



SNE Lobster Working Group Recommendations



American Lobster Management
Board

Overview



- Purpose: discuss future management of the SNE stock, particularly in light of climate change
- Working group met via conference call on September 15th
- Members included Commissioners, TC members, federal representatives, and industry members

Recommendations



1. Do Not Reconsider Draft Addendum XXV

- Disparate views on Board regarding Addendum
- Extensive voting on the issues in August
- 2/3rds majority vote needed from prevailing side

2. Review Goals and Objectives

- Concern SNE stock may not be able to be rebuilt to historic levels
- Goals and objectives may no longer be applicable
- Task subgroup to review goals and objectives and report back to Board

Recommendations



3. Engage with Climate Change Working Group

- Climate Change Work Group developing recommendations on ways to manage stocks impacted by warming waters
- Engage and potentially consider SNE lobster as a case study

4. TORs for 2020 Stock Assessment

- New stock assessment provides opportunity for Board to consider new reference points as well as environmental drivers in the assessment
- Develop TORs which address reference points and environmental drivers

Recommendations



5. Reduce Latent Effort in LCMAs 4, 5, and 6

- Under Addendum XVIII, LCMAs 2 and 3 are going through a series of trap reductions to scale size of fishery to size of resource
- Similar action not taken in LCMAs 4, 5, 6 resulting in large amount of latent effort
- Reactivation of this latent effort could negatively impact stock
- Task LCMTs in 4, 5, and 6 with developing strategies to reduce latent effort; proposals presented to Board at future meeting
- Allows PDT an opportunity to work on Addenda XXVI and XXVII before another addendum is initiated

Board Priorities



- Working Group's discussion focused on Board priorities
- Board has initiated two other addenda to address harvester reporting (XXVI) and GOM resiliency (XXVII)
- Important for Board to prioritize tasks so PDT and TC can allocate time appropriately
- Working group felt both ongoing addenda are extremely important to Board, noting SNE comprises a small portion of coastwide landings



TC Report on Addendum XXVI Tasks: Reporting and Biosamples

Kathleen M. Reardon
ASMFC Technical Committee
10/16/2017

TC Tasks



I. Harvester Reporting

- a) Evaluate precision of current 10% minimum reporting
- b) Evaluate benefits of higher percentage of reporting
- c) Make recommendations to improve harvester reporting

II. Fishery-Dependent Bio-sample Collection

- a) Identify gaps in current monitoring programs
- b) Make recommendations to improve bio-sampling in fishery

Current reporting



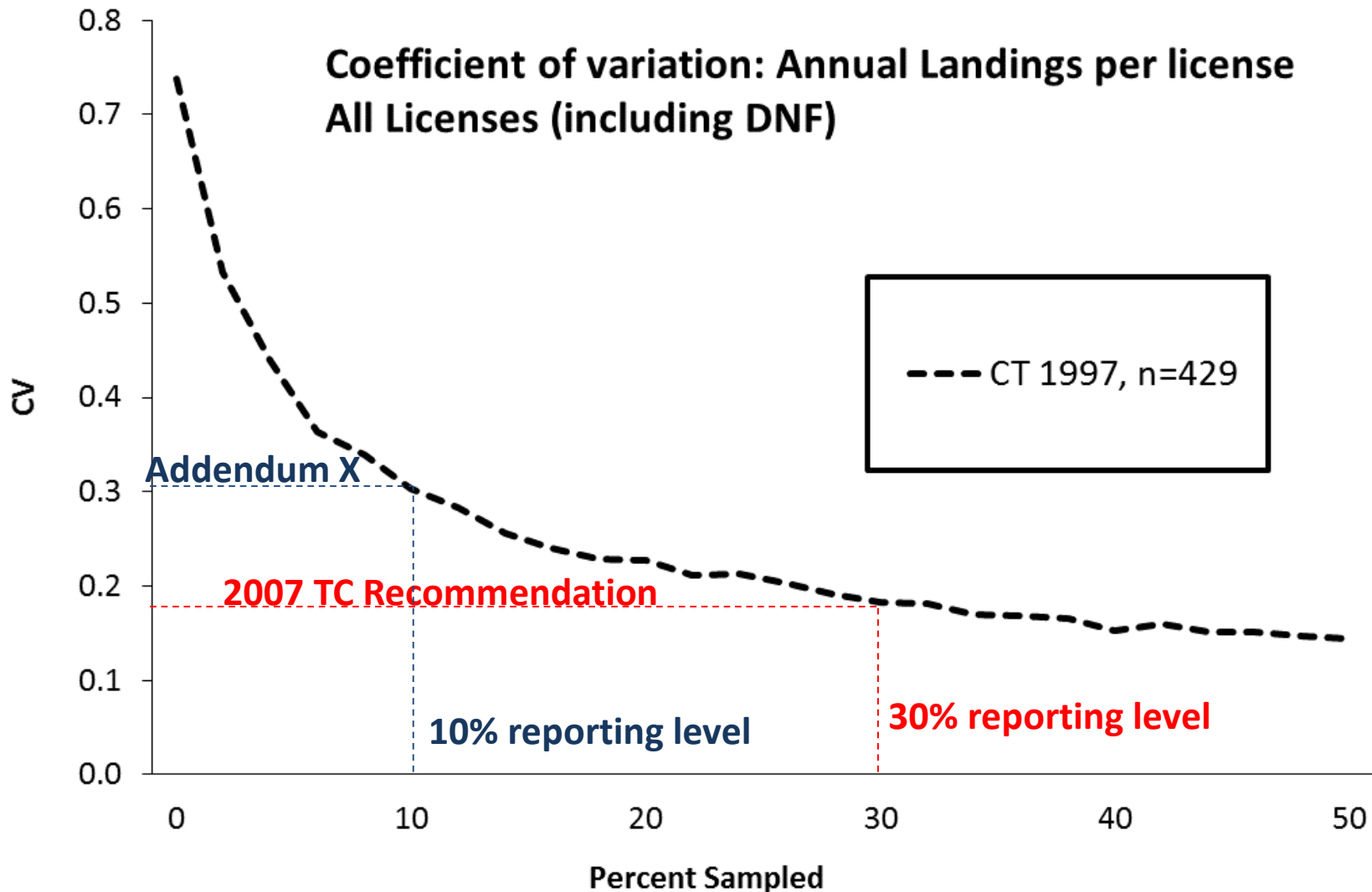
- Addendum X (2007) determined reporting requirements
- All States have 100% trip level dealer reporting
- All states except Maine require 100% harvester reporting
- Maine currently requires 10% harvester reporting
 - 10% of the licenses in each Maine Lobster Zone and License Class are required to report
 - License classes: based on crew # and age
 - Logbooks are in paper form

Maine Lobster Fishery

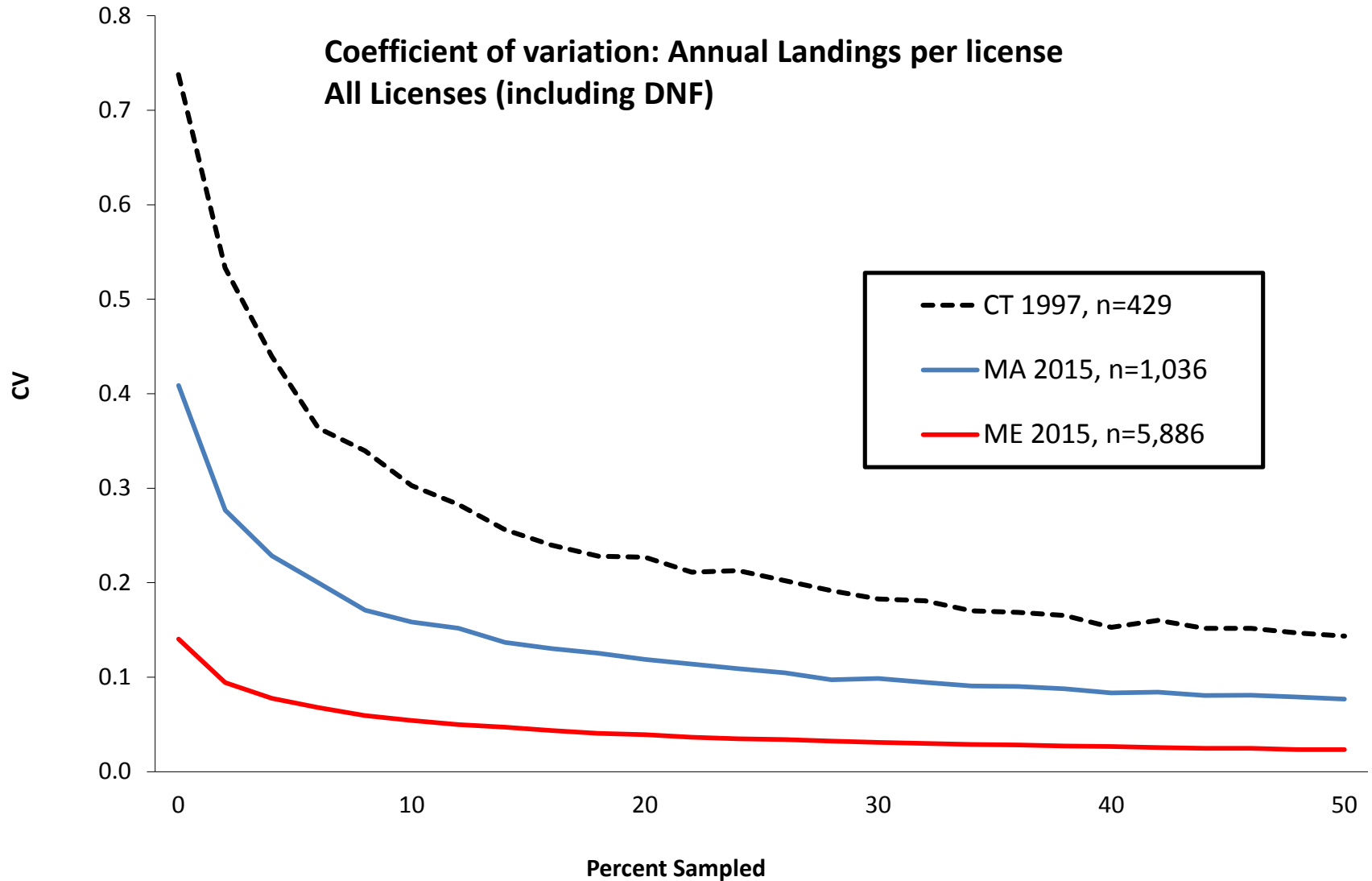


- 80% of total US Landings
- ~ 6,000 commercial licenses
- >265,000 trips annually
 - Maine completes >80% of US lobster trips
- 650-700 licenses selected annually to report
- Maine Landings Program enters ~30,000 records
- High latency in some license classes

Multi-State % Sampled Comparison



Multi-State % Sampled Comparison



Logbook Effort Metrics



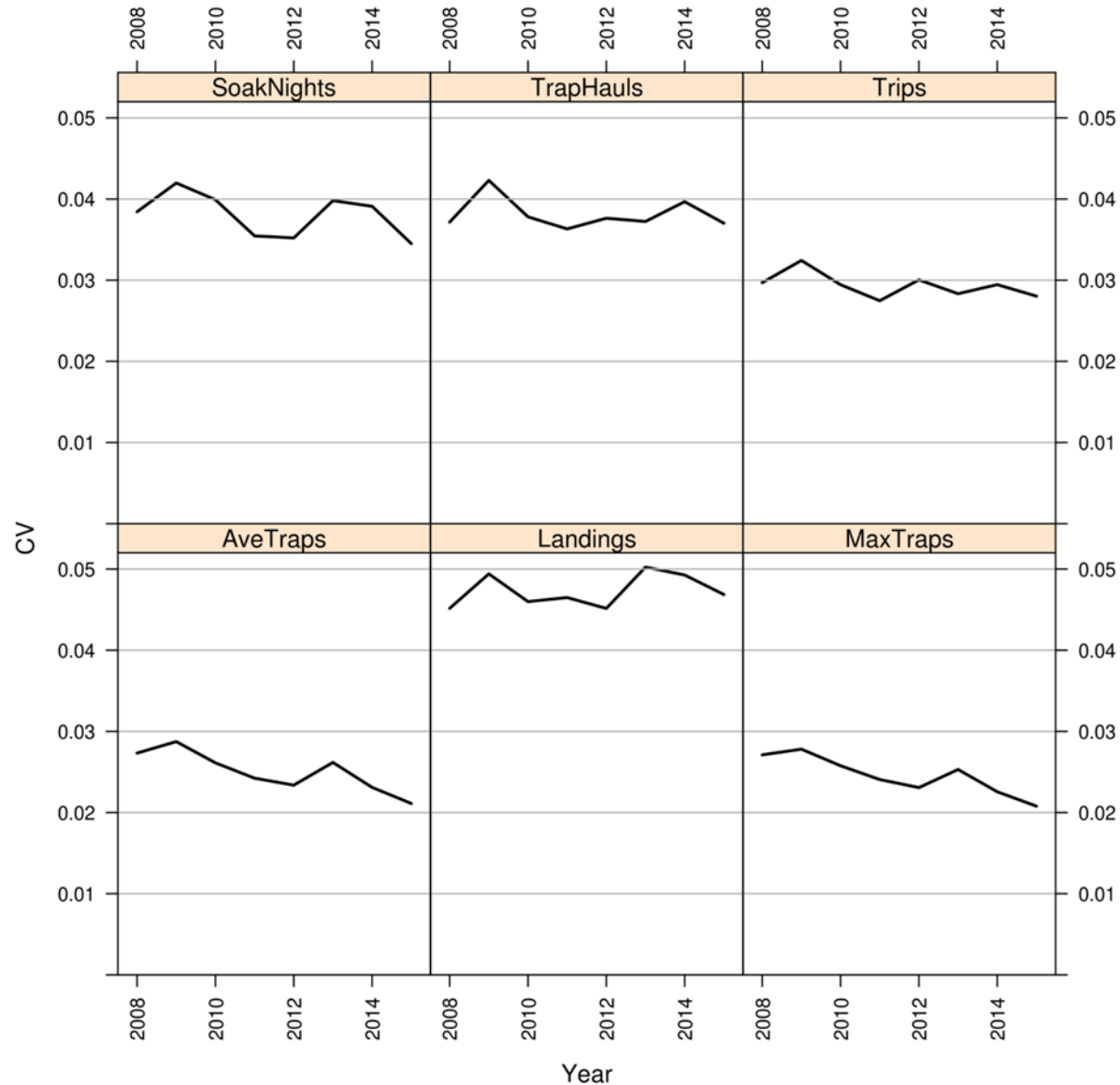
- 1) Total annual trips
- 2) Annual trap hauls
- 3) Total soak nights
- 4) Max annual traps
- 5) Total annual landings
- 6) Average traps per day



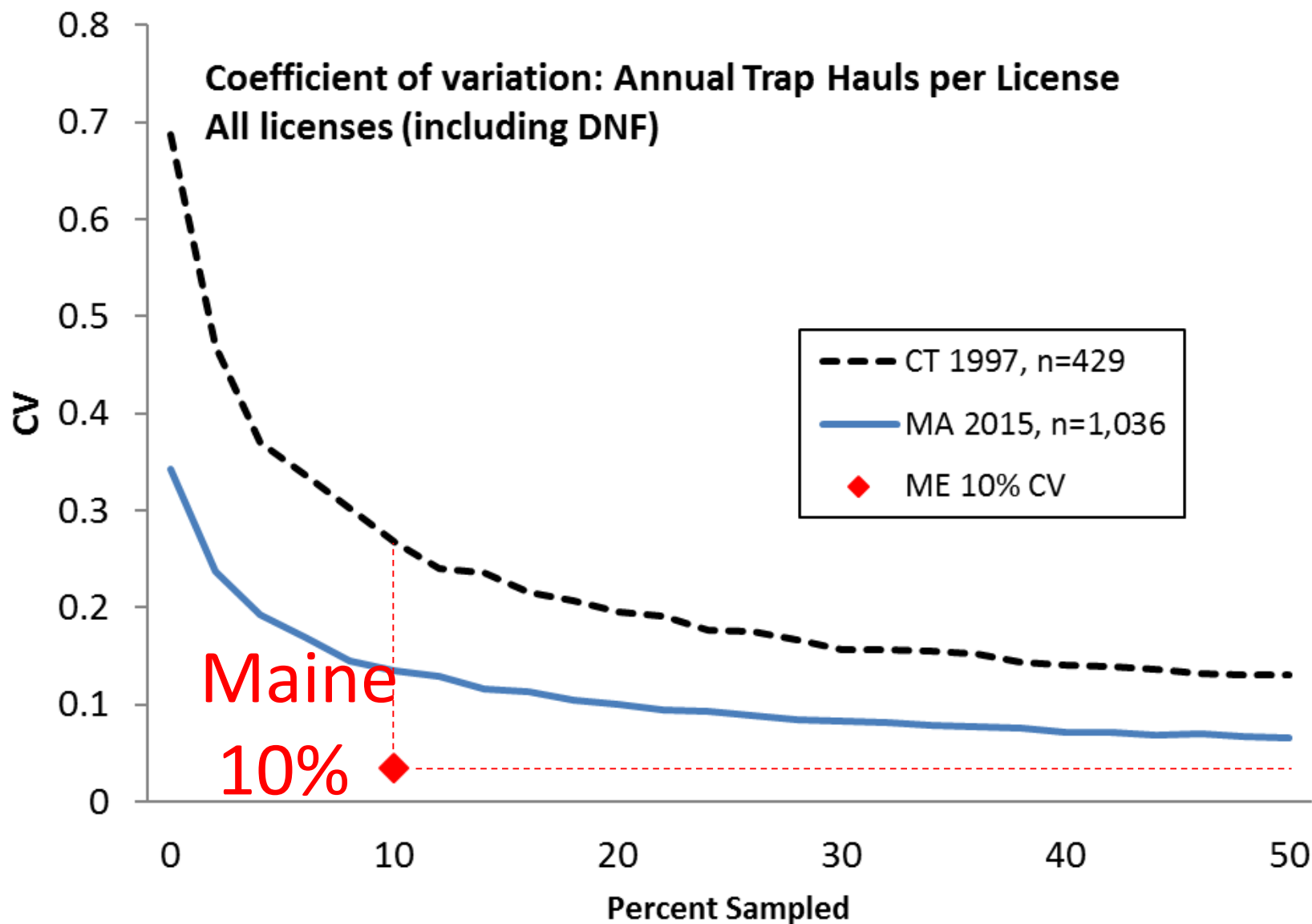
CV's for Effort Metrics



- Low CV's at < 0.05
- Stable over time
- Evidence of statistical precision



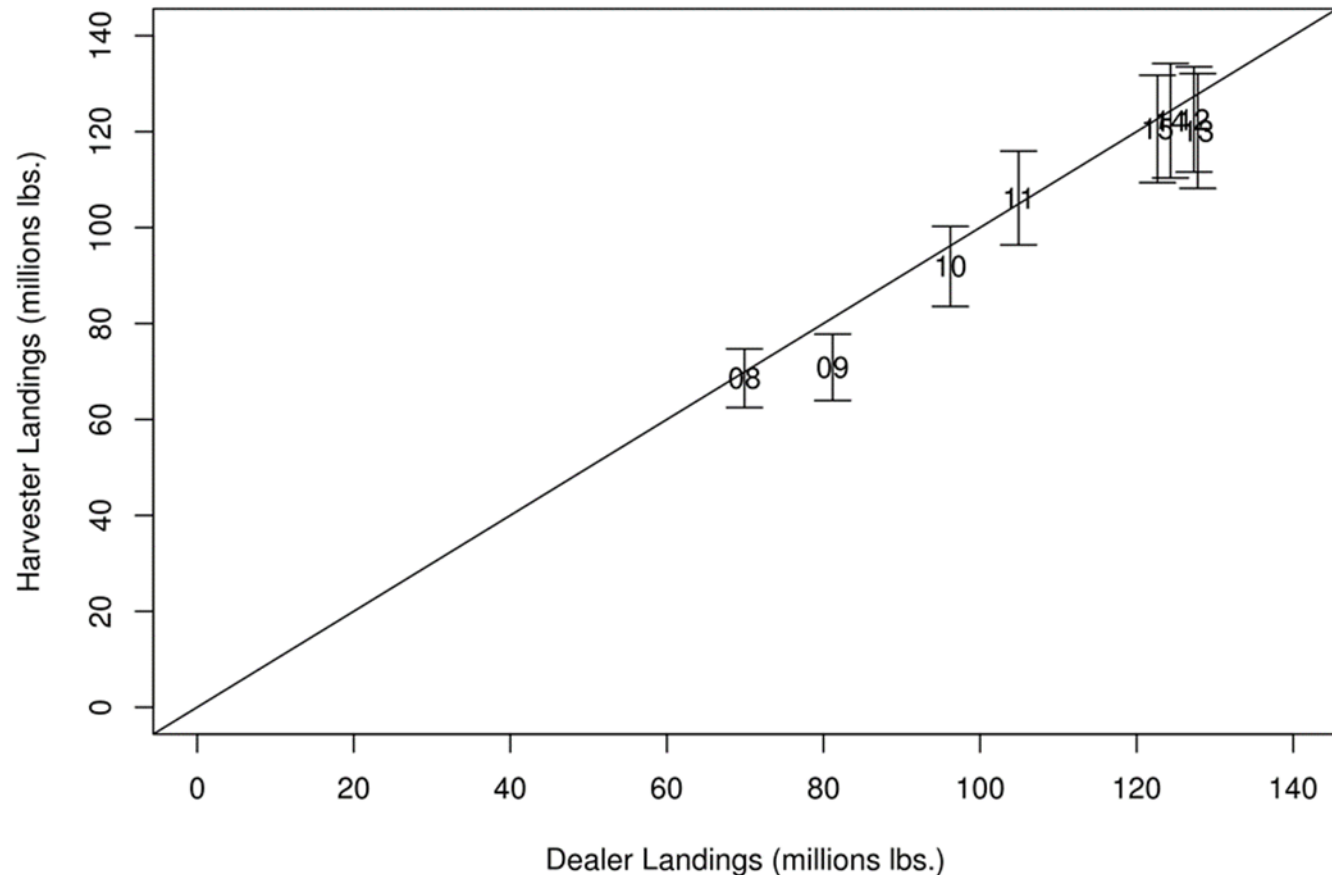
Comparing ME's Trap Haul CV



Harvester vs Dealer



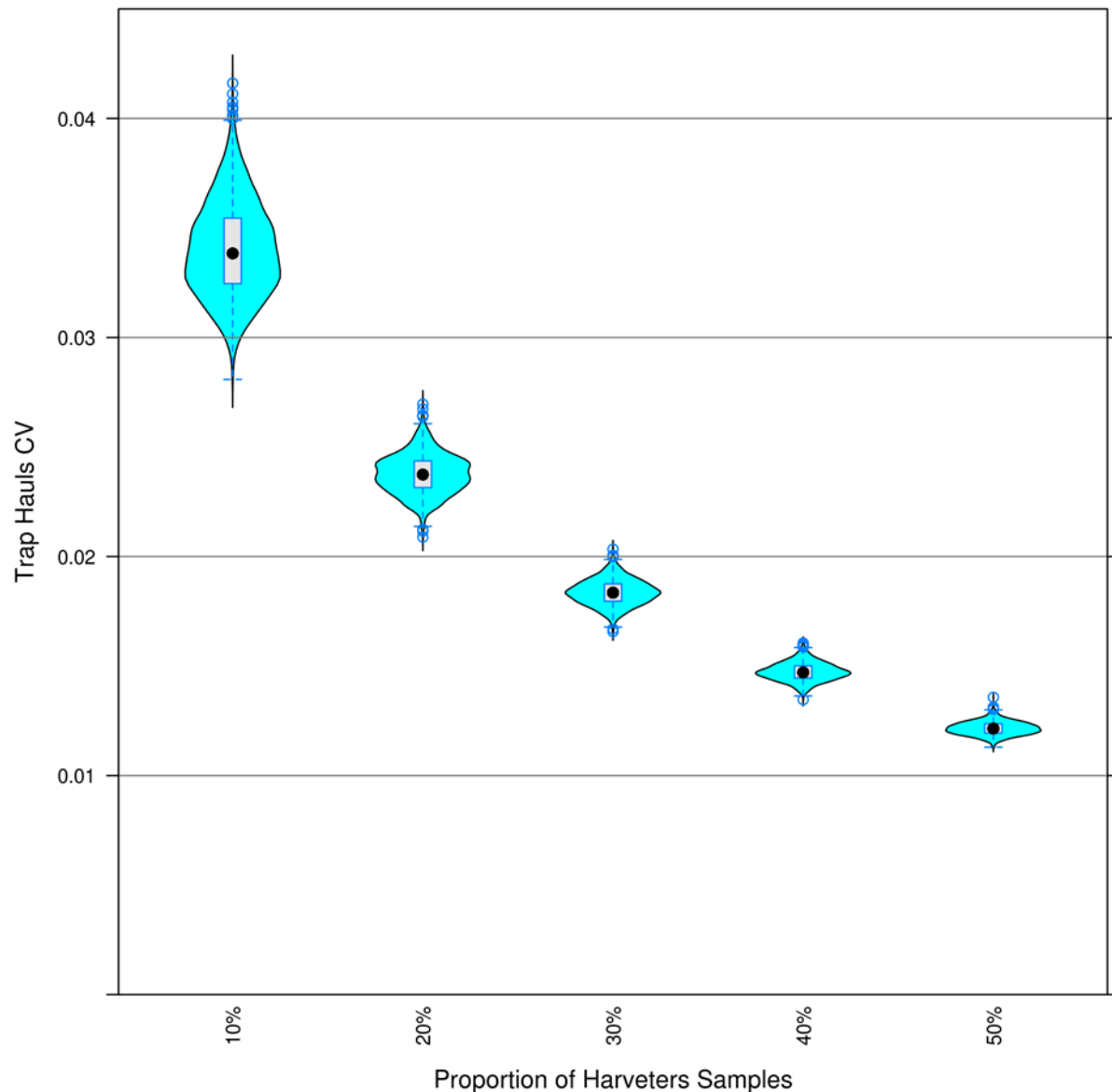
- Harvester data scales up to Dealer data
- Evidence of statistical accuracy



Benefits of increasing reporting



- 0.035 CV at 10%
- ↑ sampling provides lower CV's
- Marginal statistical benefit to ↑ sampling



Can we improve sampling efficiency?



- Evaluating the stratification factors
 - Significant factors
 - ❖ License class
 - ❖ Status (active or latent when selected)
 - Spatially important
 - ❖ Zone
 - Year was not significant

Importance of status

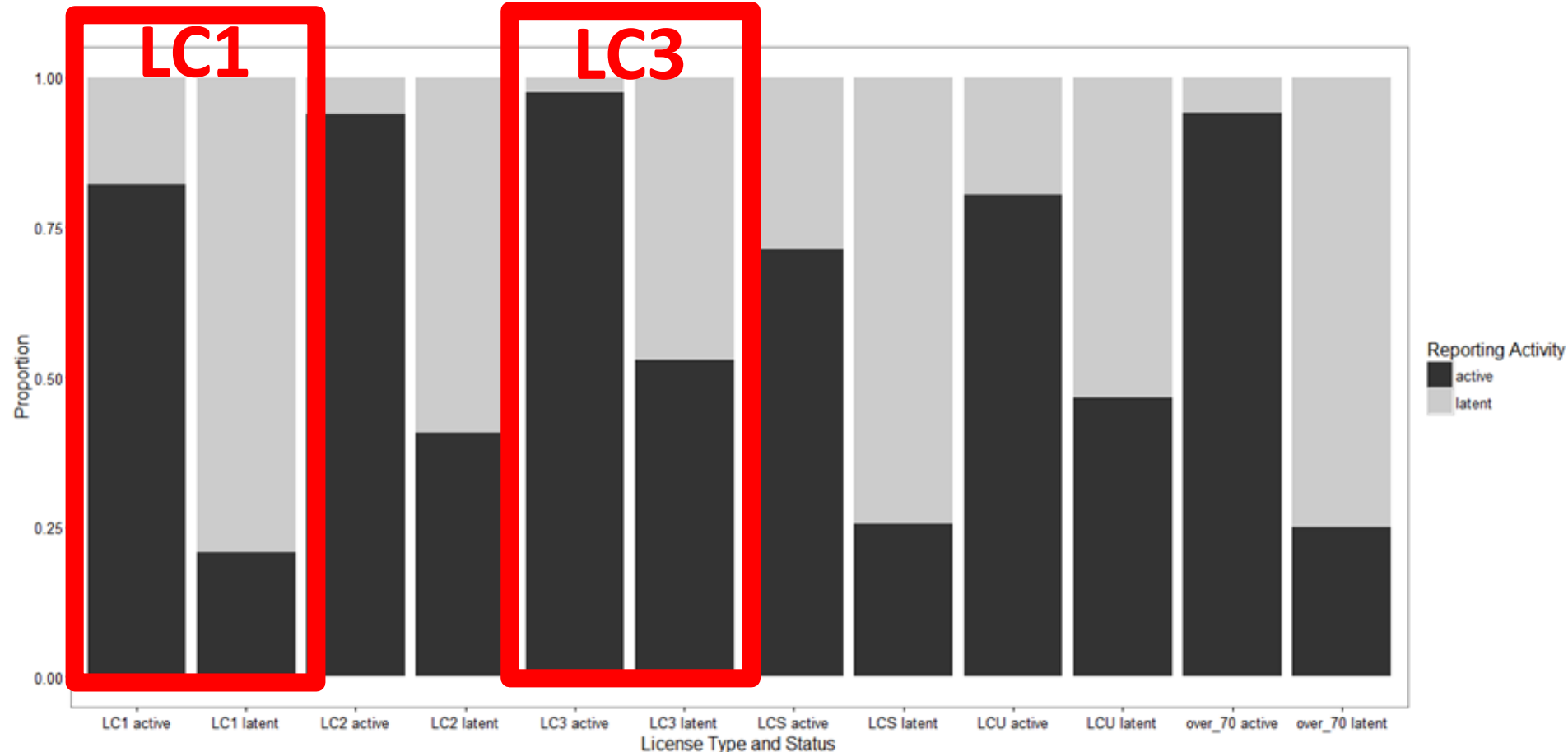


- Active vs latent licenses
 - Similar proportion of latent licenses annually
 - BUT active or latent status in the selection year does not always predict activity in the reporting year
 - E.g. if a license is latent in 2013 (selection year), it could be activated in 2015 (reporting year)

Importance of status



Proportion of each LC and status in reporting year



License Class and Status in selection year

Can we improve sampling efficiency?

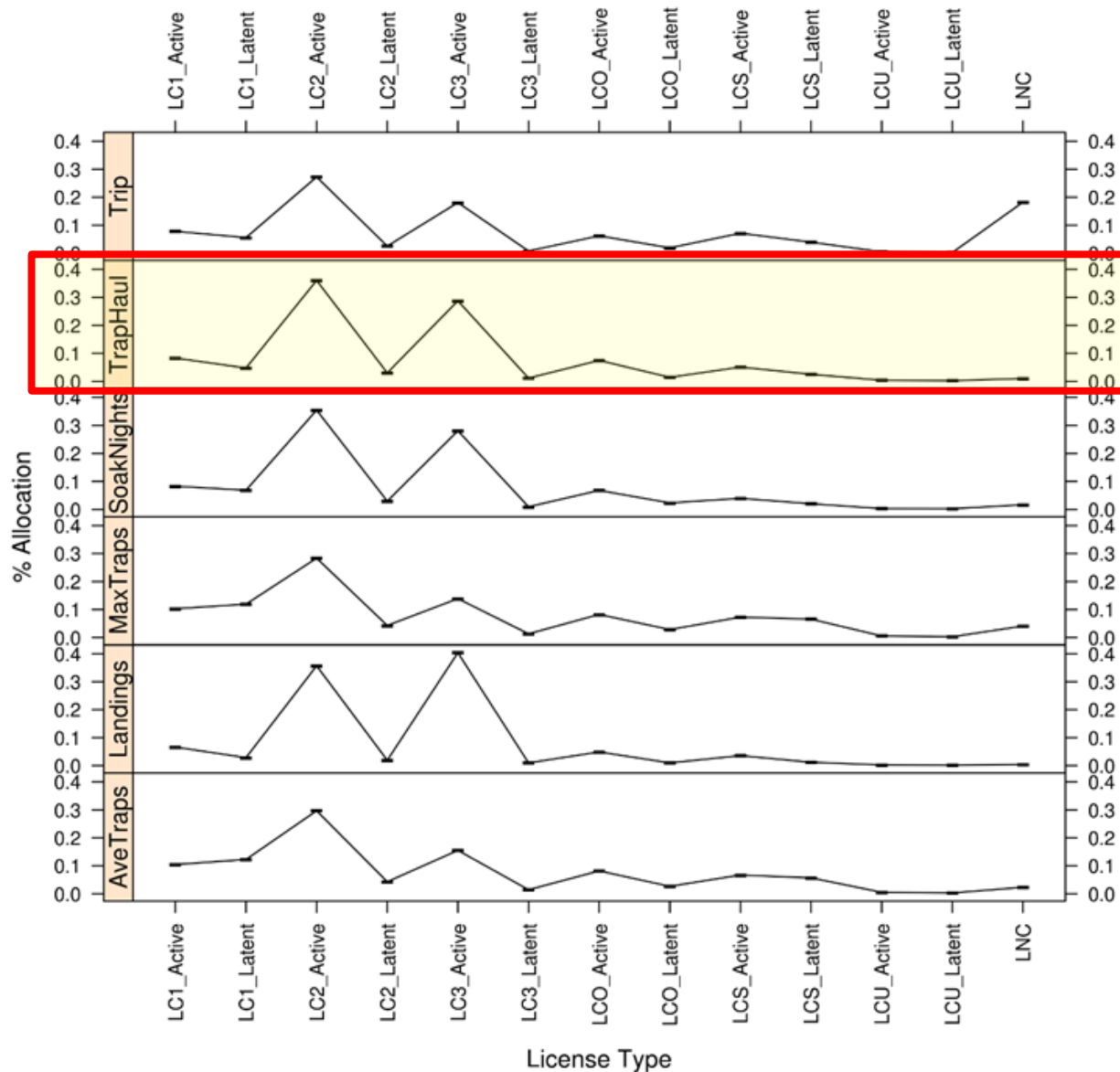


- Optimal allocation at current levels?
 - Problem: current program oversampling latent licenses
 - Create new sampling strata using license type and status
 - Reallocate program resources optimally across strata
 - Variability: Standard deviation
 - Cost: Average # of records to enter
 - Population Size: Number of vessels in each strata
 - ↓ the number of reporting vessels, BUT ↑ the amount of useful data to characterize the fleet

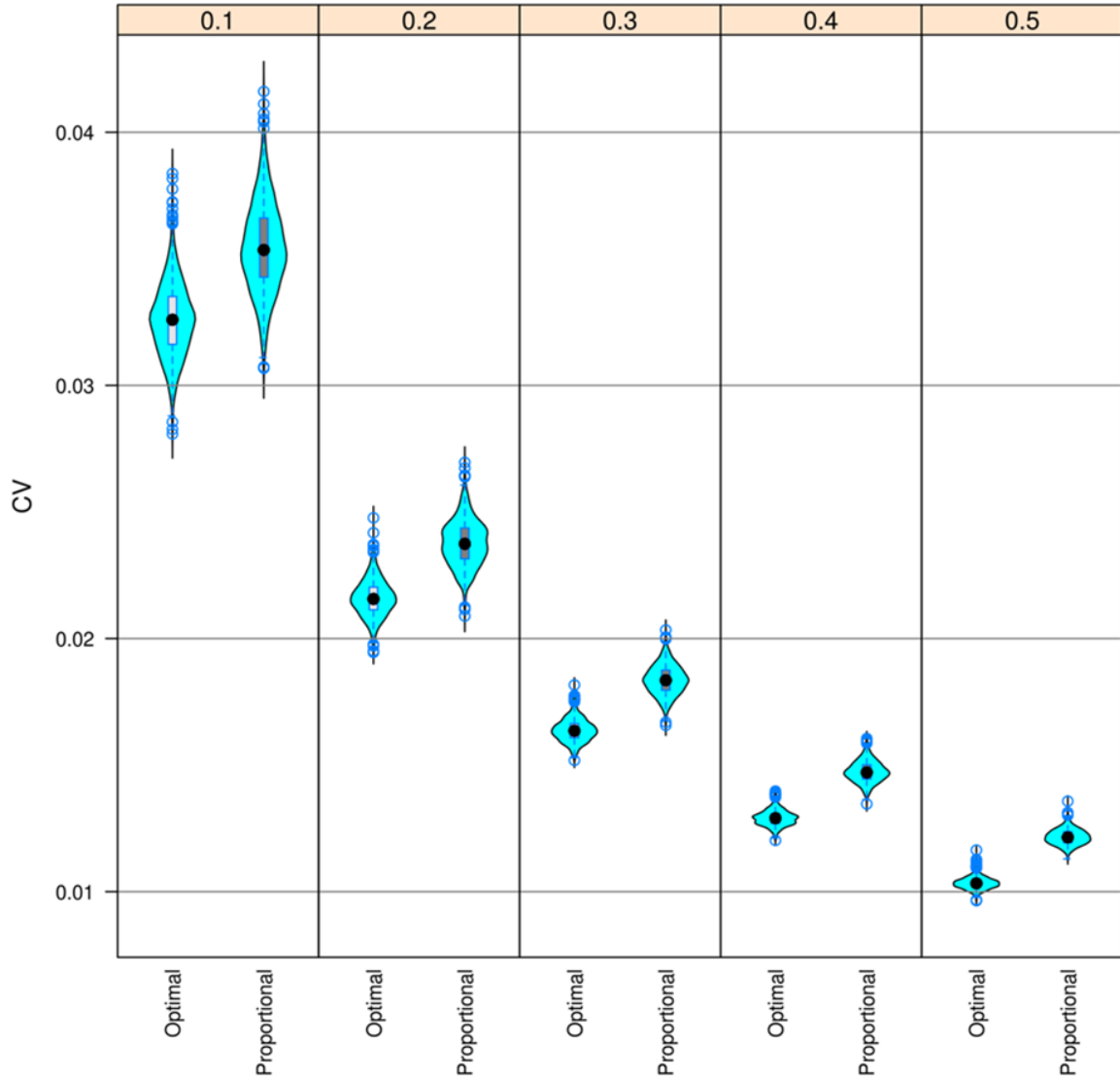
Allocation for each metric



- Similar patterns across metrics
- More allocation for the active LC2 and LC3 strata



Proportional vs Optimal



TC Harvester Reporting Recommendations



- TC supports future goal of 100% harvester coverage through electronic reporting
- 10% reporting is statistically valid for Maine because of the large scale of the fishery
- Until electronic reporting is developed, the current proportional method can be fine-tuned using an optimized sampling
 - Focus program resources on active permits while still accounting for unpredictable latent effort
 - Optimized sampling levels should be revisited every 3 years until 100% is achieved.

II. Bio-sampling Programs



- Data: length composition and sex ratio
- Sources: States, NMFS, CFRF
- Port Sampling
 - Interviews at the dock
 - Provides only data from harvestable catch
- Sea Sampling
 - One sample is collection of data from a trip per day in a statistical area
 - Provides data on harvestable and discarded catch, including reproductive
- Rule of thumb: need 3 samples from each statistical area, quarter, and year

II. Bio-sampling Programs

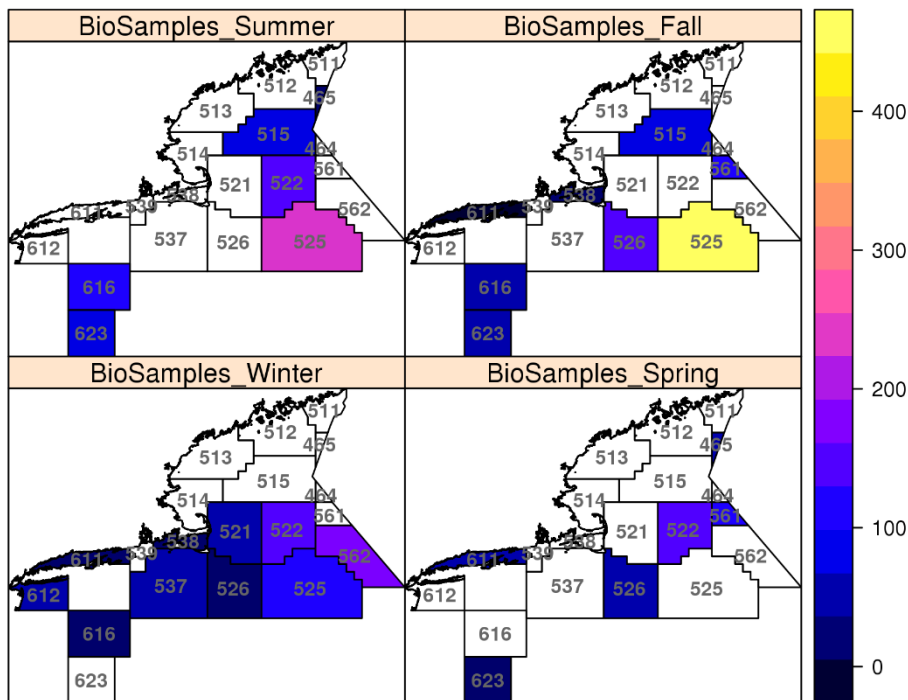


- Problem: historically, regions of the lobster fishery with gaps in bio-sample data, especially offshore and SNE
 - Past stock assessments required gap filling or borrowing data from adjacent statistical areas, quarters, or years increasing uncertainty
 - Sea sampling data is preferred, but logistically difficult and costly
- TC evaluated available data in 2015-2016

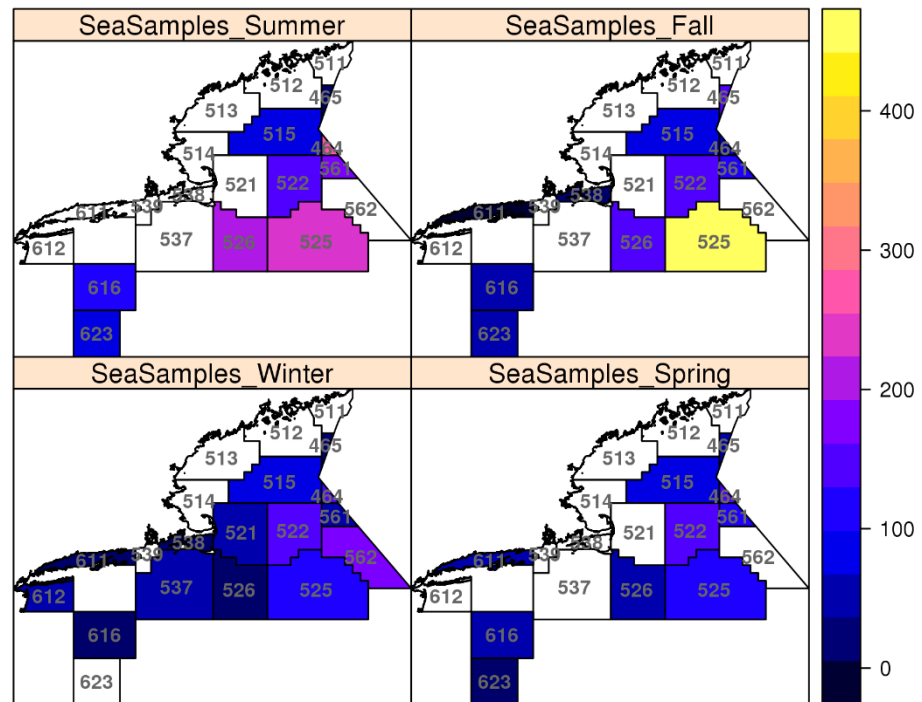
Bio-Sample Gaps



Port and Sea Sampling:
best available coverage



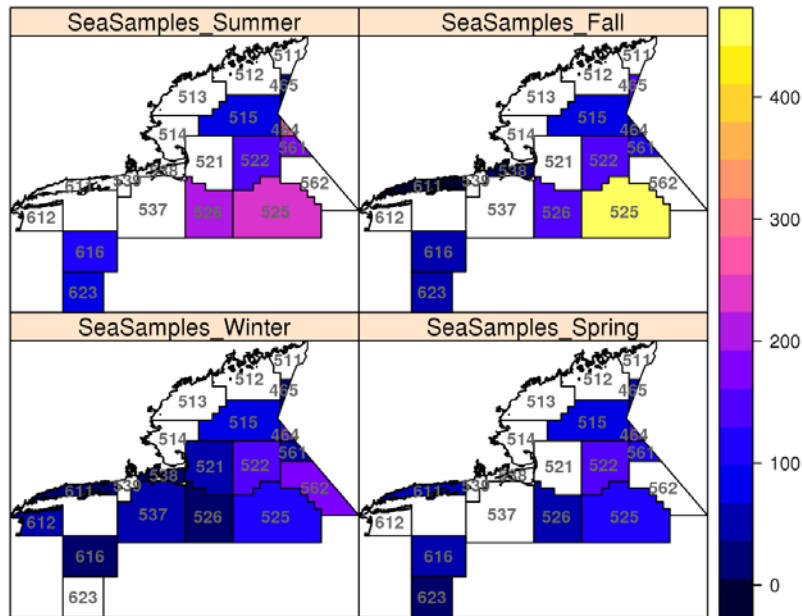
Sea Sampling Gaps:
missing more
offshore areas



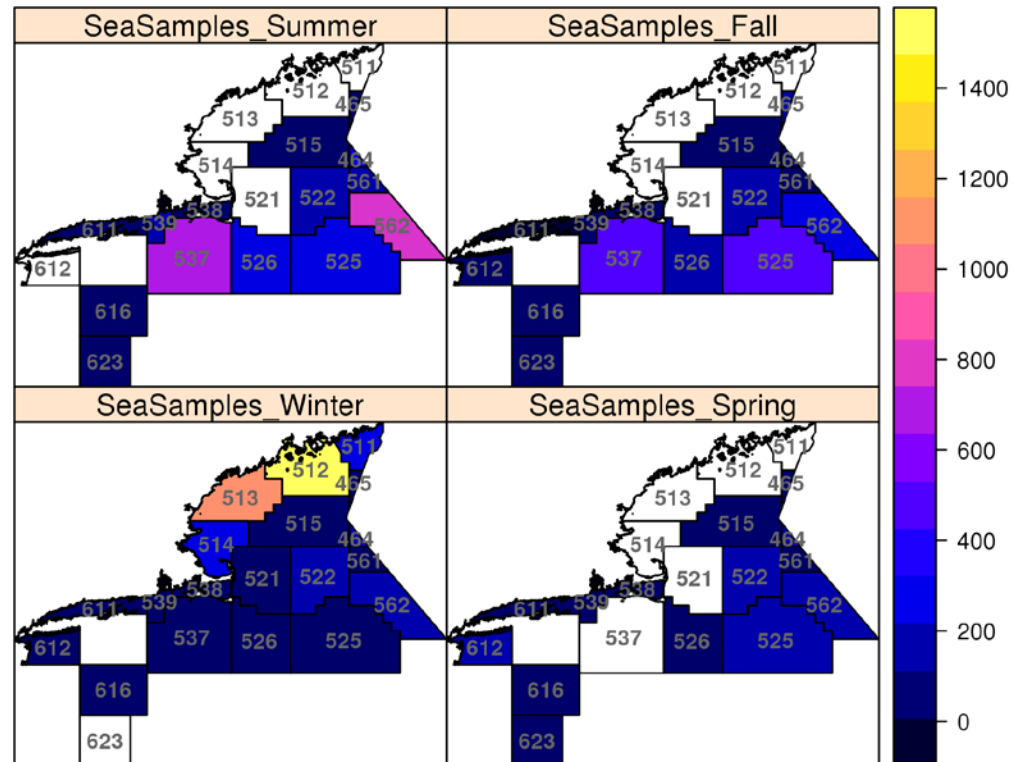
Bio-Sample Gaps



Sea Sampling Gaps:
missing more
offshore areas



Sea Sampling Gaps
**without CFRF or
NMFS efforts**



TC Bio-Sample recommendations



1. Collect a minimum number of samples (3) for each statistical area/quarter/year to avoid gap-filling, especially for areas of higher landings
 - Sea samples preferred
2. NOAA Fisheries should implement a lobster bio-sample program to increase coverage, especially offshore
 - independent from SBRM
 - stratified by statistical area
 - State and Federal programs should coordinate to avoid overlap and increase efficiency
3. Future evaluation during assessments to identify evolving priorities

A dramatic seascape from the perspective of someone on a boat. The sky is filled with heavy, dark clouds, with a bright sun breaking through near the horizon, creating a golden glow. The ocean is dark, with white foam from the boat's wake churning in the foreground. On the right side, a metal railing is visible, with a yellow buoy hanging from it. The overall mood is somber and contemplative.

Questions?

Lobster Draft Addendum XXVI/Jonah Crab Draft Addendum III



American Lobster Management
Board

Problem Statement



- Current harvester reporting requirements do not provide the level of information needed to respond to management issues
- While the lobster fishery moves further offshore and the Jonah crab fishery primarily occurs in federal waters, the majority of biological sampling occurs inshore

Goals:

1. Utilize the latest technology to improve reporting
2. Collect greater effort data
3. Increase the spatial resolution of harvester reporting
4. Advance the collection of biological data offshore

Timeline



January 2017	Board initiated Addendum XXVI
February – October 2017	Draft Addendum developed by PDT; TC completed analysis
Annual Meeting	Board considers approving document for public comment
November 2017 – January 2018	Public comment period including public hearings
February 2018	Final Action on Addendum
TBD	Implementation Deadline

Current Reporting Requirements



- Lobster Addendum X
 - Minimum 10% harvester reporting with expectation of 100% reporting over time
 - Harvesters report: stat area, # of traps hauled, # traps set, lbs harvested, trip length
 - Sea and/or port sampling weighted by area and season to match the 3-year average of commercial catch
 - At least one of the following surveys: trawl, VTS, settlement
- Jonah crab requirements mirror those in lobster fishery

Harvester Reporting Deficiencies



- Lack of spatial information collected
 - Stat area too coarse to respond to outside management actions (e.g. coral zones)
 - Multiple LCMAs in a single stat area
- Lack of data collected on depth of fishery
 - Ex: national monument presented options based on depth
- Not all harvesters report
 - Maine accounts for >80% of lobster harvest but only 10% of harvesters report
 - Lobster-only federal permit holders are not required to report through VTRs

Bio Sampling Deficiencies



- While current surveys span a broad length of the coast, most surveys are conducted within 12 miles of shore
- Of concern given majority of landings in SNE, and an increasing portion in GOM, are from offshore
- TC identified data gaps in fishery by comparing sampling effort to magnitude of landings in each stat area; greatest data gaps in GBK and offshore GOM, some in SNE

ALWTRT



- ALWTRT has been discussing deficiencies in the collection of fishing effort data
- Considering an annual recall survey which would be sent to fishermen to collect additional effort data
 - Color of buoy, weight of trap, # of traps per trawl, buoy configuration, buoy line diameter, weight of anchor lines, color of buoy underside
- Addendum provides opportunity to proactively address some of these data concerns; however, many data components are more specific than what is typically required in trip-level reports
 - State level reports often used for multiple species

Issue 1: Percent Harvester Reporting



Option A: Status Quo

- Minimum 10% reporting w/ expectation of 100% reporting over time
- States w/ higher level of reporting required to maintain that percentage

Option B: Maintain Current Reporting Effort - Optimal Approach

- If state at 100% reporting, maintain that percentage
- For states w/ less than 100% reporting, maintain current level of effort but distribute through an optimal allocation
- Expectation of 100% reporting over time through use of electronic reporting

Option C: 100% Harvester Reporting

- All states required to implement 100% reporting
- Can be phased in over 5 years

Electronic Reporting



- Electronic reporting is highly encouraged by PDT and TC
 - Cost effective method to increase reporting
 - Flexibility to collect expanded data elements
- Recommended states use eTrips or eTrips Mobile
 - Can be implemented at little to no cost to states
 - Approved by GARFO for eVTRs
 - Well established relationship between ACCSP and ASMFC
- States can use a different platform for electronic reporting but must be API compatible
 - Submit proposal to Board demonstrating platform meets reporting requirements and can accommodate scale of fishery

Issue 2: Reporting Data Components



Option A: Status Quo

- Unique trip ID, vessel #, trip start date, stat area, # of traps hauled, # traps set, pounds, trip length (and soak time for Jonah crab)

Option B: Expanded Data Elements

- Depth, bait type, soak time

Option C: Gear Configuration Elements

- # traps per trawl, # buoy lines

Board can chose both Options B and C

Issue 3: Spatial Resolution



Option A: Stat Area (Status Quo)

Option B: Stat Area and LCMA

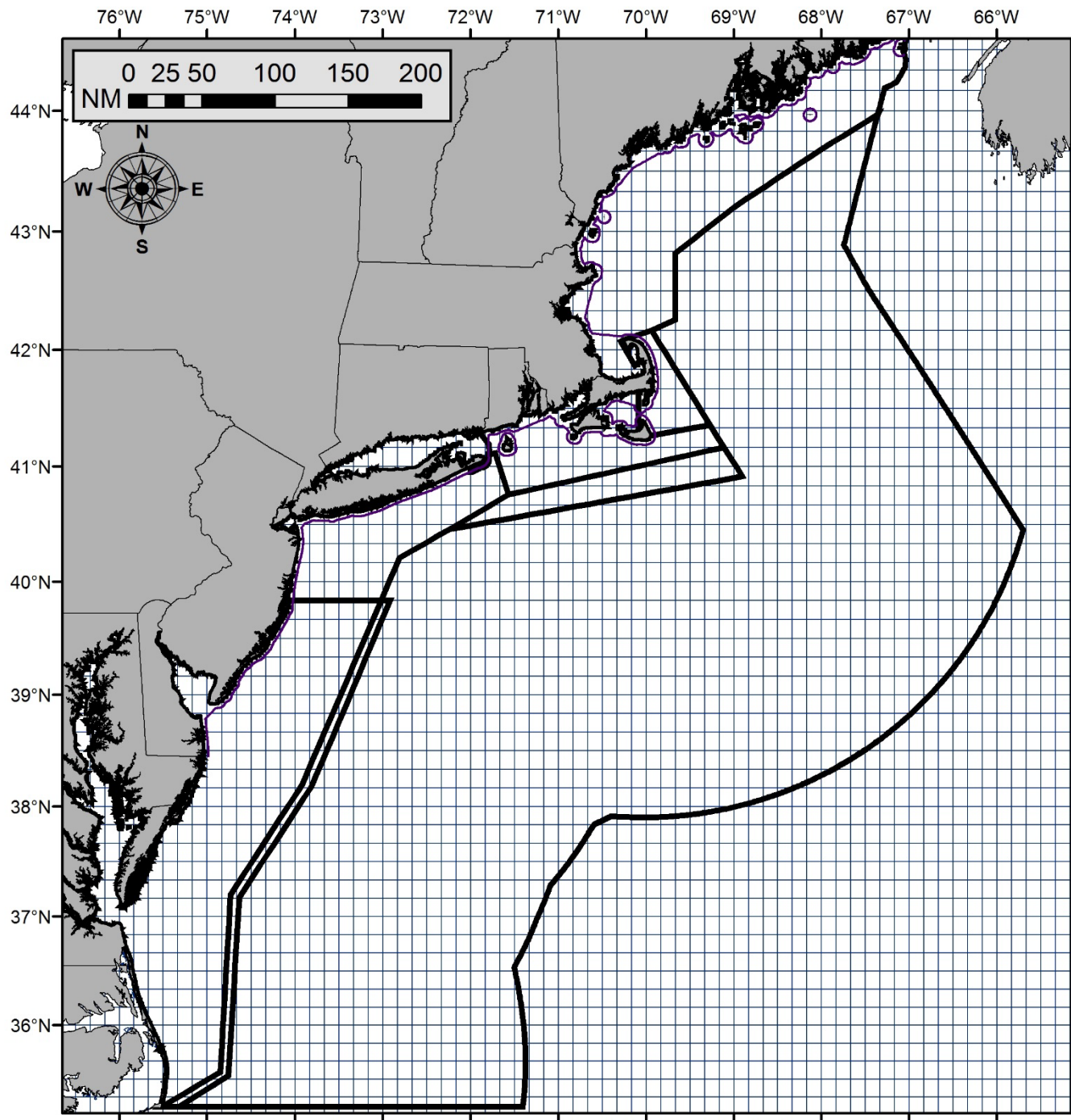
Option C: Stat Area and Distance from Shore

- 0-3 miles, 3-12 miles, >12 miles

Option D: 10 Minute Squares

Option E: Electronic Tracking (can be combined with above)

- As a first step, one year pilot program to test electronic tracking devices in fishery
- Subcommittee will design and implement pilot program
- Technologies evaluated based on ease of compliance, ability to determine trap hauling vs. steaming, industry feedback, cost-per-fishermen, LEC feedback
- After 1 year, Board can end program, extend program, or pursue implementation of tracking in fishery



Issue 3: Spatial Resolution



Option A: Stat Area (Status Quo)

Option B: Stat Area and LCMA

Option C: Stat Area and Distance from Shore

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Biological Sampling for States



- Non *de minimis* states still required to complete trawl survey, VTS, and/or settlement survey
- States required to conduct a minimum of 10 sea/port sampling trips in lobster and Jonah crab fisheries, combined
 - Baseline requirement; not representative of population
 - If states comprise more than 10% of coastwide landings in either lobster or Jonah crab fishery, conduct additional sampling trips
 - If a state is unable to complete 10 trips, must notify Board in annual compliance report as to why sampling trips were not completed and future sampling efforts

Recommendations in Federal Waters



- 1. Establish harvester reporting requirement for lobster-only federal permit holders**
 - To percentage approved by Board or higher in each stat area
- 2. Creation of fixed-gear VTR**
 - Single VTR form limits data that can be collected
- 3. Implementation of a targeted lobster sampling program in federal waters**
 - Increased harvest and effort offshore
 - Appendix 3: TC recommended sampling program including location of data gaps in fishery

Questions?



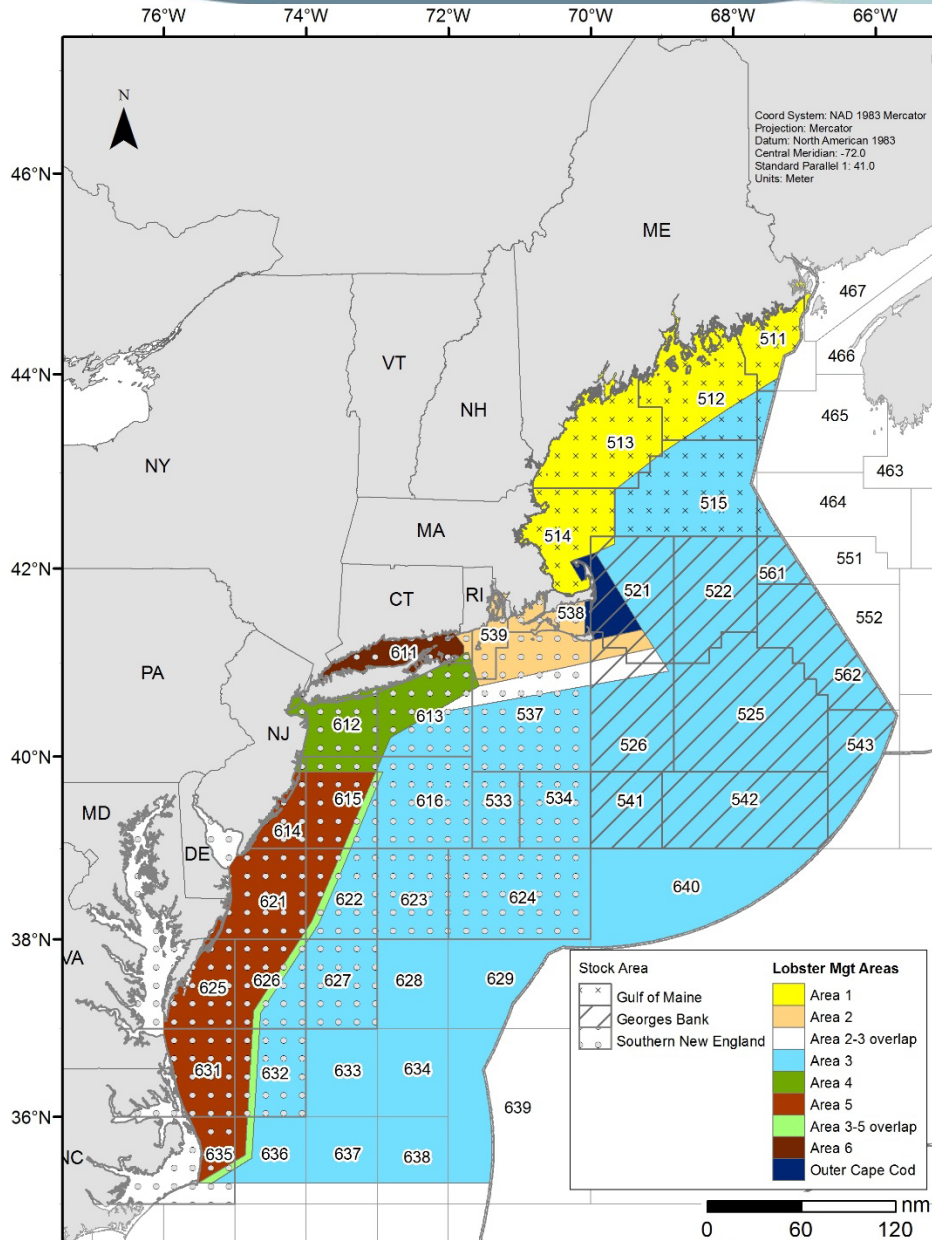


American Lobster 2017 FMP Review



American Lobster Management Board

Status of Management

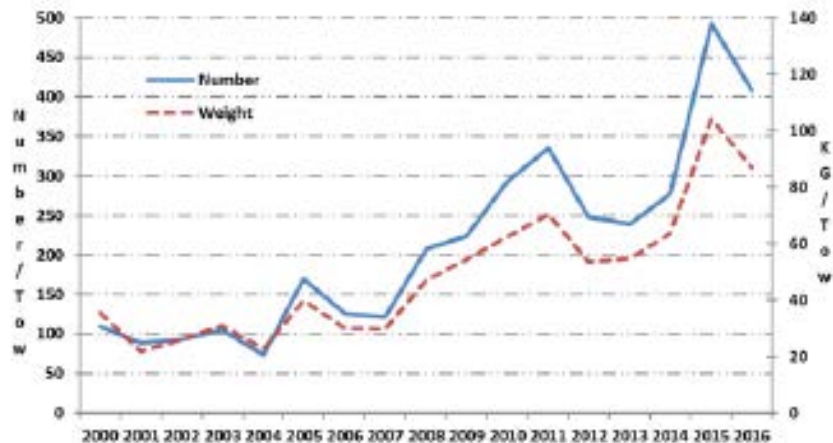
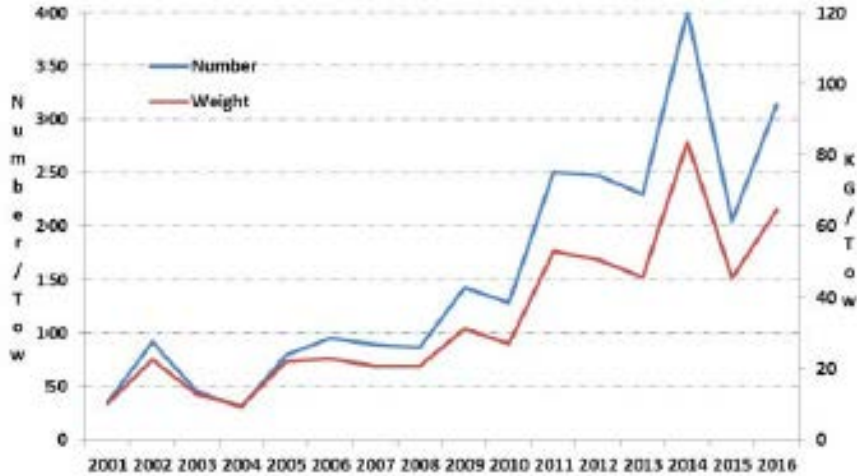


- 5% trap reductions in LCMAs 2 and 3
- 6,781 traps retired in LCMA 2
- 8,008 traps retired in LCMA 3
- Includes traps retired due to trap transfer tax

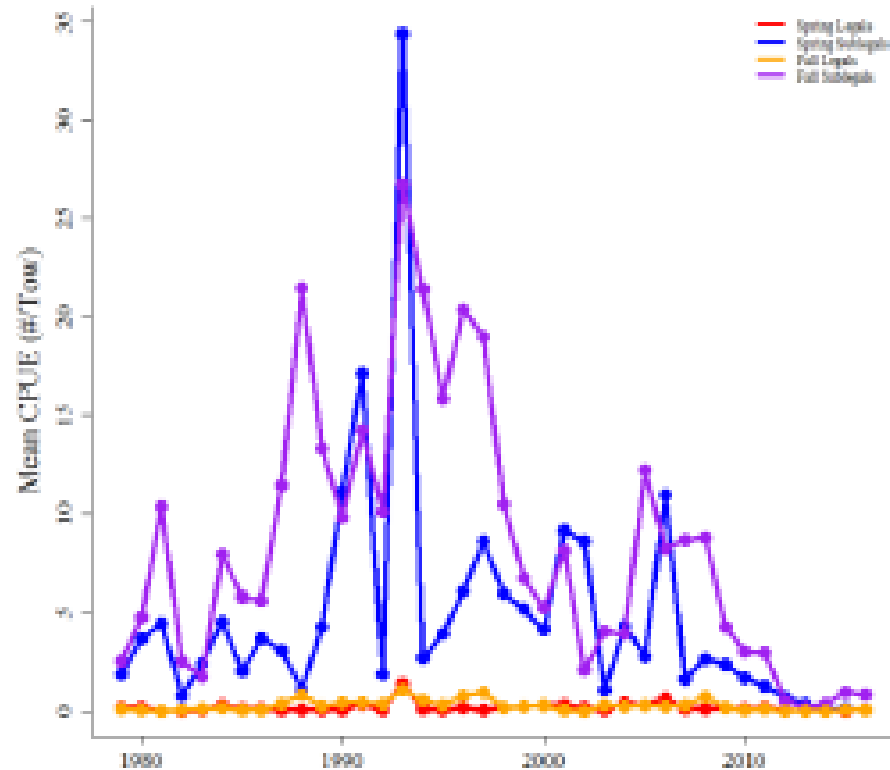
Fishery Monitoring – Trawl



ME/NH Trawl Survey



RI Trawl Survey



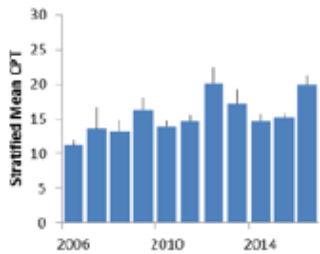
Fishery Monitoring – VTS



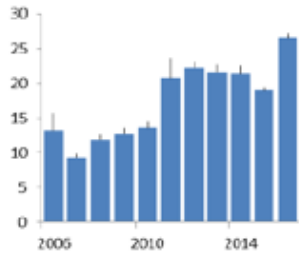
ME VTS

RI VTS

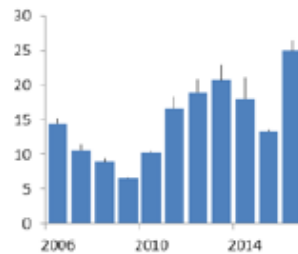
NH-Friendship
513



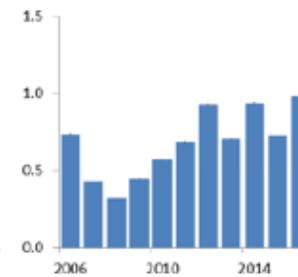
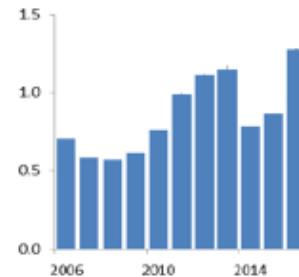
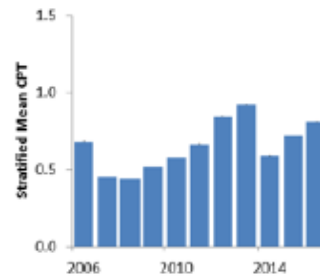
Friendship-Schoodic
512



Schoodic Pt -Cutler
511



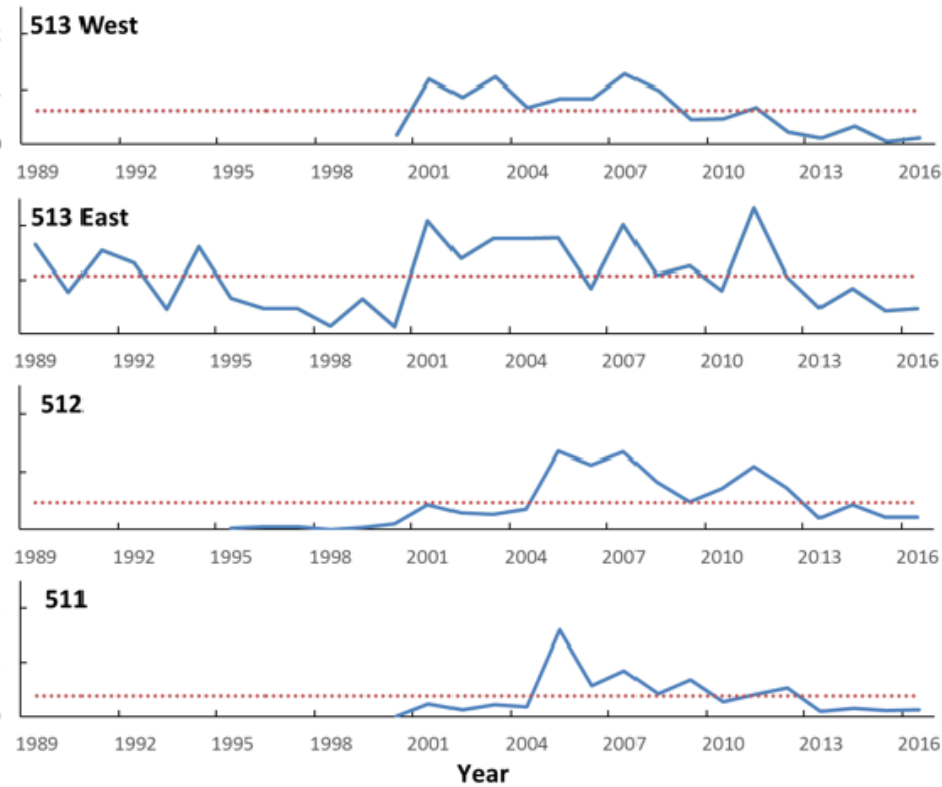
B. Legal Stratified Mean CPT



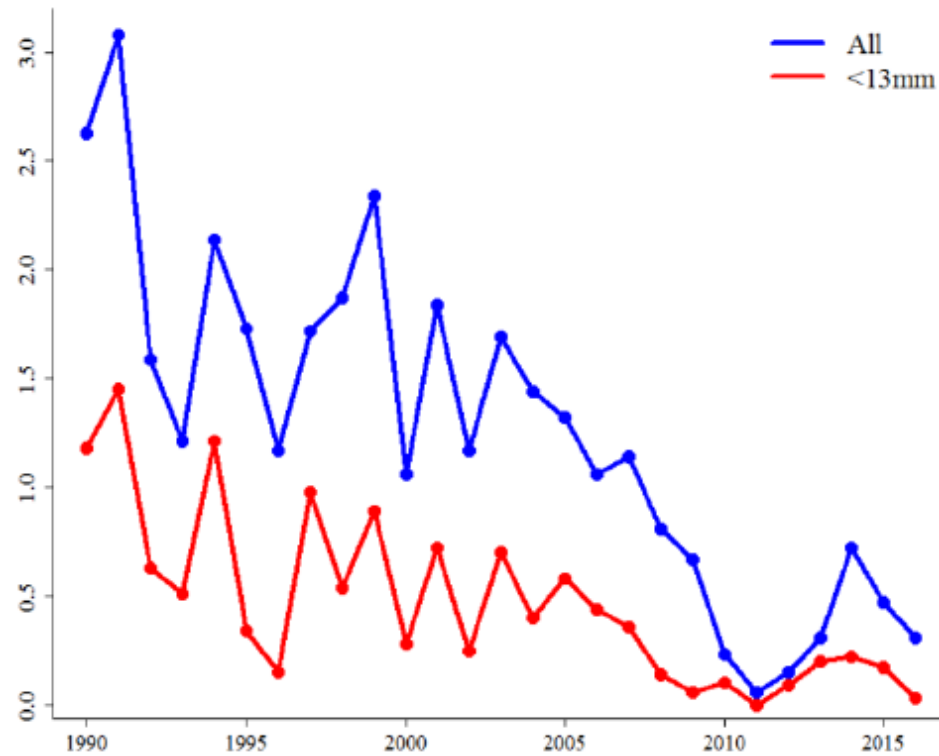
Fishery Monitoring – YOY



ME YOY Survey



RI YOY Survey



State Compliance



Compliance

- All states found to be in compliance with biological management measures in Amendment 3, Addenda I-XXIV
- RI and CT did not conduct any sea sampling, per Addendum X; states noted staffing and budget constraints

De Minimis

- Commercial landings, 2 year average, under 40,000 lbs
- Requests: DE, MD, VA
- All three states qualify

PRT Recommendations



- PRT recommends the Board approve *de minimis* status for DE, MD, and VA
- PRT notes an increase in the number of enforcement concerns reported in state compliance reports
- PRT recommends the Board investigate the best way to quantify effort in the lobster fishery
- PRT recommends investigating the connectivity between the offshore portion of SNE and GBK



QUESTIONS?

**Move to approve the 2017 Lobster FMP
Review, state compliance reports, and de
minimis status for DE, MD, and VA**

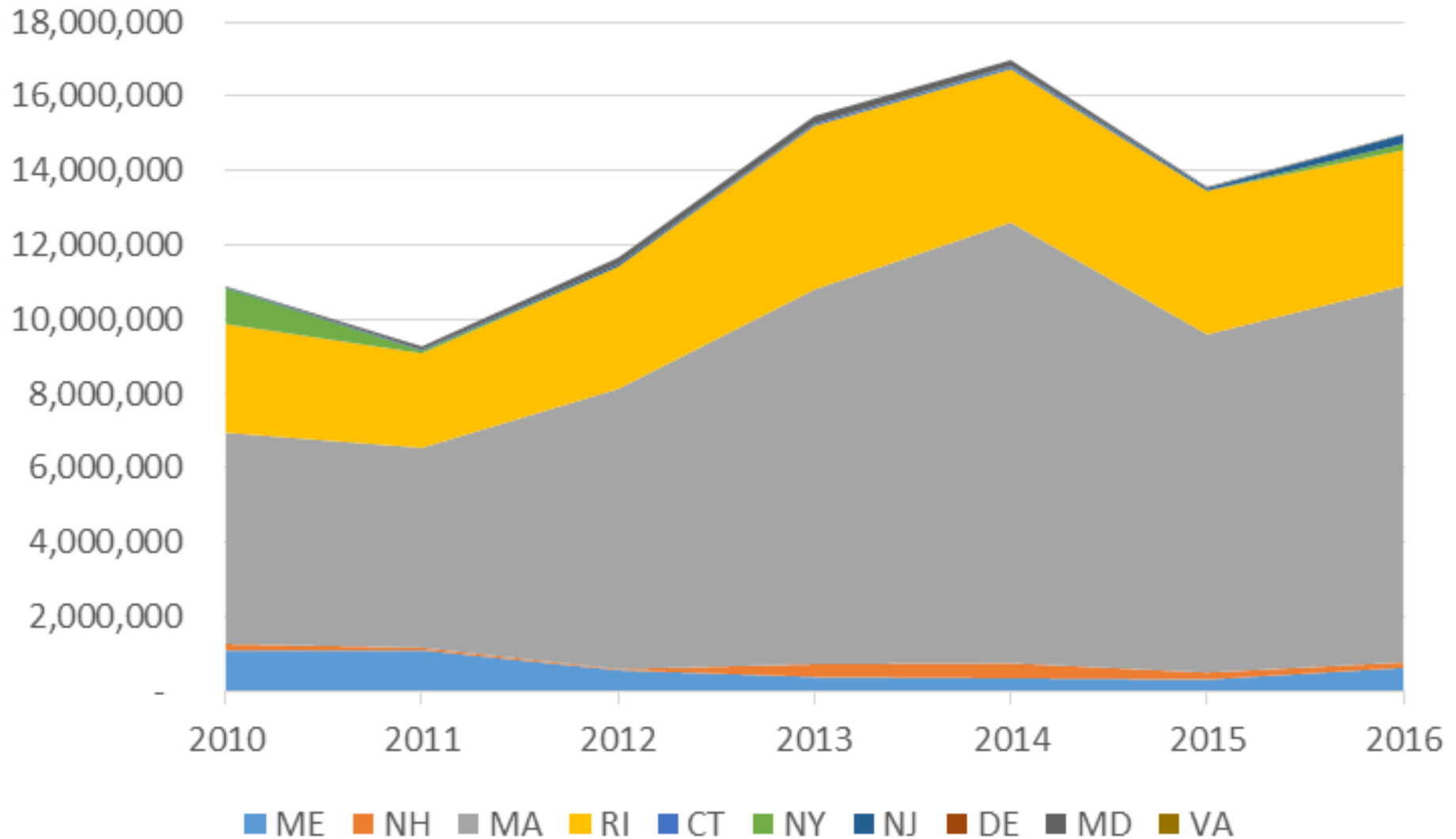
Jonah Crab

2017 FMP Review



American Lobster Management Board

Commercial Landings



Status of Stock



Status of Jonah crab resource is relatively unknown and no coastwide stock assessment has been conducted

The following research topics need to be addressed prior to a coastwide stock assessment:

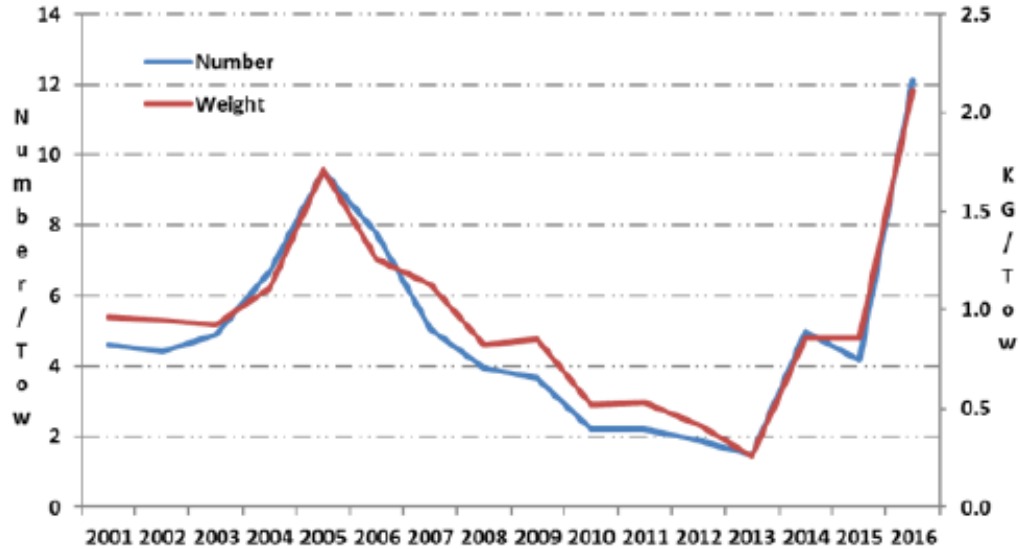
- Growth rates, molt frequency, molt increment
- Maturity in different regions, size ratio of mating crabs, sperm limitations
- Mortality rates in claw fishery in the field
- Migration (on-going tagging studies)
- Estimate of natural mortality

Status of Management

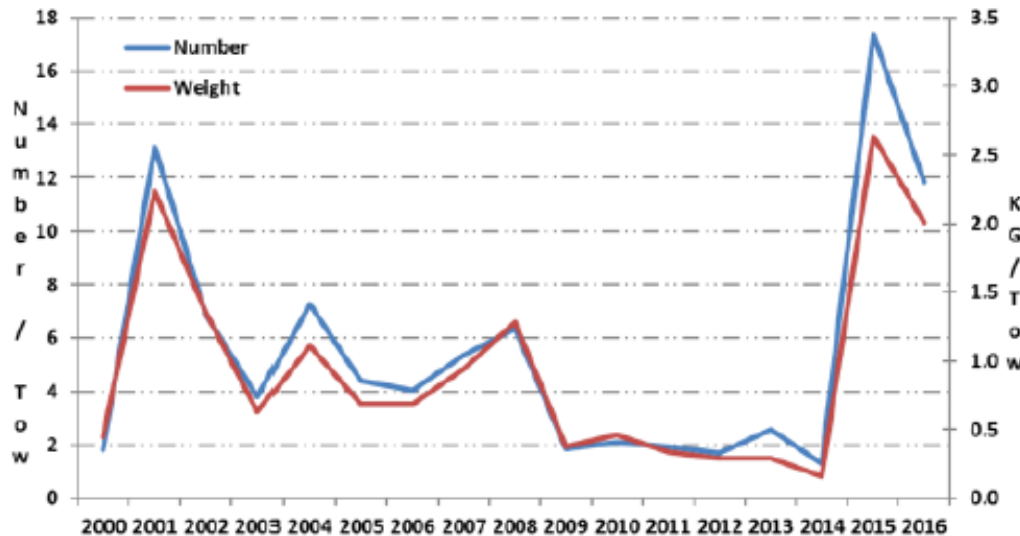


- **Interstate FMP (2015)**
 - 4.75” minimum size
 - Prohibition on retention of egg-bearing females
 - Directed fishery linked to lobster fishery
- **Addendum I**
 - 1,000 lb bycatch limit for non-trap gear and non-lobster trap gear
- **Addendum II (Implementation Data 1/1/18)**
 - Coastwide standard for claw harvest; bycatch defined

Sampling



ME-NH Trawl Survey - Spring

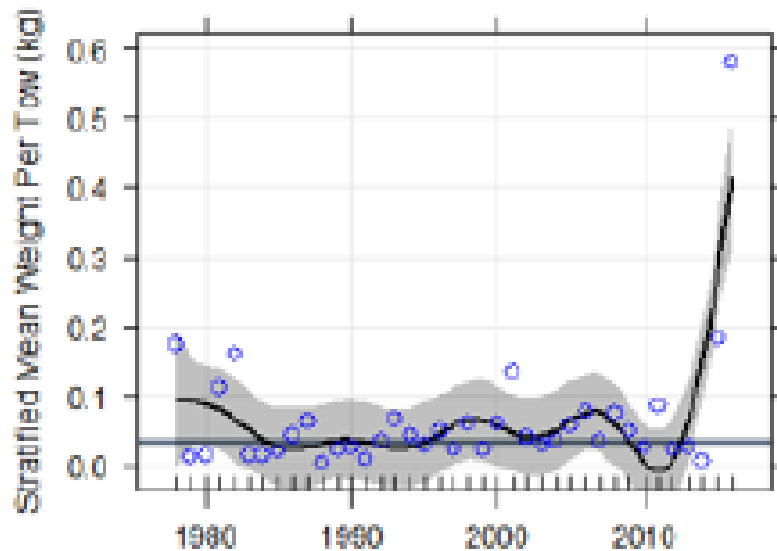


ME-NH Trawl Survey - Fall

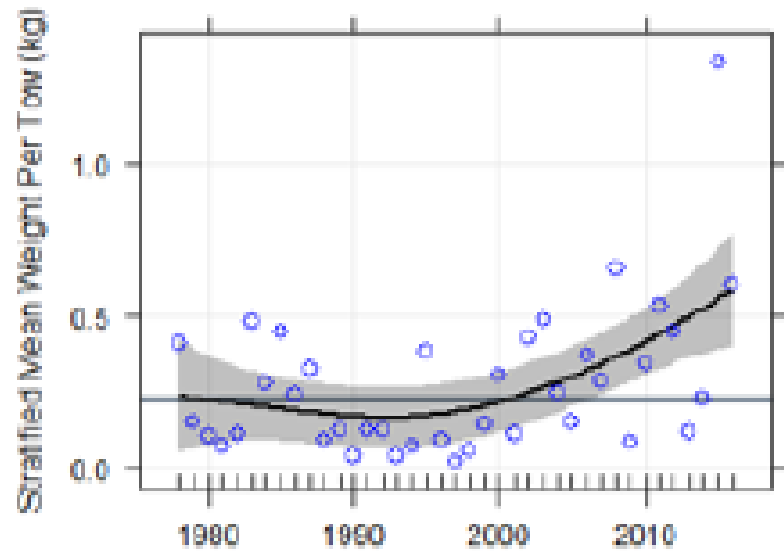
Sampling



MA Trawl Survey - Spring



MA Trawl Survey - Fall



State Compliance



- Most states are in compliance with the FMP and Addenda
 - NY has not yet implemented full suite of management measures. Currently prohibit harvest of egg-bearing females and recreational harvest is limited to 50 crabs. Other provisions expected in early 2018.
 - DE has not yet implemented Jonah crab regulations. DE delayed implementation in anticipation of changes to lobster regs through Addendum XXV given the regulatory process is costly. DE is moving forward with Jonah crab regs and implementation is expected in 2018.

De Minimis



- States may qualify if, for the 3 preceding years, their average commercial landings constitute less than 1% of average coastwide commercial catch
- DE, MD, and VA apply and meet *de minimis* requirement

PRT Recommendations



- PRT recommends Board approve *de minimis* requests of DE, MD, VA
- PRT recommends the TC discuss standard methods for reporting survey data
- PRT highlights importance of all states implementing 4.75" minimum carapace width
- PRT recommends continued research so that a coastwide stock assessment can be completed in the future



Questions?

Move to approve the 2017 Jonah crab FMP Review, state compliance reports, and de minimis status for DE, MD, and VA