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FISHERIES

Funding Northeast Fisheries Science Center Fishery Monitoring Programs

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Topics in Today's Presentation

- Program funding sources
- Historical funding levels
- Program costs

Three Major Observer Programs at NEFSC

1. Northeast Fisheries Observer Program (NEFOP)

Marine Mammal Bycatch

Standardized Bycatch Reporting Methodology

Management: e.g. Atlantic Herring; Loligo

2. At-Sea Monitoring (ASM)

Northeast Multispecies FMP

3. Industry-Funded Scallop Observers (IFS)

Atlantic Sea Scallops FMP

Seven Funding Sources for Northeast Fisheries Science Center Fishery Monitoring Programs

1. Marine Mammal Protection Observers
2. Atlantic Coast Observers
3. Northeast Observers
4. Reducing Bycatch
5. National Catch Shares
6. National Observer Program
7. Atlantic States Marine Fisheries Commission

Summary: Current Use of Funding

Budget Line	Current Use of Funding
MMPA Observers	Marine mammal bycatch
Atlantic Coast Observers	SBRM; Loligo
Northeast Observers	SBRM, Atlantic herring
Reducing Bycatch	Atlantic herring
National Catch Shares	At-sea monitoring
National Observer Program	At-sea monitoring, Industry-funded scallop, Special projects, Restore Atlantic Coast Funding
Atlantic States Marine Fisheries Comm.	Inshore fisheries

Historical Funding, FY11-14 (000s dollars)

Budget Line	FY 2011	FY 2012	FY 2013	FY 2014
MMPA Observers	859	703	605	679
Atlantic Coast Observers	1,230	1,055	963	1,182
Northeast Observers	6,669	4,042	5,367	6,600
Reducing Bycatch	186	45	47	75
National Catch Shares	3,702	2,917	678	772
National Observer Program	3,234	2,551	3,482	4,658
Atlantic States Marine Fisheries Com.	245	425	161	TBD
Total	16,125	11,738	11,303	13,966

This FY: Agency-funding of ASM a priority

- Fund SBRM as fully as possible (and 500 days of Atlantic herring coverage), using Atlantic Coast and Northeast Observer lines.
- For New England groundfish, determine additional ASM coverage required beyond SBRM to meet minimum target coverage rate specified by NMFS.
- Augment SBRM coverage with ASM coverage, using National Observer Program and National Catch Share lines.
- Once target is met, prioritize use of any surplus.

Costs of NEFSC Monitoring Programs: Two Components

1. Infrastructure: within NEFSC
 - Operations
 - Training
 - Data processing, quality assurance
2. At-sea costs: paid to observer service providers under current contract agreements

Infrastructure Costs : Operations (FY2013)

Operational Cost	Amount (000s dollars)	Cost Type
Permanent labor	891.3	Fixed
Contract labor	741.7	Fixed
Aggregate fixed costs (leases, etc.)	477.1	Fixed
Total	2,110.1	Fixed
Aggregate mixed fixed and variable cost (supplies)	78.2	Mixed
Aggregate variable costs (shipping, etc.)	56.4	Variable
Total, all operational costs	2,244.7	

Infrastructure Costs : Training (FY2013)

Training Cost	Amount (000s dollars)	Cost Type
Permanent labor	374.0	Fixed
Contract labor	266.0	Fixed
Total fixed costs	640.0	Fixed
Aggregate variable costs	118.0	Variable
Aggregate intermittent costs	47.7	Non-annual
Total , all training costs	805.7	

Infrastructure Costs : Data (FY2013)

Data Processing Costs	Amount (000s dollars)	Cost Type
Permanent labor	321.6	Fixed
Contract labor	1,666.3	Fixed
Total fixed costs	1,987.9	Fixed
Aggregate intermittent costs	69.2	Non-annual
Total, all data processing costs	2,057.1	
Grand total, all infrastructure costs (2013)	5,107.5	

Infrastructure Costs Per Sea Day

- The biggest costs are fixed, for the current scale of operations.
- When the number of observed days goes down (decreased effort, decreased funding), the fixed infrastructure costs are spread over fewer sea days – the infrastructure cost per sea day goes up as a consequence.
- When the number of observed days goes up, the infrastructure cost per sea day goes down.

At-Sea Costs (Paid to Service Providers under Current Contract Agreements)

- Observer at-sea time (contractor overhead and observer salary)
- Observer travel
- Salary and travel for trainees (new, refresher)
- Observer land days (vessel no show, debriefings)
- Meals (for more than day trips)

Variation in At-Sea Cost Due to:

- Observer experience (pay scale)
- Distribution and number of observers (travel)
- Turnover in observer cadre (salary and travel of trainees)
- No-shows (observer land days)
- Trip length (meal allowances paid to vessel)
- Individual contractor business model

Historical Sea Day Spending and Sea Day Accomplishments, FY11-13 (000s dollars)

Program	FY 2011	FY 2012	FY 2013
Northeast Fisheries Observer Program			
Sea day spending (000s dollars)	4,881	2,212	2,667
Sea days accomplished/supported	6,538	3,993	4,921
Cost/day	\$746	\$554	\$542
At-Sea Monitoring			
Sea day spending (000s dollars)	3,800	3,243	1,619
Sea days accomplished/supported	7,052	4,945	3,081
Cost/day	\$539	\$656	\$525

Total Sea Day Accomplishments, FY11-13

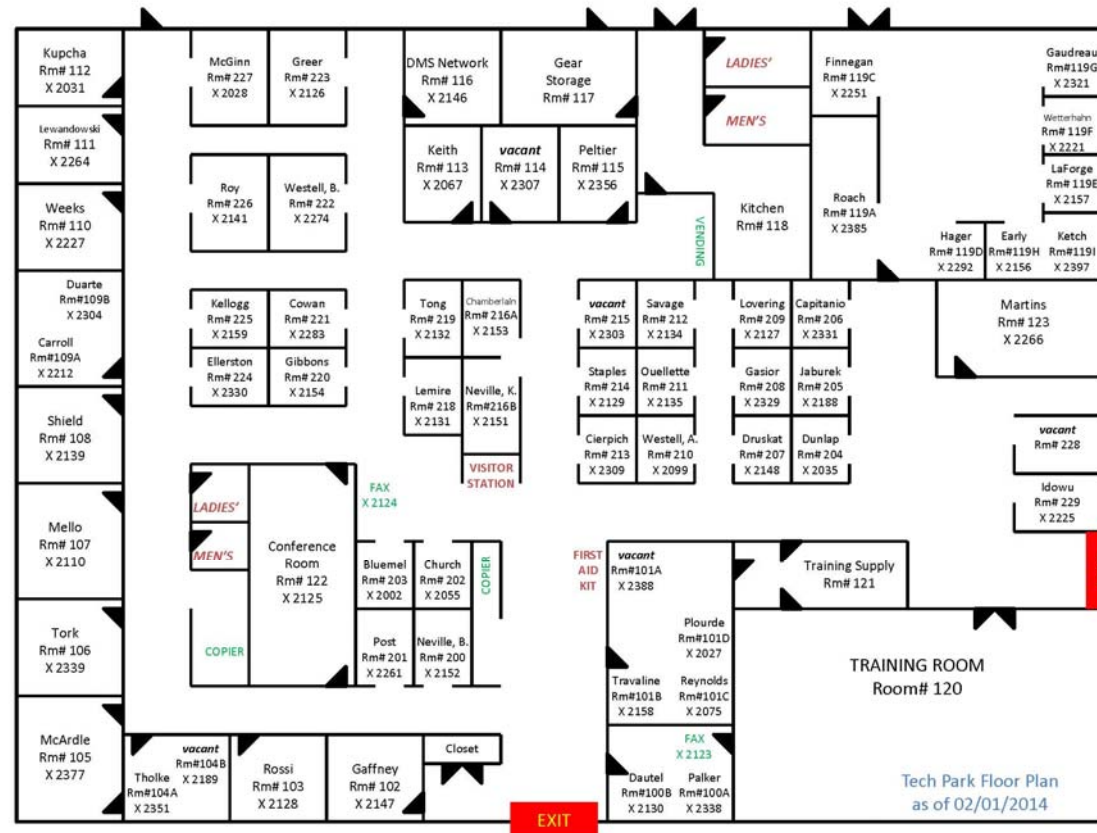
Program	FY 2011	FY 2012	FY 2013
Northeast Fisheries Observer Program			
Sea days accomplished/supported	6,538	3,993	4,921
At-Sea Monitoring			
Sea days accomplished/supported	7,052	4,945	3,081
Industry-Funded Scallops			
Sea days supported	2,987	3,233	2,664
Total sea days supported	16,577	12,171	10,666

Future

- Under current conditions, there is a finite capacity of the program to expand (space, communications, administration) even if funding were unlimited.
- Program infrastructure supports 15,000 sea days annually. Expansion beyond 17,000 days per year would be difficult.

Future

- Facility houses about 15 FTE and 50 contract employees.



Future

- Technological improvements to increase efficiency, data quality :
 - Underway: Observer data entry in the field (Toughpad: automatic error checking; automatic photo linking)
 - Underway: New flexible OBERS database system allows custom data collection programs.
 - In development: Integrated commercial fishery monitoring system including ER and EM as appropriate.

Future

- External interactions to improve efficiency:
 - Increase collaboration to make deployments more efficient
- Potential for industry funding, cost-sharing
 - Infrastructure capacity limited, however
- Allocation of funding may be limited in the future under the proposed SBRM amendment.

Summary

- Funding variable but not likely to increase
- Most infrastructure costs are fixed and that cost component fluctuates depending on the number of days those costs are amortized over.
- At-sea costs can vary significantly from trip to trip.
- Infrastructure currently is close to capacity, and expansion will entail a break in service.
- Technological innovation should improve data quality and quantity.
- SBRM amendment may have significant impacts on regional monitoring programs and plans.