

2015 Science Program Review: Marine Mammal & Turtles

Southwest & Northwest Fisheries Science Centers
26 - 31 July 2015
Cisco Werner and John Stein



NOAA Fisheries Program Reviews

Are we doing good science?

Are we doing the right science?

Why Program Reviews, Why Now?

- Beginning in Jan 2013, NOAA Fisheries is **conducting a systematic review of science** programs by theme
- **Peer reviews ensure delivery of high quality, trusted, timely science** to fulfill mandates and requirements under the ESA and MMPA, and meet the needs of the regulatory partners

<https://swfsc.noaa.gov/2015ProtectedMammalTurtleReview>

Introductions: Review Panel

Frances Gulland (Chair), The Marine Mammal Center

Scott Baker, Oregon State University

Phillip Clapham, Alaska Fisheries Science Center, NMFS

Selina Heppell, Oregon State University

Bonnie Ponwith, Southeast Fisheries Science Center, NMFS

Lorenzo Rojas, Instituto Nacional de Ecología y Cambio Climático, SEMARNAT



Introductions

Richard Merrick, Stephanie Hunt (NMFS Scientific Programs)

Mridula Srinivasan (Office of Science and Technology, NOAA NMFS)

Donna Weiting, Angela Somma (Protected Resources, NOAA NMFS)

Tanya Dobrzynski (Office of Management and Budget, NOAA)

Chris Yates, Lynn Barre, Penny Ruvelas, Tina Fahy (West Coast Regional Office, NMFS)

John Bengtson (Alaska Fisheries Science Center, NOAA NMFS)

Michael Tillman (U.S. Marine Mammal Commission)

Our speakers (WCRO, SWC, NWC):

Division Chiefs

Program Leads

Science Staff



Context For This Joint Review

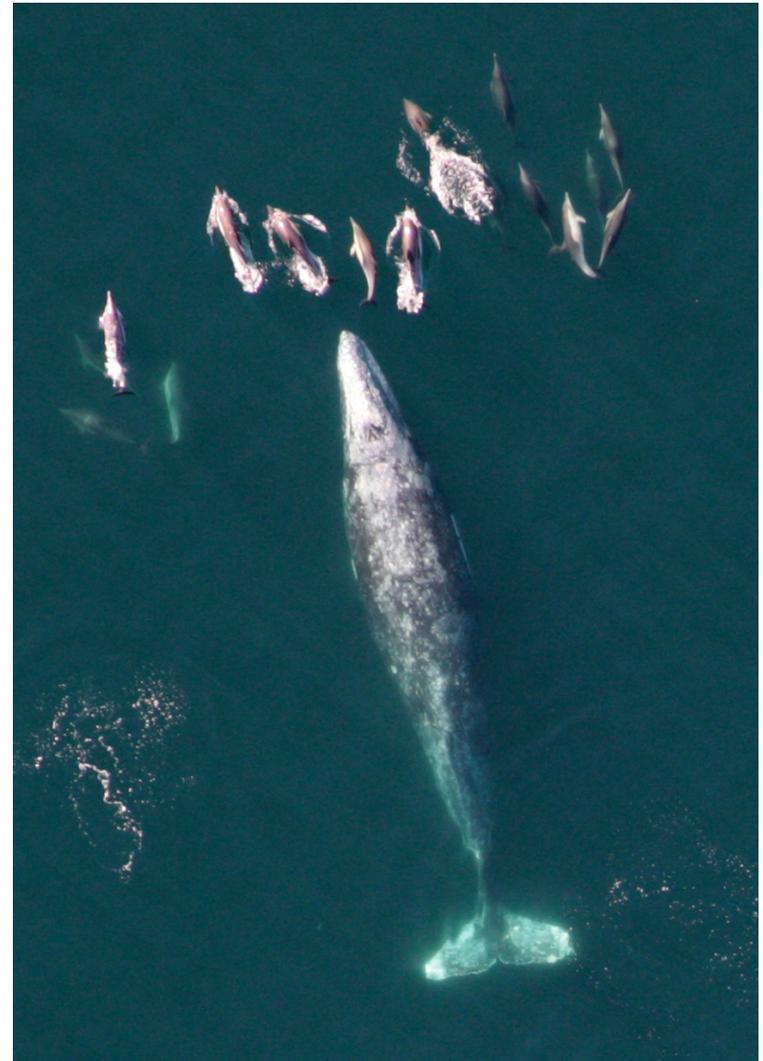
High level view of the scope of the marine mammal and turtle science enterprise at the Centers

Institutional Structure

NOAA is the National Oceanic and Atmospheric Administration, part of the Department of Commerce

National Marine Fisheries Service (NOAA Fisheries) is one of five NOAA Line Offices - whose mission is to promote sustainable fisheries, the recovery of protected species, and the habitats on which they depend

NOAA Fisheries operates six **Science Centers** nationally; associated with five Regional Offices and eight Fishery Management Councils



Key Legislative Mandates

Magnuson-Stevens Fishery Management Reauthorization Act (MSRA)

Marine Mammal Protection Act (MMPA)

Endangered Species Act (ESA)

International Agreements (IATTC, ISC, WCPFC, **IWC, AIDCP, IAC-Sea Turtles, CITES, CCAMLR, ...**)

... and numerous other legislative and regulatory requirements



Key Living Marine Resources

Coastal Pelagic Species - MSRA

Pacific sardine, anchovy, Pacific mackerel, market squid

Highly Migratory Species - MSRA, ISC, IATTC, WCPFC

Albacore tuna, bluefin tuna, billfish, sharks

Demersal Species - MSRA

Rockfishes and other groundfish species (*Sebastes sp.*)

Anadromous Species - ESA

Chinook salmon, coho salmon, steelhead, green sturgeon

Coastal Invertebrates – ESA, MSRA

shellfish, deepsea corals

Marine Mammals - MMPA, ESA, IWC, AIDCP

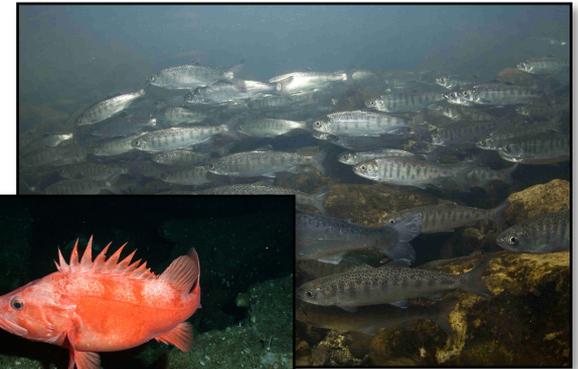
cetaceans, pinnipeds

Marine Turtles – ESA

Leatherback, green, loggerhead, olive ridley

Antarctic Ecosystem – CCAMLR

Krill, fish, fur seals, seabirds



History of Marine Mammal & Turtle Science



SW Center

- Marine Mammal Division created from Pelagic Division in 1970s
- Primary Driver 'The Tuna-Dolphin Issue' (one of three issues leading to creation of MMPA)
- Marine Turtle research added early 1990s; Division became "Protected Resources Division"
- Recent division name change ("Marine Mammal & Turtle Division") to more accurately reflect scope of research

NW Center

- When NW/AK Fisheries Science Center split marine mammal program to AKC
- Did not create a 'classic' marine mammal division at the NWFSC
- Center of Expertise on chemical contaminants and effects as part of Marine Mammal Health and Stranding Response Program
- Led status review of southern resident killer whales
- NW Center assumed responsibility for SRKW (joint agreement)



Science in Support of Management

SWC and NWC provide technical expertise and communicate research findings to inform policy and management positions regionally, nationally and internationally, e.g.:

West Coast Regional Office (WCRO) & Office of Protected Resources (NOAA Fisheries)

- Advise on best available science for MMPA take reduction planning (e.g., Makah waiver request),
- ESA status reviews and recovery plans

Recovery Partners (Federal, State, Tribe, NGO)

- Participation in recovery teams; technical support for recovery efforts

International Commissions (IWC, AIDCP, IUCN, CIRVA, IAC-ST and more)

- Fill critical needs for technical expertise on US delegations to IWC, IAC, CIRVA, AIDCP, WTO

Stakeholders and Partners: Leveraging Resources

Scripps Institution of Oceanography, UCSD; University of Washington, Oregon State University, San Diego State University, University of San Diego

Port of San Diego, Puget Sound Partnership, California Department of Fish and Wildlife

NOAA: WCRO, PIRO, AKRO, Office of Protected Resources, NOS, National Marine Sanctuaries

Department of Interior: USFWS, BOEM; Department of Defense: U.S. Navy

U.S. Marine Mammal Commission

Department of Fisheries & Oceans, Canada

Maritime shipping and transportation

Ocean development; renewable energy

Commercial fishing

Recreational ocean users; whale watching

International commissions & conventions

(e.g., IATTC, IWC, IUCN, IACST)

The Marine Mammal Center

Hubbs SeaWorld Research Institute

Conservation groups

Public



By the Numbers

Staff:

- NWC ca. 290 (Federal) and 80 (contractors) in 6 locations
- SWC ca. 180 (Federal) and 100 (contractors) in 4 locations

FY14 Funding (Total):

- NWC: \$51.2M NMFS (base + temp) + \$21M (external) = \$72.2M
- SWC: \$45.3M NMFS (base + temp) + \$6.8M (external) = \$52.1M

NMFS FY14 Funding (millions)

Funding Category

	NWC	SWC
Fish	21.1	16.2
Mammals and Turtles	1.3	7.9
Pacific Salmon	10.3	6.7
West Coast Observers	5.6	0.0
Other Activities Supporting Fisheries	4.4	7.3
Temporary funds	8.5	7.2
Center Allocation from NMFS:	51.2	45.3

Strategic Planning

2013: Revised Strategic Science Plans

2013 – 2015: Annual guidance memos

Planning documents support priorities laid out in the NMFS and NOAA Strategic Plans

Setting Priorities

- Strategic Plan provides foundation
- Mandates drive our priorities
- Implementation Process:
 - Online Project Database
 - Project descriptions
 - Project rankings
 - Criteria
 - Importance to mission and relationship to strategic plan, AGM
 - Relative risk (scientifically, economically, politically)



Note: This is an evolving process.

NWC Director's Guidance for FY15/16

- CA current ecosystem monitoring
- West coast salmon recovery (BiOp technical support)
- Habitat assessment (Puget Sound-scale, WCR partnership)
- Habitat Science
- Marine Forensics Seafood Safety
- Provide biological, social, economic science to support recovery of listed species
- SRKW strategic planning and implementation 'self contained'



SWC Director's Guidance for FY15/16 includes:

- CLAWS “Collaborative Large Whale Survey”, loggerhead turtles process study, diet sampling of California sea lions
- Complete the 5th winter U.S. AMLR survey in FY16
- Continue the development of the CCIEA
- Increase attention on Central California Coast coho salmon, and Sacramento River winter-run Chinook salmon
- SaKe survey, estimate CCE forage base, PBF assessment



Terms of Reference



Scope of Review

- Evaluate current scientific programs that provide information on the conservation and management of marine mammals, endangered or threatened wildlife, and species of concern under NMFS jurisdiction
- Extent to which current science programs are focused on the highest information needs identified by NOAA Fisheries managers
- Provide advice on the direction and quality of the data collection and assessment programs.



Scope of the Review, continued

2015 Marine Mammal and Turtle Science Review

- SWC's Marine Mammal & Turtle Division
- NWC's Southern Resident Killer Whale Program (SRKW)

2016 Ecosystem Science Review

- CA Current pinniped science (AFSC, SWFSC)
- Select CA Current cetacean science (SWFSC's ERD)
- Antarctic marine mammal research (SWFSC)



Reviewers' Tasks

Reviewers should review and comment on (from Terms of Reference):

1. Do current and planned protected species scientific activities **fulfill mandates and requirements under the ESA and MMPA**, and **meet the needs of the regulatory partners**?
2. Are there **opportunities** to be pursued in conducting marine mammal and turtle science, including shared and collaborative approaches with partners?
3. Are the marine mammal and turtle species **scientific objectives adequate, and is the best suite of techniques and approaches to meet those objectives**?
4. Are the marine mammal and turtle species **studies being conducted properly** (survey design, statistical rigor, standardization, integrity, peer review, transparency, confidentiality, etc.)?
5. **How are advances in marine mammal and turtle species science and methodological approaches being communicated and applied in NMFS?**

Report and Report Out

- Individual reports from each member of the panel
- Chair provides a summary report
- Draft reports by end of the week, ~one week to polish
- Friday mid-morning report-out by panel
- Center provides response and submits to HQ (one month/six weeks)
- Final reports and Center responses posted publicly in ~3 months
- National synthesis and actions end of calendar year



We look forward to your advice on improving the quality, relevance and performance of marine mammal and turtle science.

Thank you!

Questions?