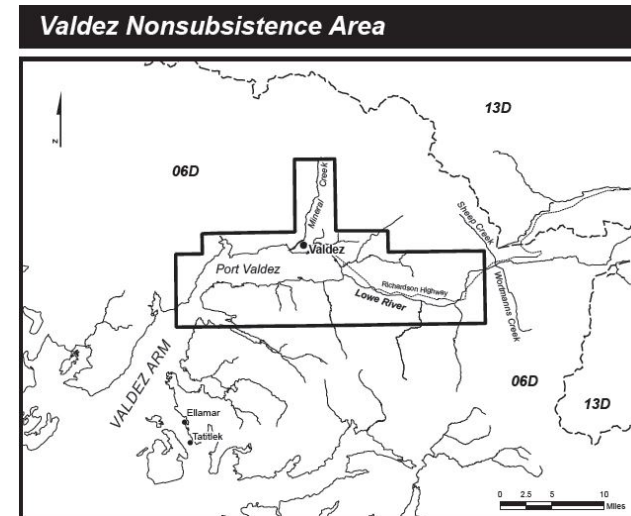
# NGC Area: PU Only



# PWS Noncommercial Shrimp Pot Fishery

## Management Components

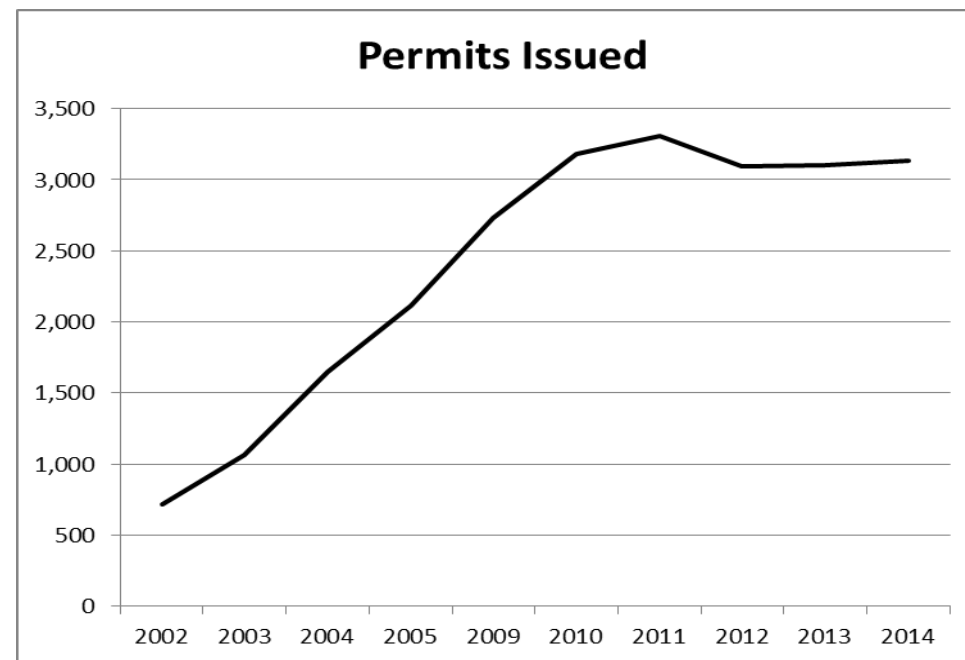
- 1) Noncommercial fishery includes Subsistence, Sport, and Personal Use.
- 2) Sport license is required for sport and personal use, but not for subsistence
- 3) All saltwaters are open to shrimp fishing with the exception of subsistence use in the Valdez Nonsubsistence Area
- 4) There is no threshold that must be met in order for this fishery to take place.
- 5) Allocation is 60% of total allowable harvest



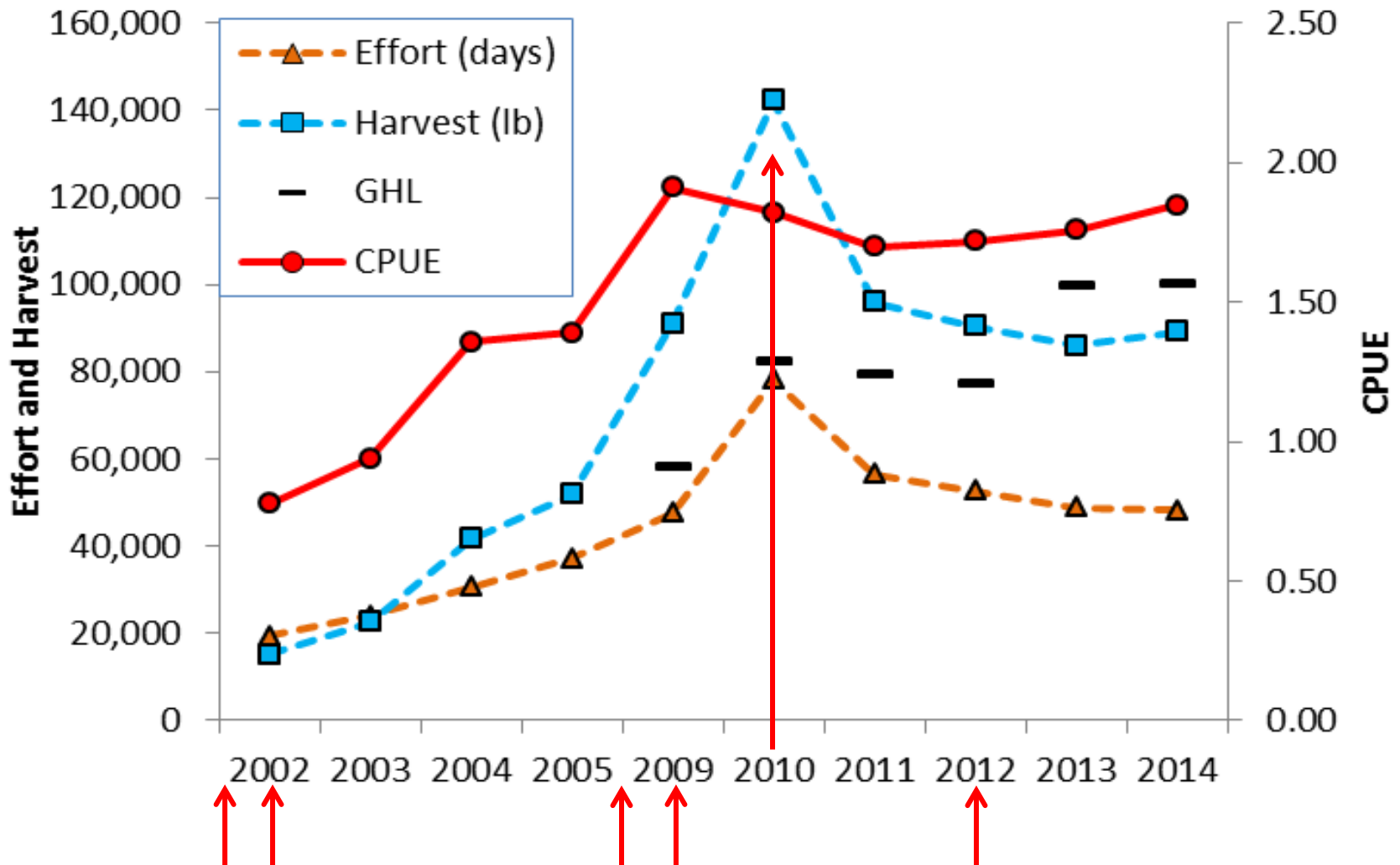


# PWS Noncommercial Shrimp Pot Fishery Management Components (Continued)

- 6) Season dates April 15 through September 15
- 7) Pot limits set at 5 pots/person/vessel with no bag, possession, or annual harvest limit
- 8) Harvest/Effort tracked through Shrimp Permit/Recording form  
~90% returns
- 9) No inseason management



# PWS Noncommercial Shrimp Pot Fishery



# Fishery Dynamics: Non-comm. Harvest

<b>Harvest</b>	<b>Rank</b>
Whittier	1
Valdez	2
Unakwik	3
Port Wells	4
Port Nellie Juan	5

<b>Pot Days (Effort)</b>	<b>Rank</b>
Whittier	1
Valdez	2
Port Wells	3
Port Nellie Juan	4
Unakwik	5

<b>CPUE</b>	<b>Rank</b>
Unakwik	1
Port Wells	2
Port Nellie Juan	3
Whittier	4
Valdez	5



# PWS Shrimp Management Plan

**Permits are Mandatory for ALL  
non-commercial users**

**They are FREE!**

Available at ADFG offices in Anchorage and Cordova  
as well many vendors

# Regulations Cont'd.

- Can you keep anything other than shrimp?



→ **YES**

Is there a bag limit on shrimp?

→ **Good news... NO**



→ **NO**



→ **No**

Can you buy, sell, or trade your shrimp?

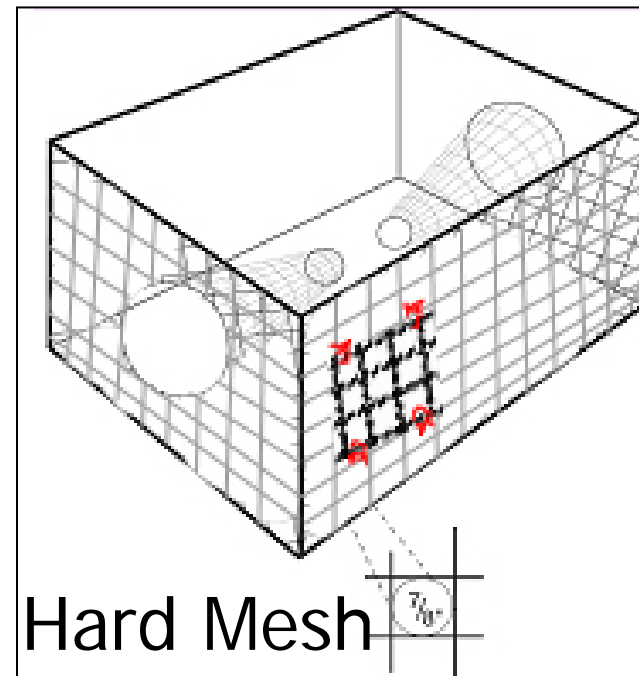
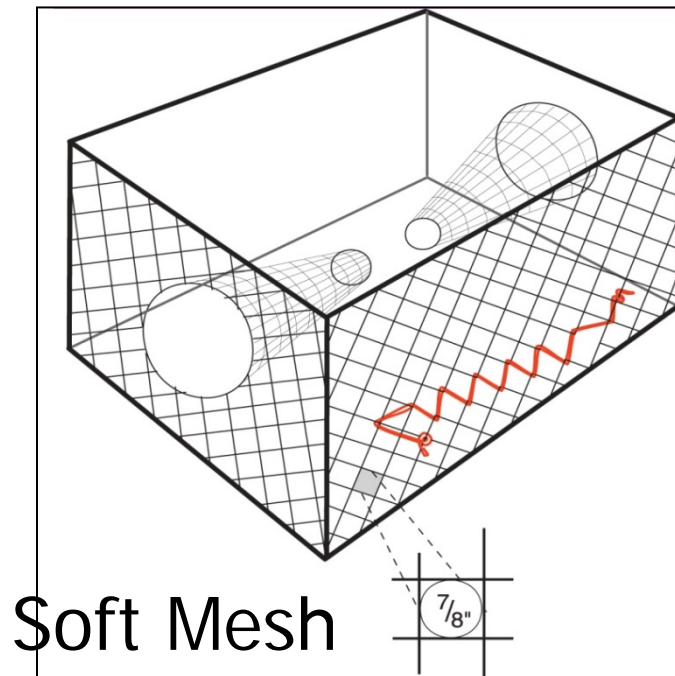
→ **No**



# Regulations for Pot Construction

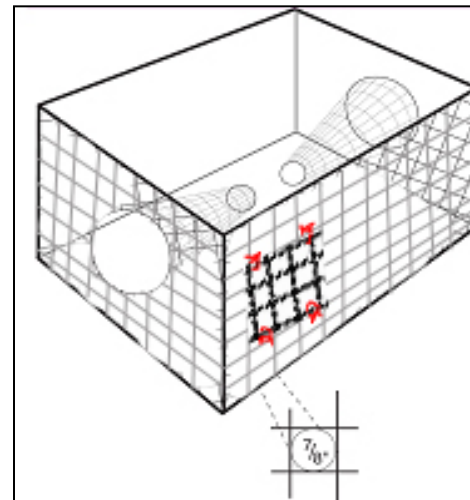
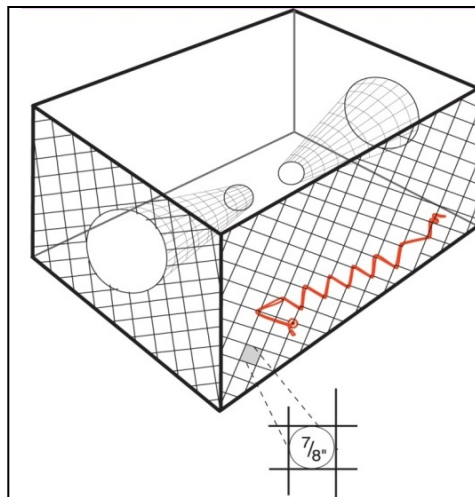
- Pot design

- Two adjacent (touch each other) vertical sides or half of pot must be webbing (a  $7/8$  in. dowel must pass through the mesh)
- Top and bottom can be covered by anything \*\*allows for juvenile escape
- Escape panel tied with cotton string = No “Ghost Pot”



# Regulations for Pot Construction

**700 pots were lost last year!**



# Regulations on Buoys

- **Buoy marking pot line**
  - **Must have name, home address, DOT Boat number or boat name (see reg booklet)**
  - **Recommend putting your phone number on your buoy to aid enforcement officials**



# Regulations

- Pick up a  
regulation booklet



# Catching Shrimp

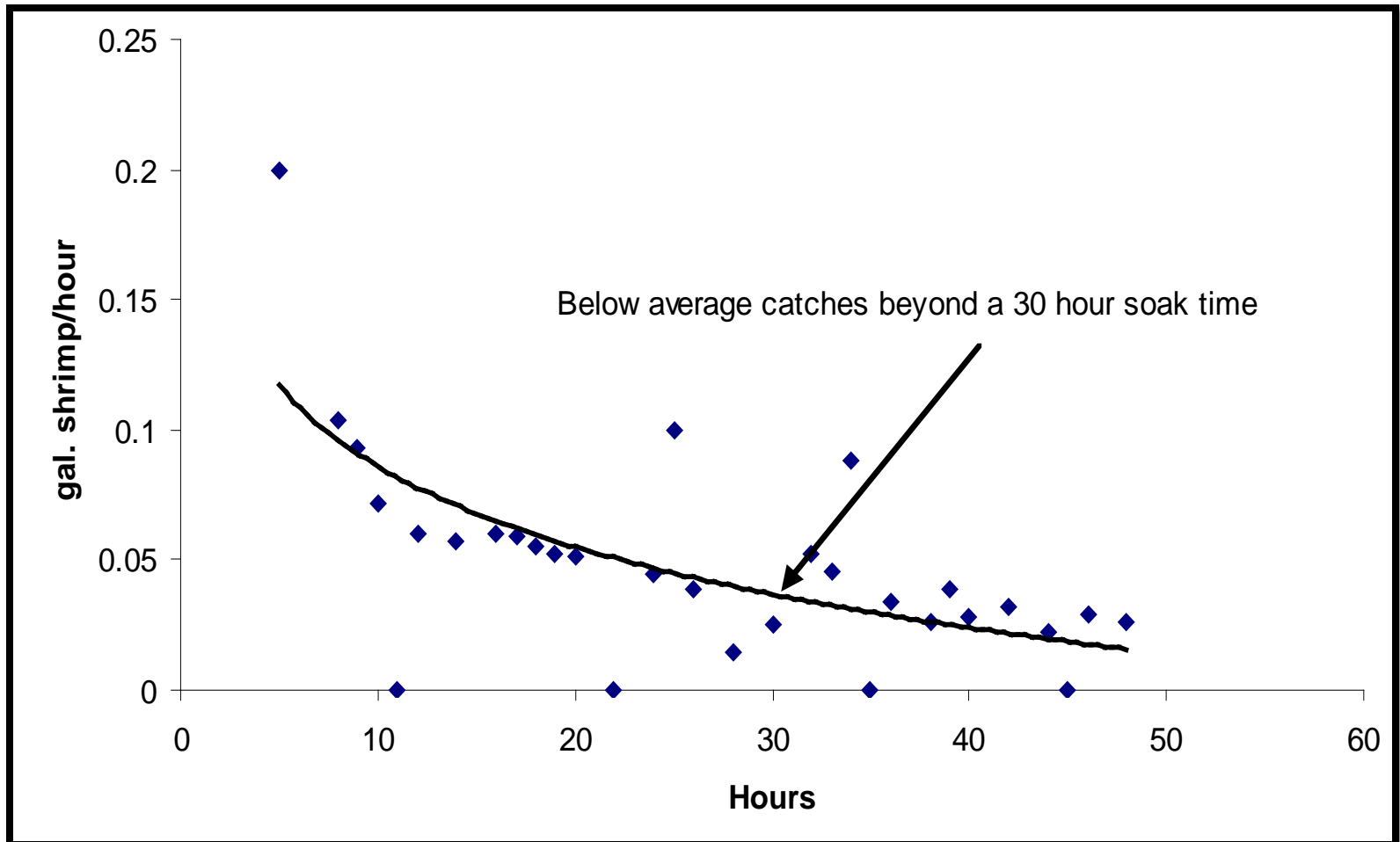


# Catching Shrimp: Variability within an Area

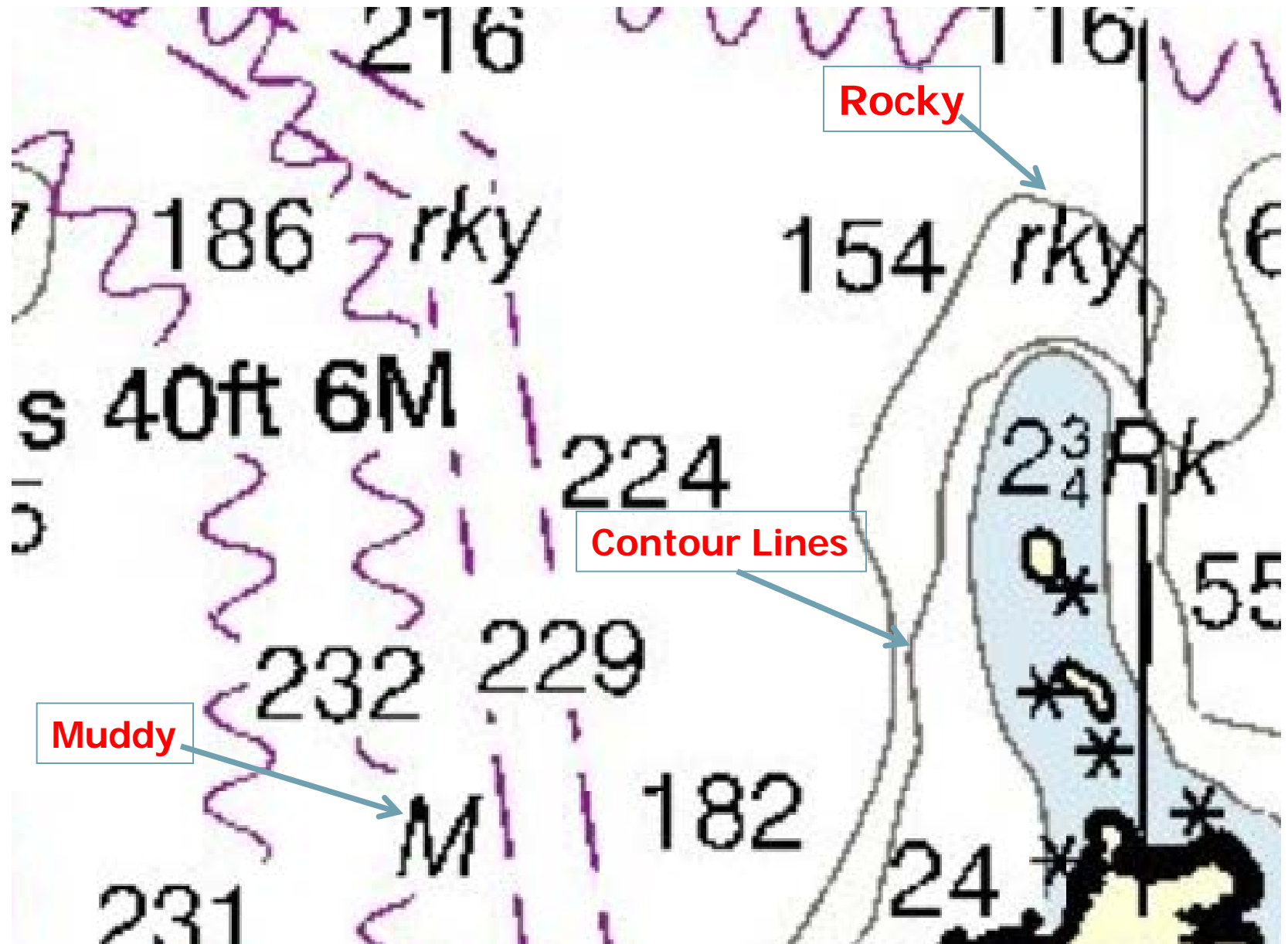
- Availability of Food and Cover
- Prevalence of Predators
- Competition with other scavengers
- Season



# Catching Shrimp: Pot Soak Time



# Use Your Chart and keep good records





# Catching Shrimp: Maximize your Catch

- **Be Adaptive**
  - Try new areas
  - Use a variety of baits
  - Adjust depth with seasons
  - Adjust your soak times by number of hours and time of day
  - Find what works for you but stay adaptive



# PWS Commercial Shrimp Pot Fishery

## Harvest and Vessel Participation

