

# Russian River Pinniped Surveys: 2009-2012



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# Pinniped Monitoring Activities

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## Implementation of Pinniped Monitoring Plan: July 2009

- water level management activities monitoring
- bi-monthly baseline monitoring at Jenner and surrounding haul outs
- monitoring incidental to biological and physical studies in the Estuary
- MMPA IHA permit (level B harassment): report submitted annually

# Pinnipeds at the Russian River

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harbor seals



California sea lions



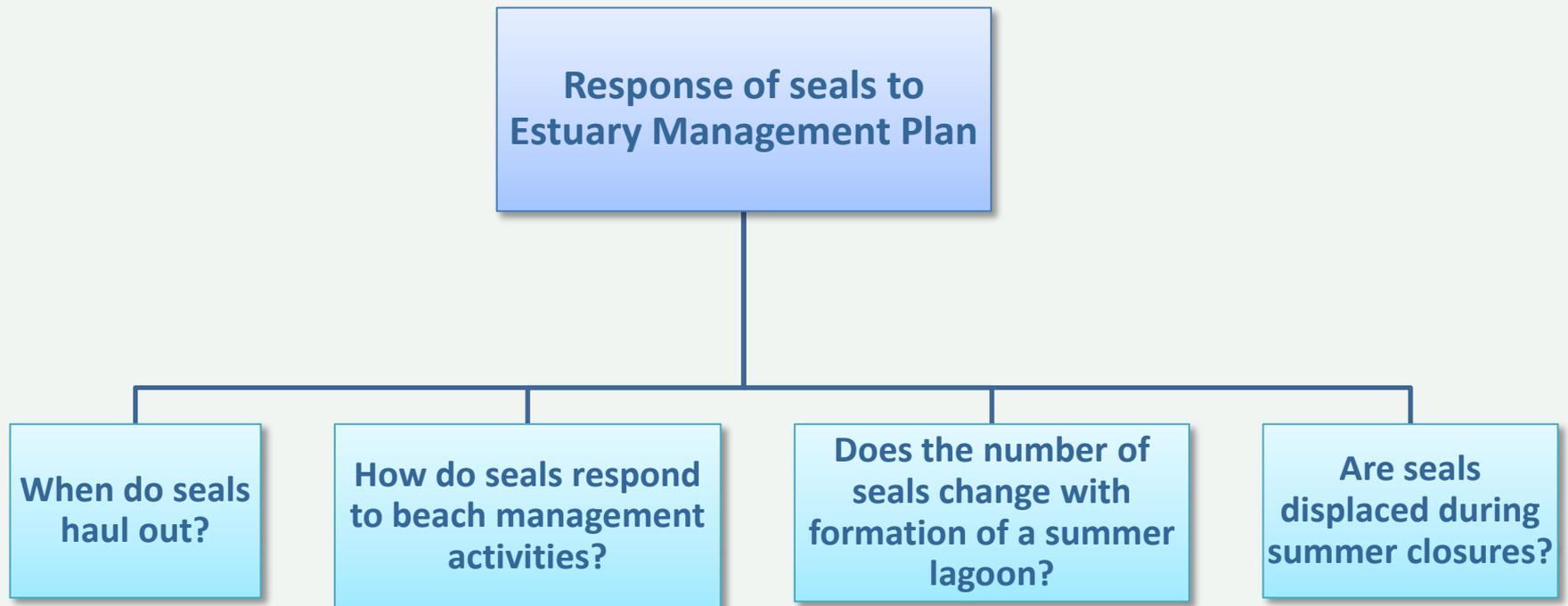
Northern elephant seals



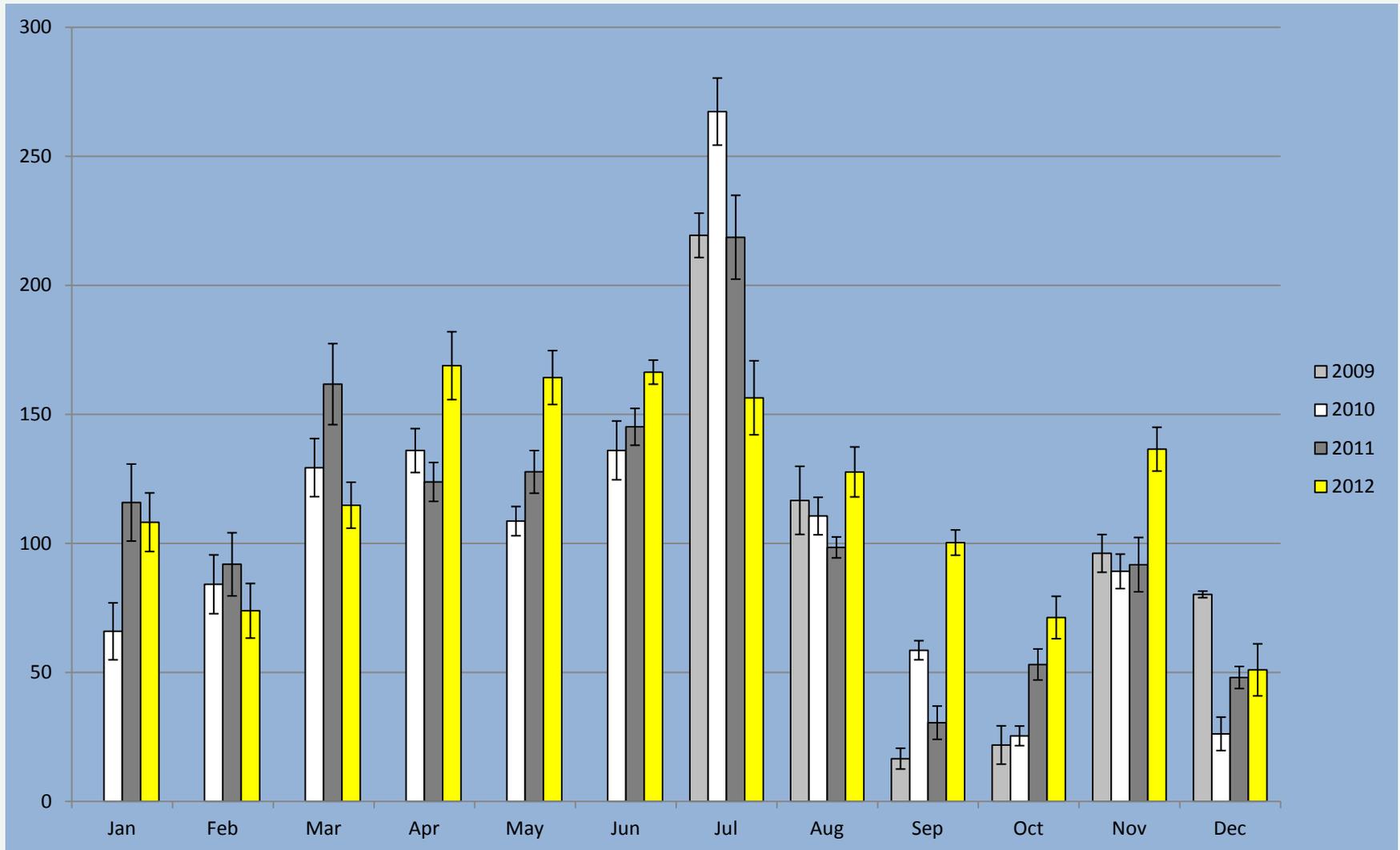
# Pinniped Monitoring Plan Objectives

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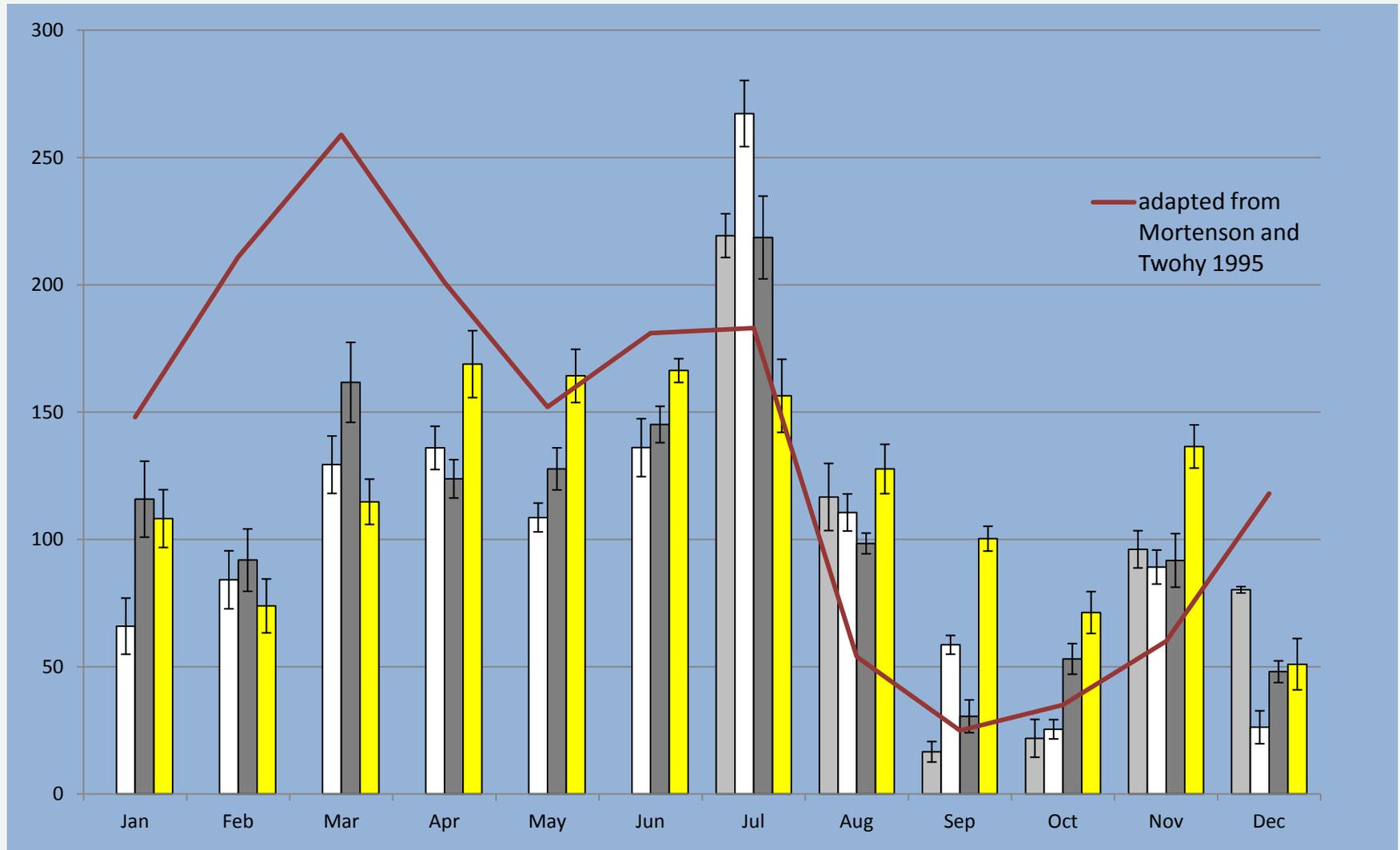
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# Seasonal Patterns

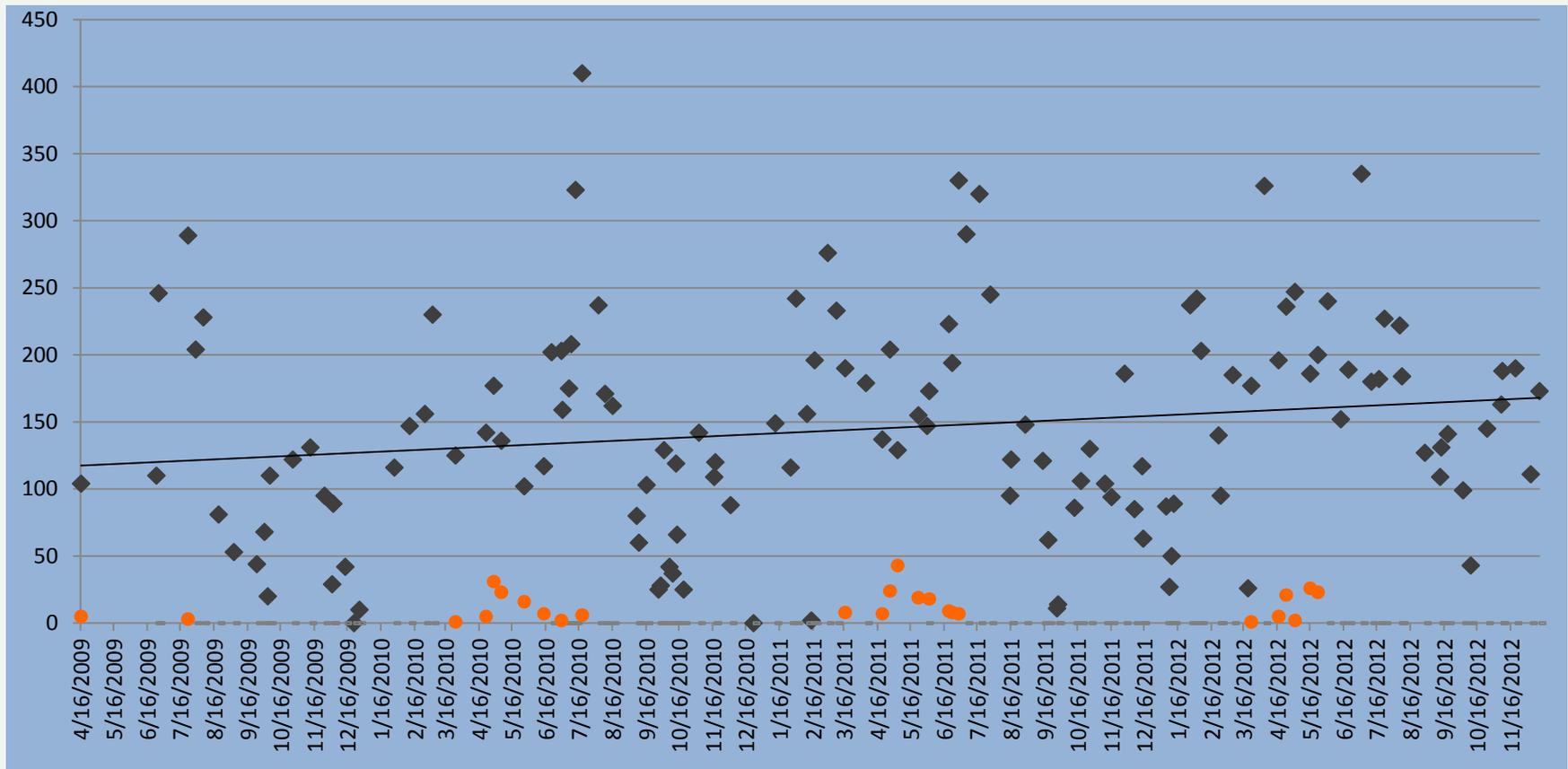


# Seasonal Patterns



# Trends in Seal Abundance

- Maximum seals hauled out during baseline “plus” surveys
- While peak counts were lower in previous two years, overall trend in seal abundance is increasing
- 2012 pup production = 13.8% compared to 29.3% in 2011



# Water Level Management Activities

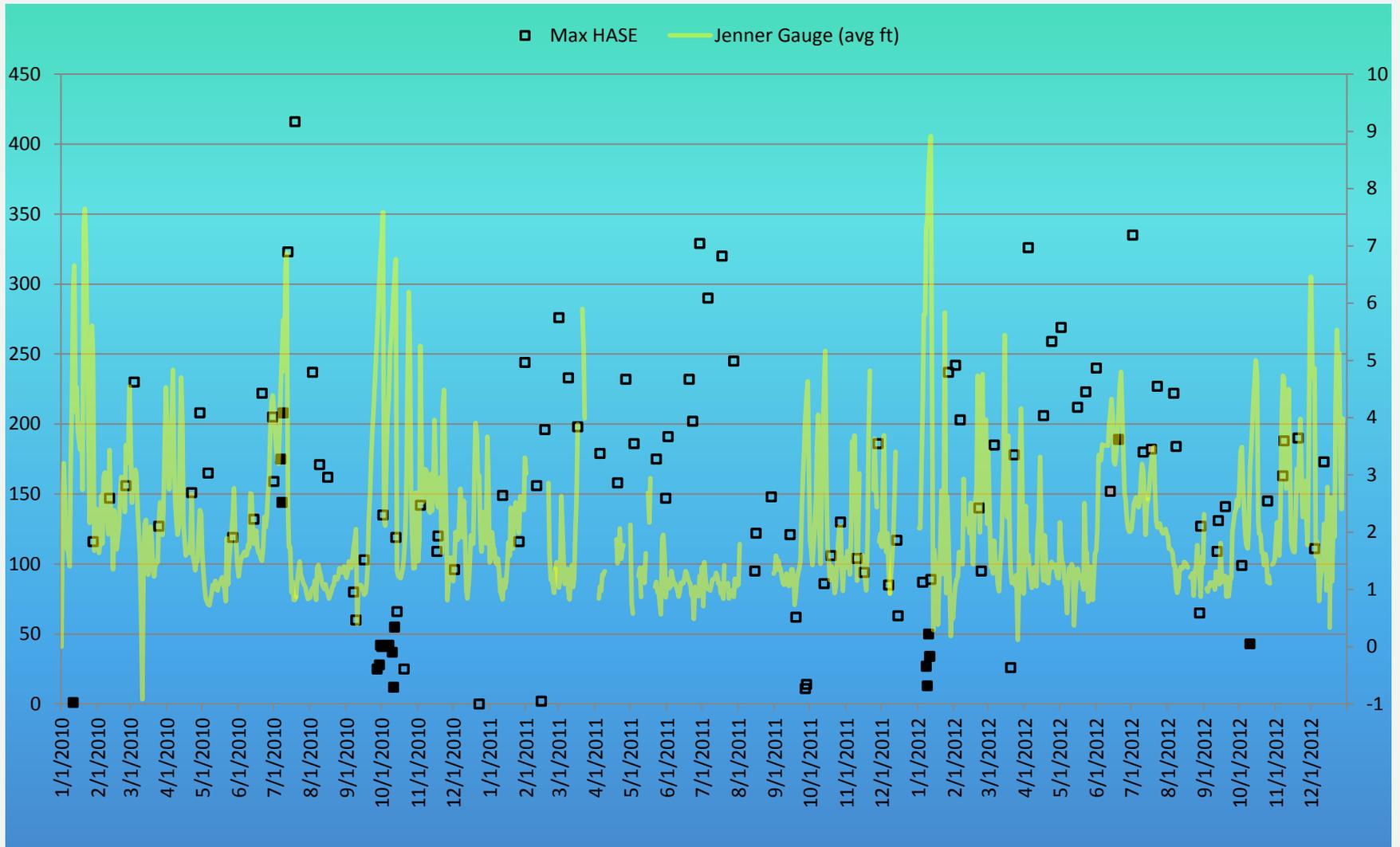
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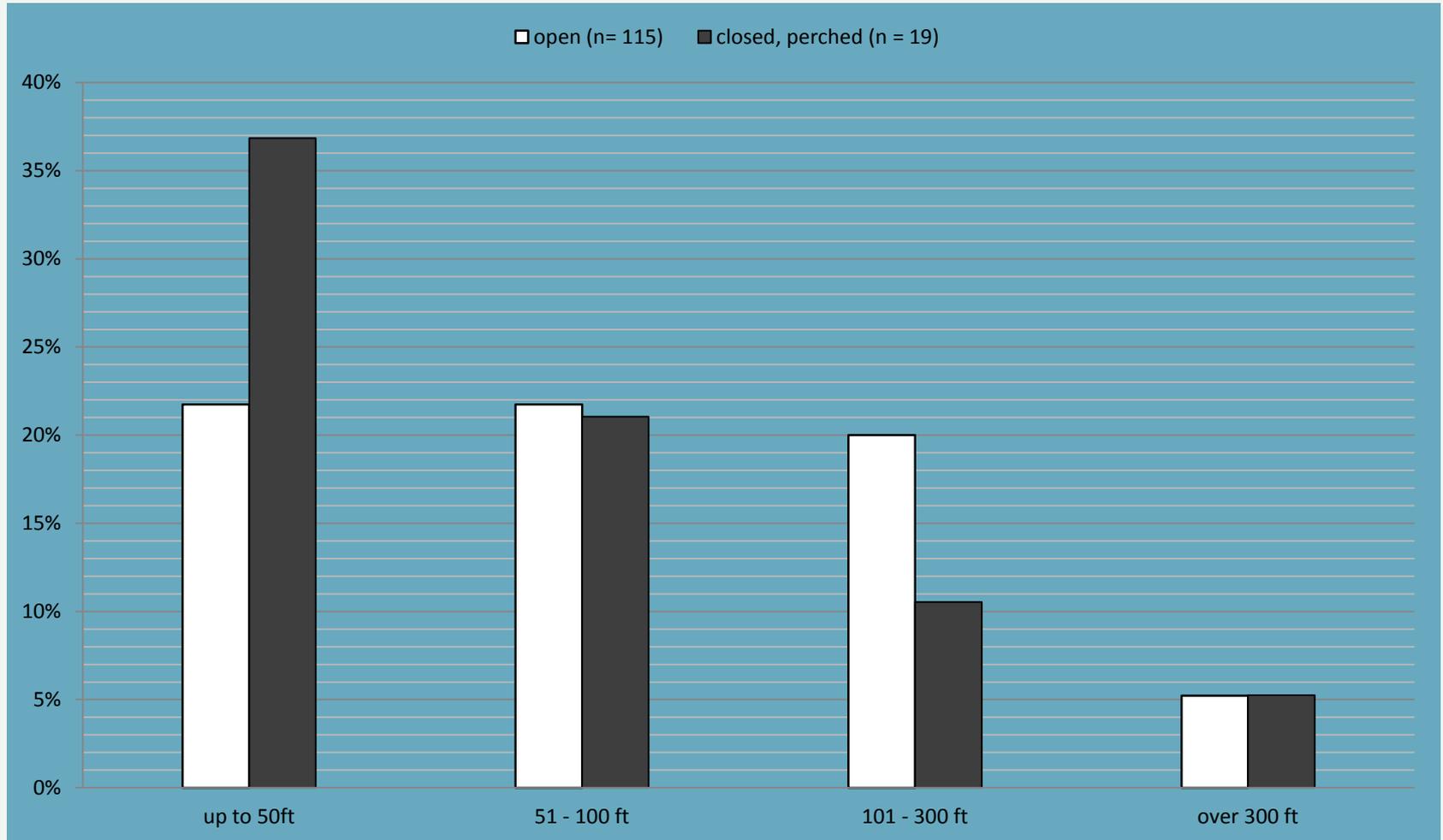
- Artificial Breaching
  - Most outside of management season
- Lagoon Outlet Channel
  - May 15 - October 15 = management period
  - One in July 2010
- Self Breaching
  - Closed bar opens due to ocean or river forces
  - 4 times in 2012, 1 during lagoon management
  - 2 times to date in 2013
  - 4 additional periods of perched conditions



# Seal Response to River Mouth Closures



# People are able to get closer to seals during closed bar conditions



# Summary

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## When do seals haul out?

- Seals present year round, more during pupping and molting seasons
- Seals can haul out throughout tidal cycle, but high tides and large swell - creating wave over wash of haul-out will decrease seal abundance
- Abundance of seals increases throughout day with more seals hauled out in the afternoon
- Seals haul out in bar open and closed conditions

# Summary

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How do seals respond to Estuary Management Activities?

- Seals are disturbed by noise from trucks/equipment driving on beach, safety crew approaching on foot, on lookers
- Seals return to haul out after disturbance is gone

Do seal numbers differ in closed summer lagoon conditions?

- Unknown: not enough data

Are seals displaced?

- Unknown: not enough data



# What we hope to learn:

- Continue to explore factors driving changes in seal behavior throughout the year
- Attempt to monitor individual seal behavior



-Do seals move to new haul-outs?

- Does age/sex composition of haul-out change seasonally?

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