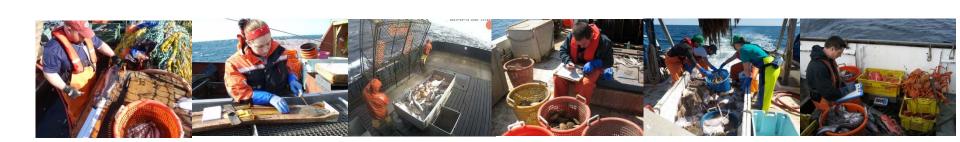


# **Observer and Electronic Technology Data Used in Fisheries Management**

**Liz Chilton & Brett Alger** 

Silver Spring, MD
November 14, 2018



## **Overview & Learning Objective**

- National and Regional Observer Programs
- Observer Data Collection feeds Fisheries Management
- National and Regional Electronic Technology Strategies

#### **Fisheries Observers and Management**

#### **Fisheries Observers and At-Sea Monitors**

- Field biologists deployed on commercial fishing vessels
- Collect fishing effort and biological data from target fishery and discarded fish (fishery dependent data)
- Monitor vessel activity for compliance with fishing regulations
- Fishery dependent data used in stock assessments
- Supports inseason management of fisheries









### **National Observer Program (Inception 1999)**

#### Responsibilities

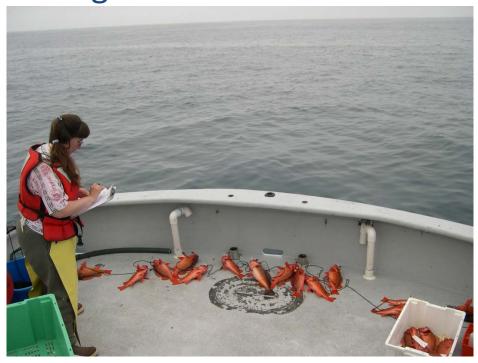
- Advocate observer issues at the national level
- Develop policies and procedures supporting NOAA
   Fisheries observers and regional observer programs
- Enhance data quality and achieve consistency in key areas of national importance





### Responsibilities of Regional Observer Programs

- Sampling protocols and coverage levels
- Safety training
- Observer deployment
- Observer debriefing
- Data management
- Data analysis



Deployed 891 observers / 73,743 sea days / 53 fisheries (2016)



#### **Responsibilities of Deployed Observers**

#### **Collect Fishery Dependent Data**

- Fishing Effort, Gear Type and Location
- Biological samples (length, sex, maturity and age structures)

#### Monitor fishing and support vessel safety compliance

- Magnuson-Stevens Act (MSA)
- Marine Mammal Protection Act (MMPA)
- Endangered Species Act (ESA)
- US Coast Guard commercial fishing vessel regulations



#### **Commercial Fishing Effort Data**

For every observed haul/set collect:

- Date and time of fishing activity
- Latitude and longitude of gear
- Depth of catch
- Gear type and mesh measurements
- Vessel characteristics
  - ➤ Type, permit number, length
- Vessel catch estimates





## **Biological Samples and Compliance Monitoring**

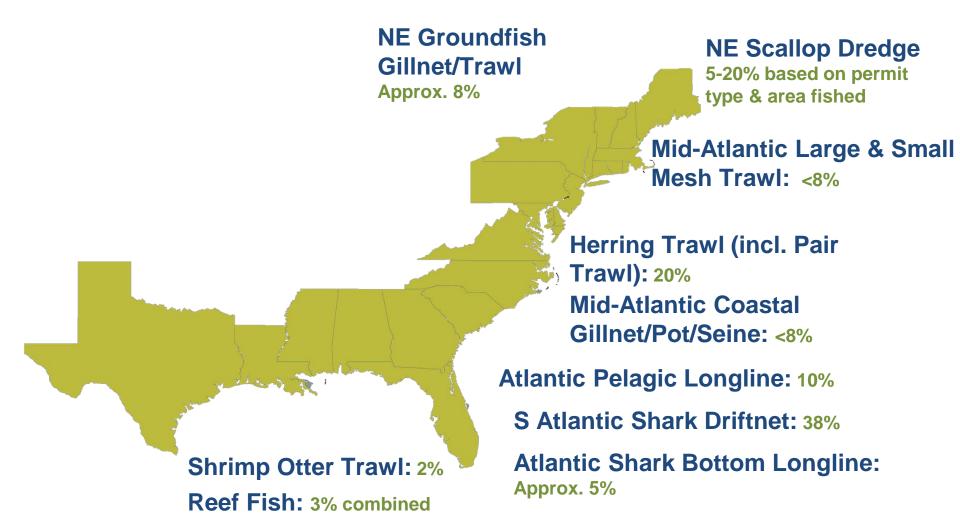
- Species composition from fish for individual hauls
- Total catch estimates
- Discarded catch data
  - Non-target species
  - Prohibited fish or invertebrates
  - Incidentally caught marine mammals or endangered seabirds





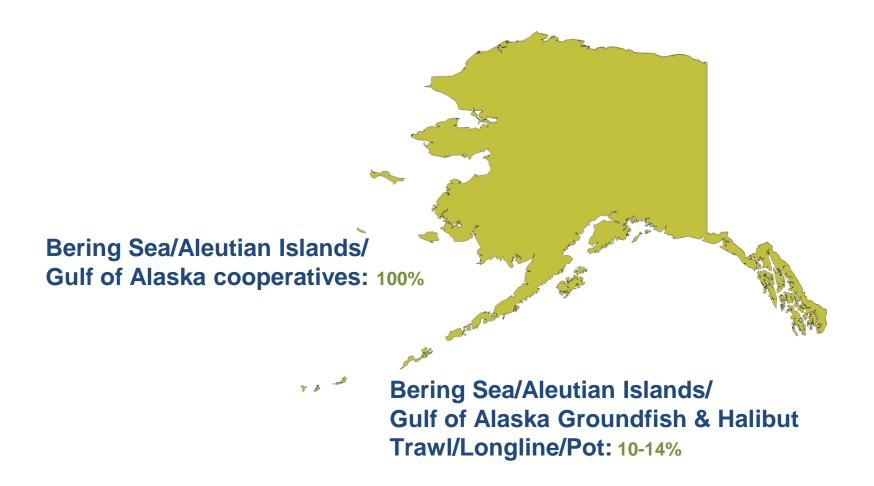


## Atlantic Ocean and Gulf of Mexico 2016 coverage





### North Pacific (Alaska) 2016 coverage





#### Pacific Ocean and Western Pacific 2016 coverage

West Coast Trawl Catch Shares
100%

**West Coast Groundfish Non-Catch Share Fisheries** 

Approx. 1-25%, based on permit type



Pelagic Longline: In HI, 20% for

tuna, 100% for swordfish In American Samoa, 20% CA Pelagic Longline (1 vessel): approx. 75%

CA Large-Mesh Drift Gillnet:19%

Southern CA Set Gillnet: 3%



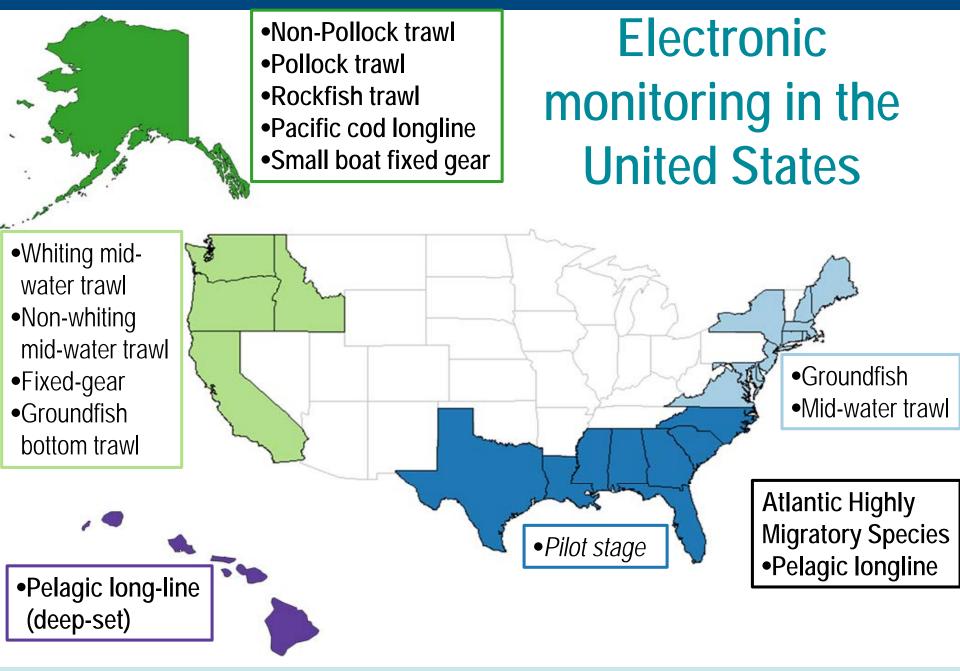


# Electronic Technologies (ET) in U.S. Fisheries

**Liz Chilton & Rachel Baker** 

Silver Spring, MD
November 14, 2018







## **Applications of Electronic Technologies**

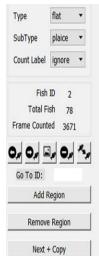
- Scientific data collection
- Management
- Compliance
- Sustainability and traceability



## **Electronic Technology Hurdles**

- Species ID
- Costs & logistics
- Writing Regulations
- Analytical Challenges
- Creating New Policies





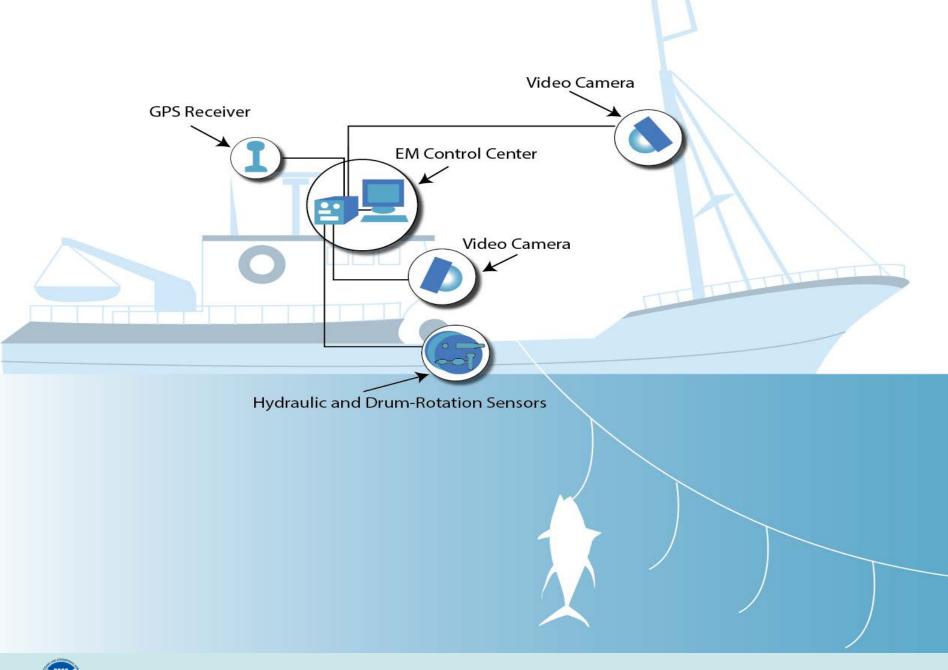




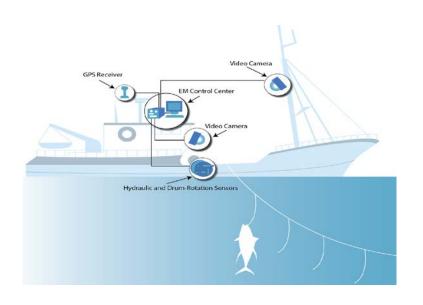


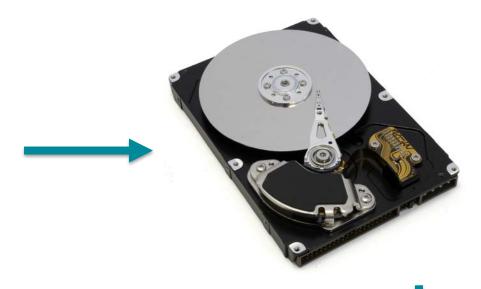












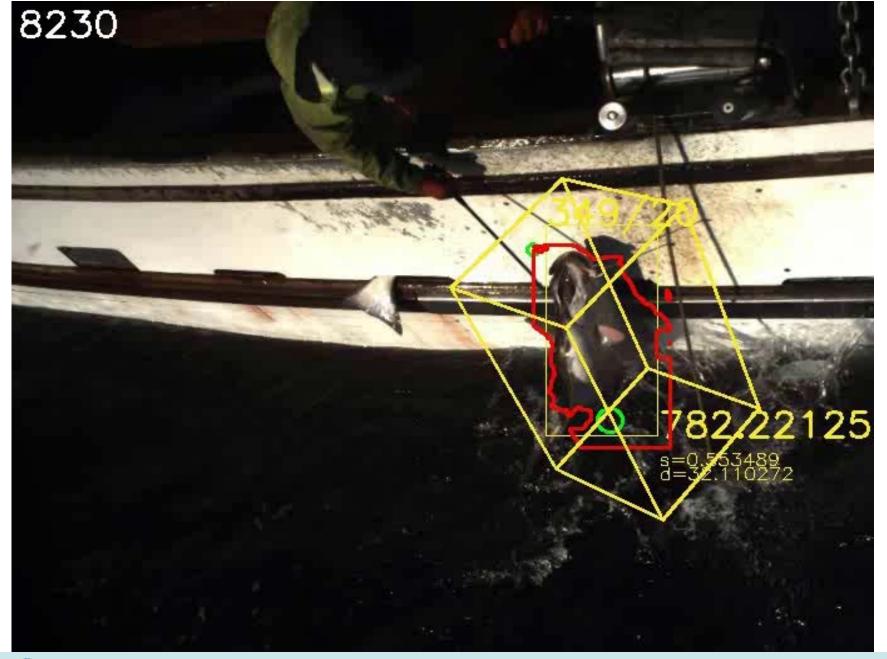














# NOAA Fisheries ET Policy Directive (2018)

- Guidance for fishery-dependent data collection
  - Vessel monitoring systems (VMS), electronic monitoring (EM), and electronic reporting (ER)
- Objectives
  - Encourage adoption of ET
  - Complement/improve existing programs
  - Cost-effective and sustainable implementation
  - Align management goals, data needs, funding sources, and regulations through Regional Implementation Plans



### Procedural Directive on EM Cost Allocation

- Framework for allocating EM program costs between NOAA Fisheries and the fishing industry
- Decreasing budgets and increasing data demands
- Program funding should consider:
  - a range of funding authorities
  - existing cost recovery provisions
- NOAA Fisheries and Councils will develop transition plans for existing programs



## **Cost Allocation Transition and Final Directive**

- Establish cost allocation provisions within 2 years
- Total implementation within 5 years
- Timeline to complete final directive
  - February 2018 Presented to CCC
  - Spring/Summer 2018 Council review
    - 7 comments received
  - February 2019 Finalize directive
  - Transitions included in 2019 Regional ET Plans



# Other EM Policy Issues

- Video Review Increase computer/reduce human review
- Video Storage and Retention Identify retention requirements for NOAA Fisheries and EM providers
- Data access, ownership, and confidentiality In collaboration with Councils, the fishing industry and other partners
- Standards, minimum requirements, & best practices



## **ET Resources**

National EM and ER Website

https://www.fisheries.noaa.gov/national/fisheries-observers/electronic-monitoring

•FIS Program Website

https://www.st.nmfs.noaa.gov/data/fis/products/project-list

EM Information.com

http://eminformation.com/



# Thank you

