

NJ perspective on MRIP in-season management

Jeffrey Brust

NJ Bureau of Marine Fisheries

September 22, 2020

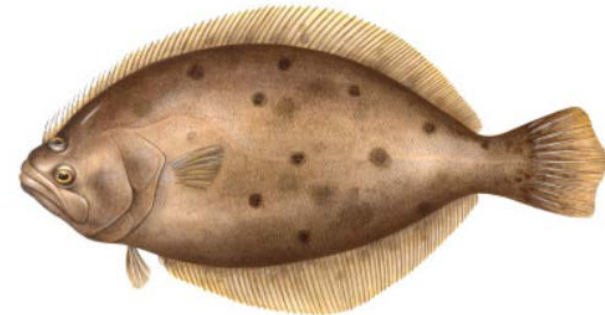
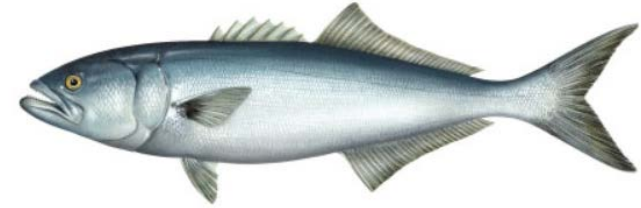


My frame of reference

- Currently – Chief, NJ Bureau of Marine Fisheries
- Formerly – Lead stock assessment biologist for NJ,
 - NJ rep on numerous ASMFC species TC/SASC with rec component
 - ASMFC Science and Research
- Been working with MRFSS/MRIP data since 1997
- Data, estimation methodology always intriguing to me
 - Dug into data more than others
- Comments based on my 20+ years as an end data user/analyst
- Input from Joe Cimino (manager), Mike Celestino (analyst), Maryellen Gordon (NJ MRIP lead), Peter Clarke (TC rep)

In season management needs

- Bluefish is only example
 - Transfer recreational quota to commercial sector
- No other regional or NJ examples
 - Often mentioned at TC meetings
 - Often suggested / requested by stakeholders
 - Current data, methods don't support it
- Black seabass and summer flounder likely candidates
 - Jointly managed by ASMFC/MAFMC
 - Popular target species
 - State quotas → annually chasing F
- Use partial year data to set next year's regs

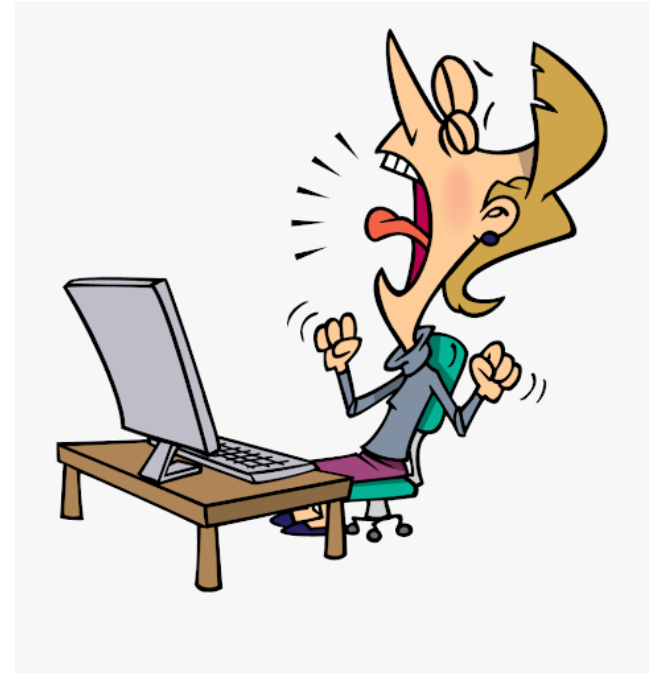


In season management assessment

- In short....frustrating!
 - Timing of estimates
 - Uncertainty in estimates

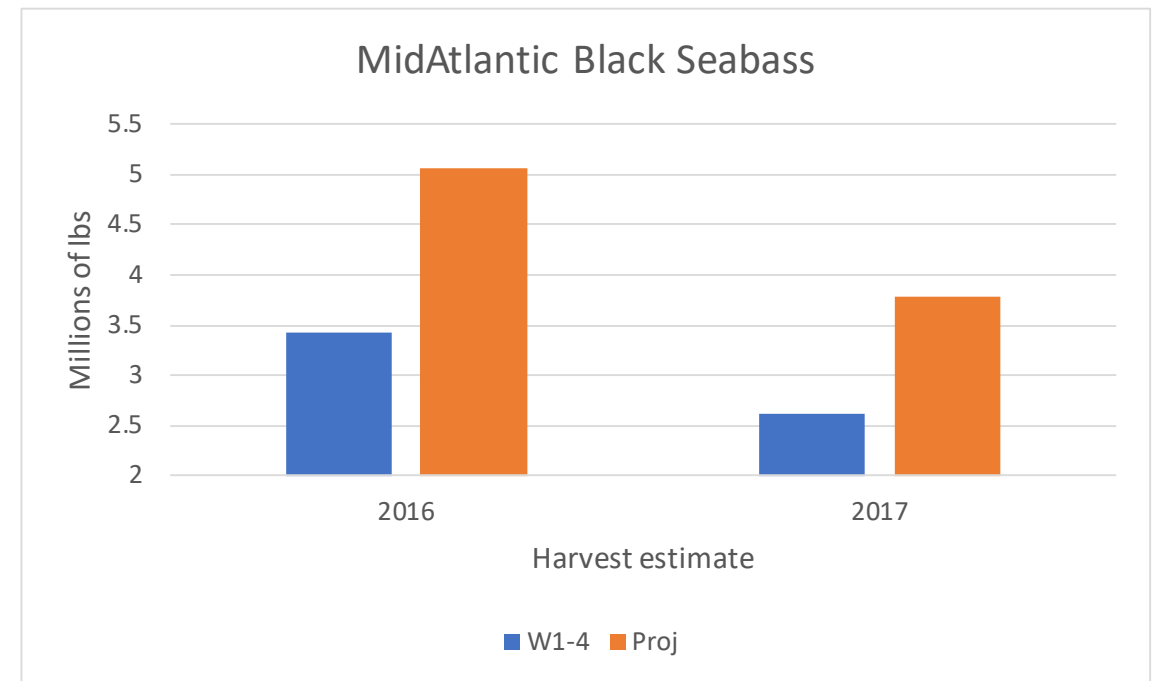


- Significant investment of staff time



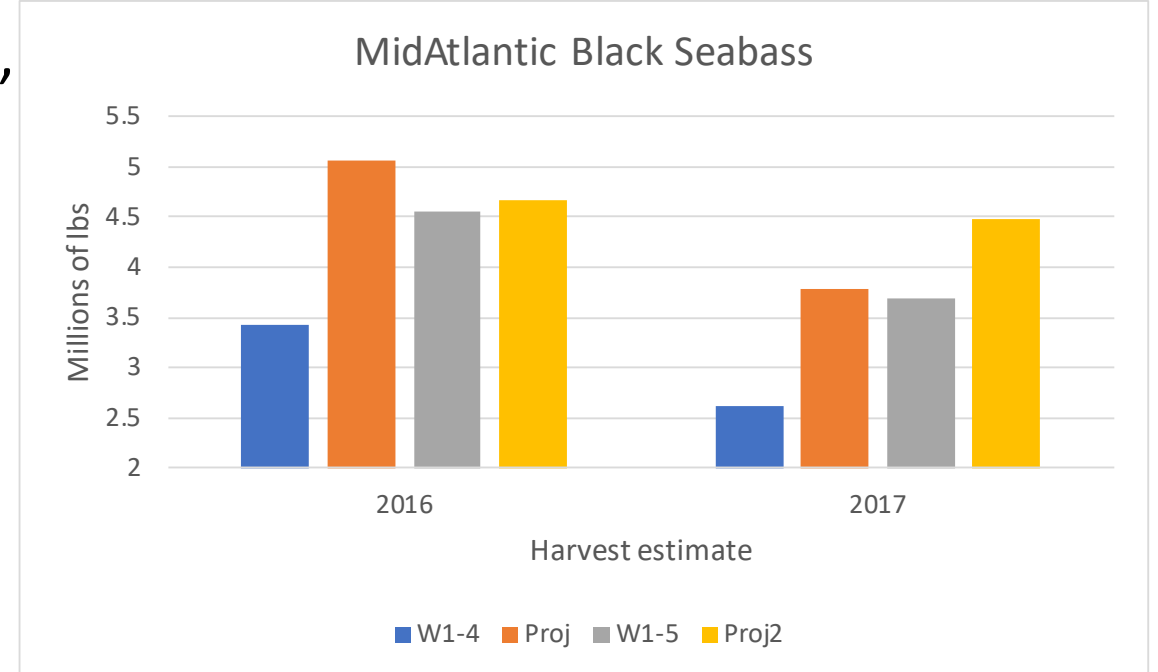
Typical timeline

- December (½ way through W6) – Harvest through W4, project through W6
- States begin developing rec alternatives
 - analysis, consult advisors, develop options, draft proposal, TC meetings, review other states methods...



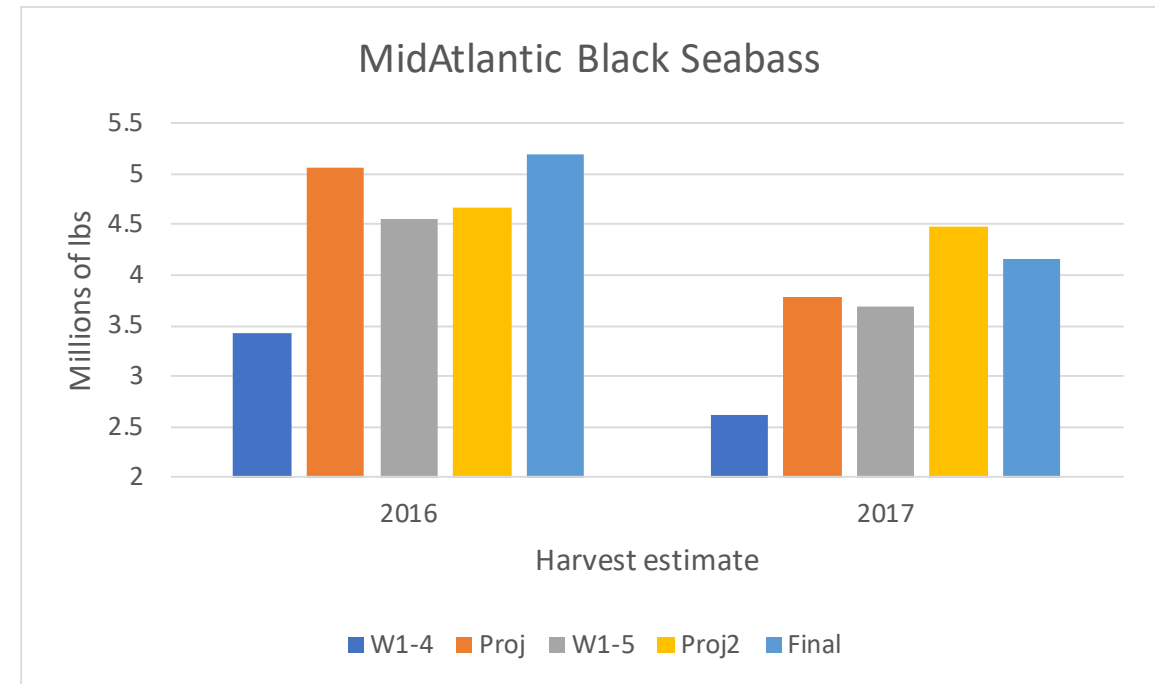
Typical timeline

- December – Harvest through W4, project through W6
- States begin developing rec alternatives
- February – Prelim W5, project through W6
- States adjust rec alternatives
 - Re-analysis, new options, edit write up, more TC meetings, re-evaluate other states...



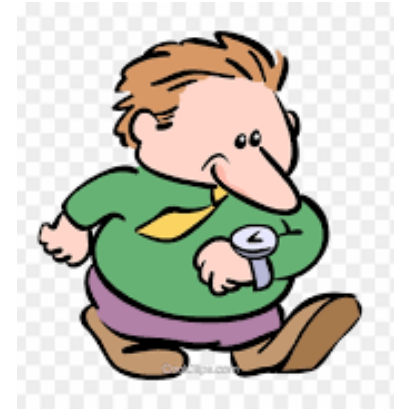
Typical timeline

- December – Harvest through W4, project through W6
- States begin developing rec alternatives
- February – Prelim W5 estimates, project through W6
- States adjust rec alternatives
- March/April - Final W1-6 estimates
- States finalize rec alternatives
 - Re-analysis, final options, TC meetings
- April/May – NJ approves final measures
 - Advisors, MFC, rule adoption
- Season opens May 15



Survey modifications - timing

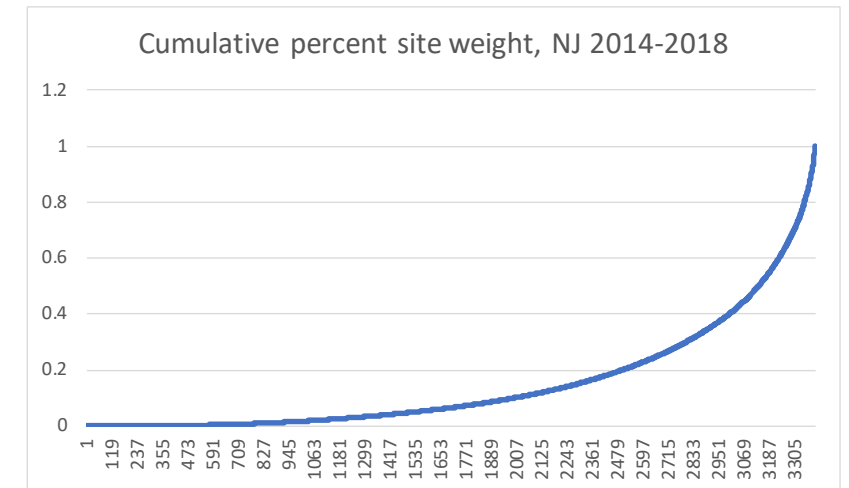
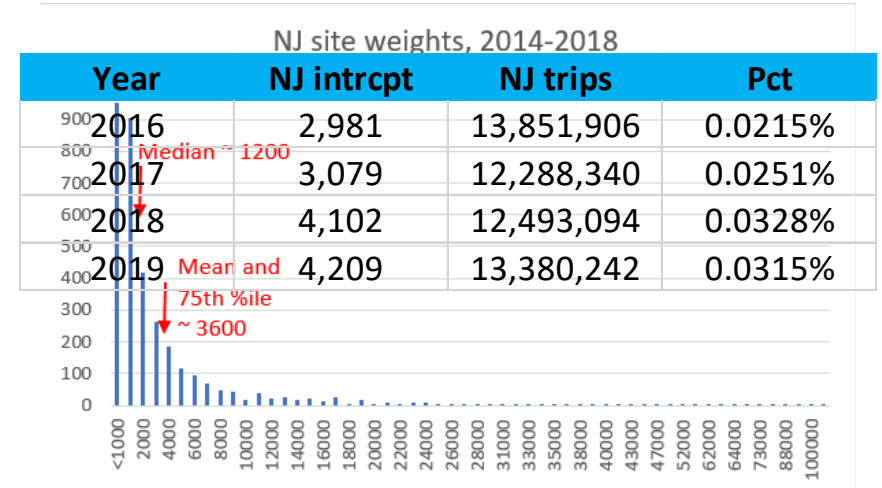
- Current methods give us final estimates 2 waves “late”
 - W3-4 estimates in W6
 - NJ summer flounder only open ~120 days
- Streamline data collection / auditing
 - Tablets
 - Data entry/audit flags
 - Alternative data sources
- Streamline / short circuit estimation procedure
 - Relationship between raw and expanded values
 - Relationship between eVTR and expanded values
 - Is uncertainty between prelim and final estimates larger than PSEs of final estimates



A photograph of a green chalkboard filled with handwritten mathematical equations. The equations involve various variables like x , y , m , n , B_2 , B_3 , V_m , V_n , C , L , P , T , and Q . Some equations include summations and square roots, indicating complex mathematical derivations or models.

Survey modifications - uncertainty

- Sample size
 - < 0.05% of trips intercepted in NJ
 - Funding (state or federal)
 - Alternative reporting venues
 - Voluntary angler surveys/logbooks, panel surveys, state VTR
- Site weights
 - 10% of interviewer site days account for 50-60% of expansion weight
 - What is methodology?
 - Trail cams, security footage
- Recall/number/prestige bias
 - Esp. discards, important for catch-based ACLs
 - Alternative reporting venues (see above)



Additional thoughts

- Disconnect between ACL and MRIP estimates
 - Pounds vs numbers
 - Increase sampling of fish weights; alternative methods of gap filling
- Recreational reform
 - Identify / smooth outliers
 - Envelope of uncertainty (in conjunction with stock metrics)
 - Single or multi year data
- Management discretion, flexibility to avoid chasing F
 - Legislation, policy changes
- Must supply wave level data, regardless of PSE



Tradeoffs

INPUTS

Funding

Staff time

Increased uncertainty?
(wave level data, but
improved sampling)



OUTCOMES

Flexibility

Angler satisfaction

Angler buy-in

