

NOAA
FISHERIES

Marine Mammal Science & Management Priorities: a way forward through identification of common needs



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on behalf of M. Srinivasan, L. Barre, J. Bengtson, S. Bettridge, K. Bisack, S. Brown, C. Fahy, M. Ford, L. Garrison, N. LeBoeuf, R. LeRoux, F. Parrish, E. Seney, M. Simpkins, T. Vardi, L. VanAtta
NOAA Fisheries Science Centers, Regional Offices, HQ Offices of Science & Technology and Protected Resources

Some Context



Our Primary Mandates and Associated Information Needs

Marine Mammal Protection Act – Maintain populations at “Optimum Sustainable Levels” and as functioning elements of their ecosystem

- Stock structure
- Population size
- Human-caused mortality

Endangered Species Act – Prevent extinction and recover species

- Distinct Population Segments
- Population size
- Trends in abundance
- Threats

Our Science Mission

1. **Assess** species relative to management objectives

2. Mitigate threats

3. Support users of our data

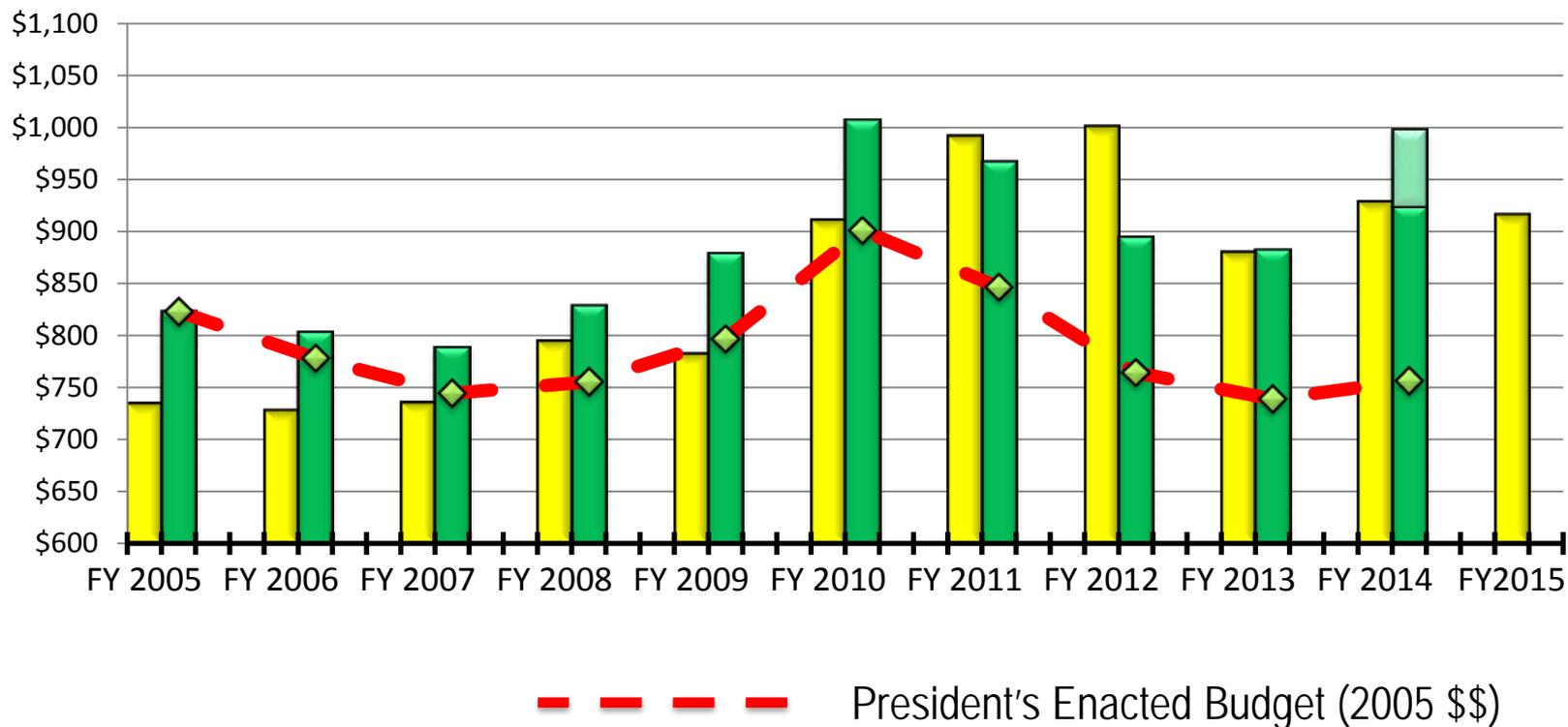
4. Educate and build capacity

5. Advance the science of management and conservation

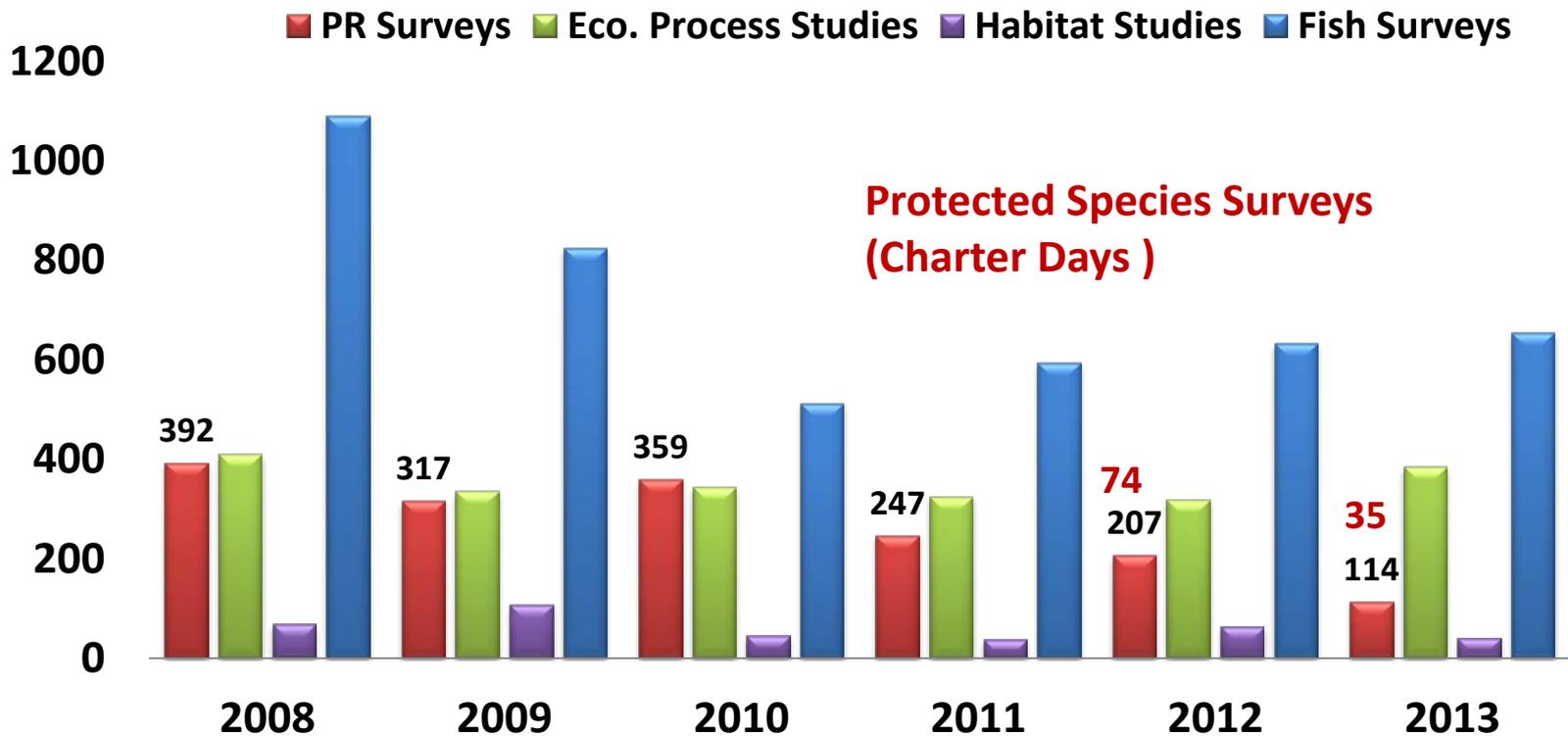
Five components of assessment:

- Estimate abundance
- Monitor status and trends
- Clarify population structure
- Assess condition and health
- Place the above in an ecosystem context

NOAA Fisheries' budget is trending up, but accounting for inflation, we are currently operating below 2005 levels.



One consequence is a decreased number of days for NOAA ships to conduct marine mammal research (although this trend too is up for 2014).



Demands for protected species science and management actions are increasing.

93 Endangered or Threatened species (80 more proposed)

Annually

- 1200-1500 ESA Section 7 Consultations
- 500+ permit requests
- 100 marine mammal incidental take evaluations

In FY13, 80% of 400 protected species stocks lacked current and comprehensive information to inform management.

Of 243 marine mammal stocks, sustainable take estimates exist for only 152.

NOAA is an Environmental Intelligence Agency. (Dr. Kathryn Sullivan)

- We need steady investment in research infrastructure and data collection for development of strategic data products in support of resilient communities.



Challenges
= Opportunities

NMFS science provides a baseline for assessing risk to protected species, especially from activities associated with energy and defense.

Uncertain science leads to reduced ability to deal with complex ecological problems, uncertain management and stewardship decisions, and often, greater expense.

The Protected Resources Science Investment & Planning Process*

CORE MESSAGE: The increased demand for protected species science to address urgent management and regulatory needs requires a “growth industry”-type investment, to ensure that the country’s priority defense and economic goals are achieved, while sustaining viable wild populations.

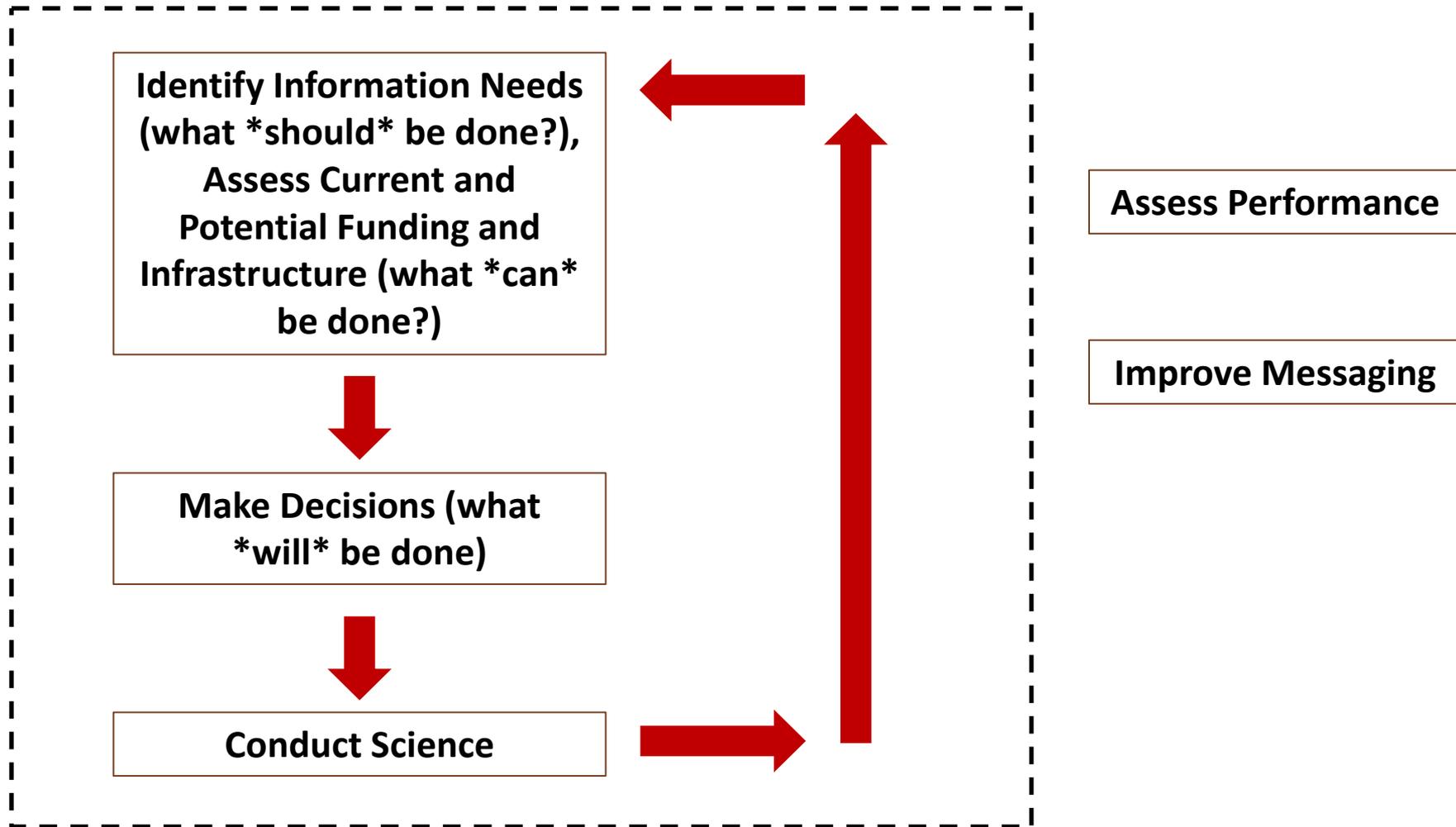
*PRSIPP – an improved business model

Goal

- Secure investment in science by identifying common needs and addressing them through enhanced partnerships

Achieved through a simple and adaptive *process-oriented* approach

The "Process"

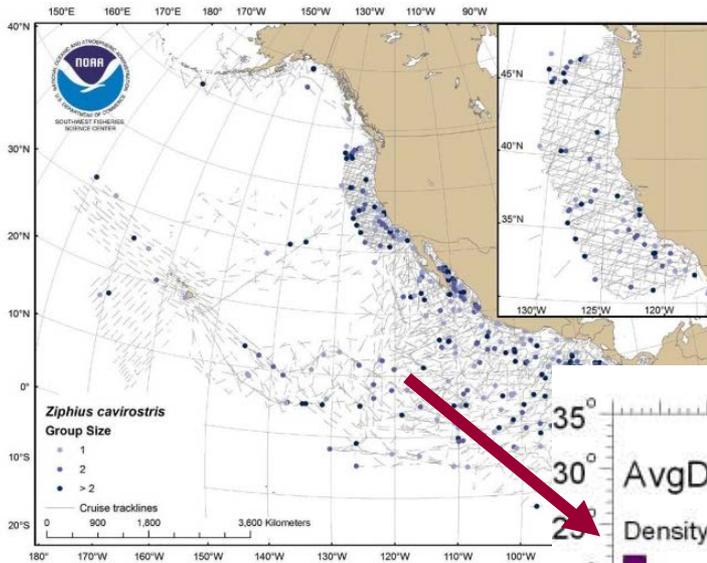


Results: an example from 2013

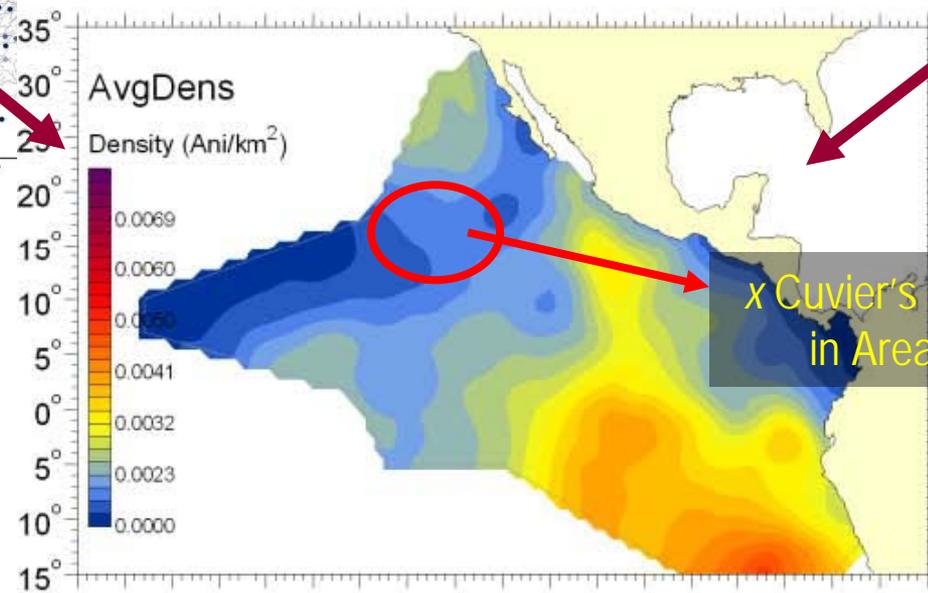
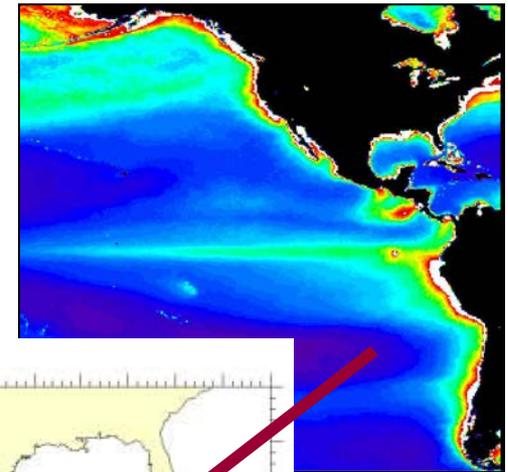
- A Common Information Need: NOAA Fisheries managers & scientists, other Federal agencies (energy & defense)
 - Long-term data on marine mammal* distribution and abundance, and an ecosystem context
- * Protected Species

Why is this information useful?

Cuvier's Beaked Whale Sightings



Physical and Biological Habitat



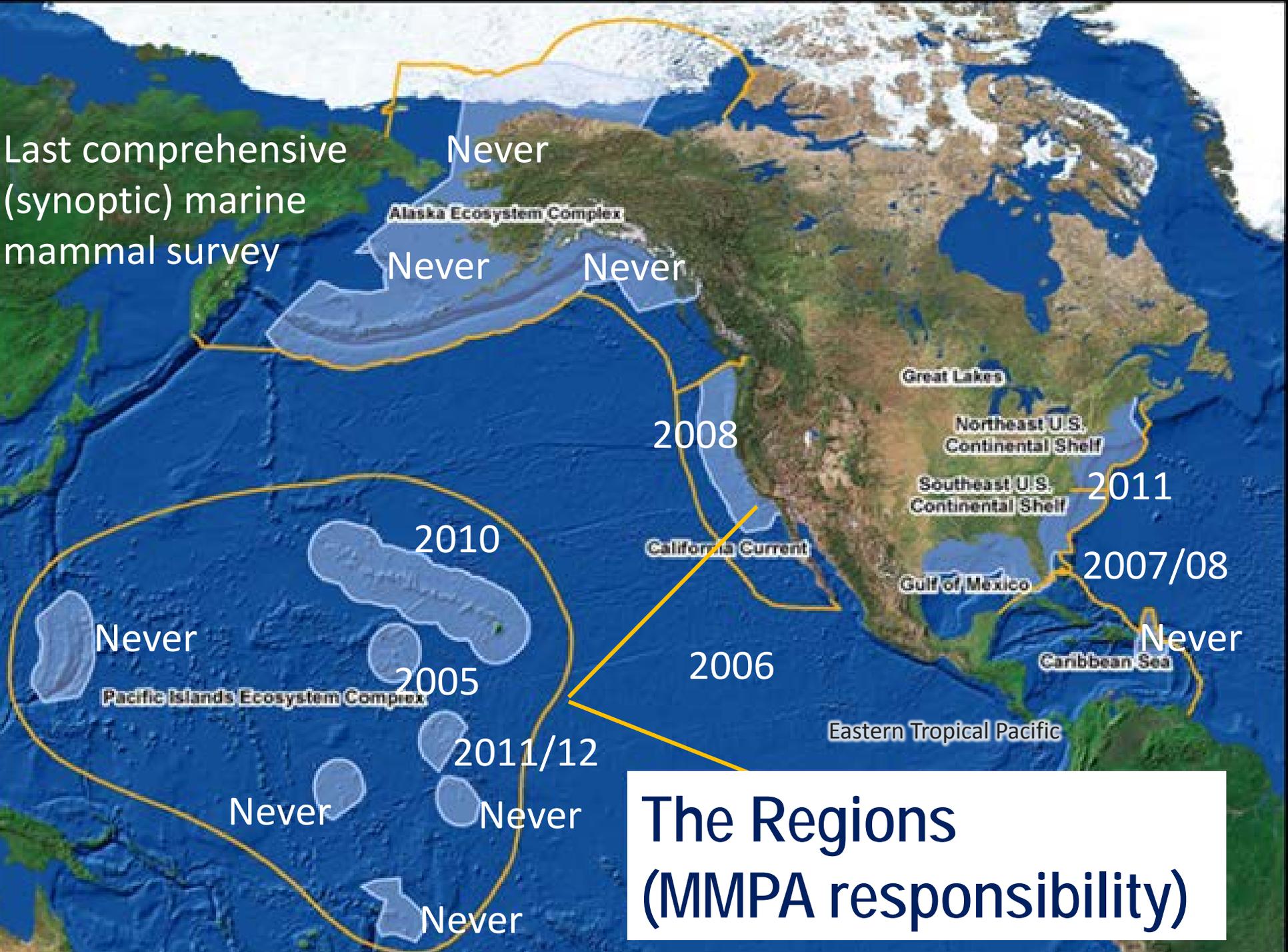
x Cuvier's Beaked Whales in Area of Concern

Addressing a Common Need



- A proposal to conduct multispecies marine mammal & ecosystem assessment surveys

Last comprehensive
(synoptic) marine
mammal survey



The Regions (MMPA responsibility)

The Survey Model

- A multispecies, multidisciplinary approach

Abundance & Trends

Biology

Population Structure

Health, Condition



Ecosystem Assessment



Apex
Predators



Low- and Mid-
Trophic Fishes and
Invertebrates

Physical and Biological
Habitat



A Proposed Survey Cycle

- Accomplished with NOAA ships, leveraged funding from Federal partners
- **A successful model in the Atlantic and California Current (NOAA, energy, defense)**

Year	Regions to be Surveyed	Days Required
1	E Coast, W Coast, Bering Sea, Chukchi Sea, Palmyra & Kingman, Jarvis	488
2	E Coast, W Coast, Bering Sea, Chukchi Sea, Commonwealth of N Mariana Islands	534
3	Gulf of Mexico, Gulf of Alaska, Howland & Baker	328
4	Gulf of Mexico, Gulf of Alaska, Johnston	322
5	Caribbean, ETP, American Samoa, Wake	443
6	Caribbean, Hawaiian Archipelago	306

Marine Mammal Science & Management Priorities: Benefits of our approach

- Consistent science planning and implementation agency-wide
- Move from 'Triage' to 'Proactive'
- Increased transparency on what science is conducted and why
- Improved communication and synergy between NOAA Fisheries science & management, and across Federal agencies
- Diversified support for science



Identification of common needs and strengthening partnerships will help us to work smarter and more efficiently.



Robert L. Pitman