

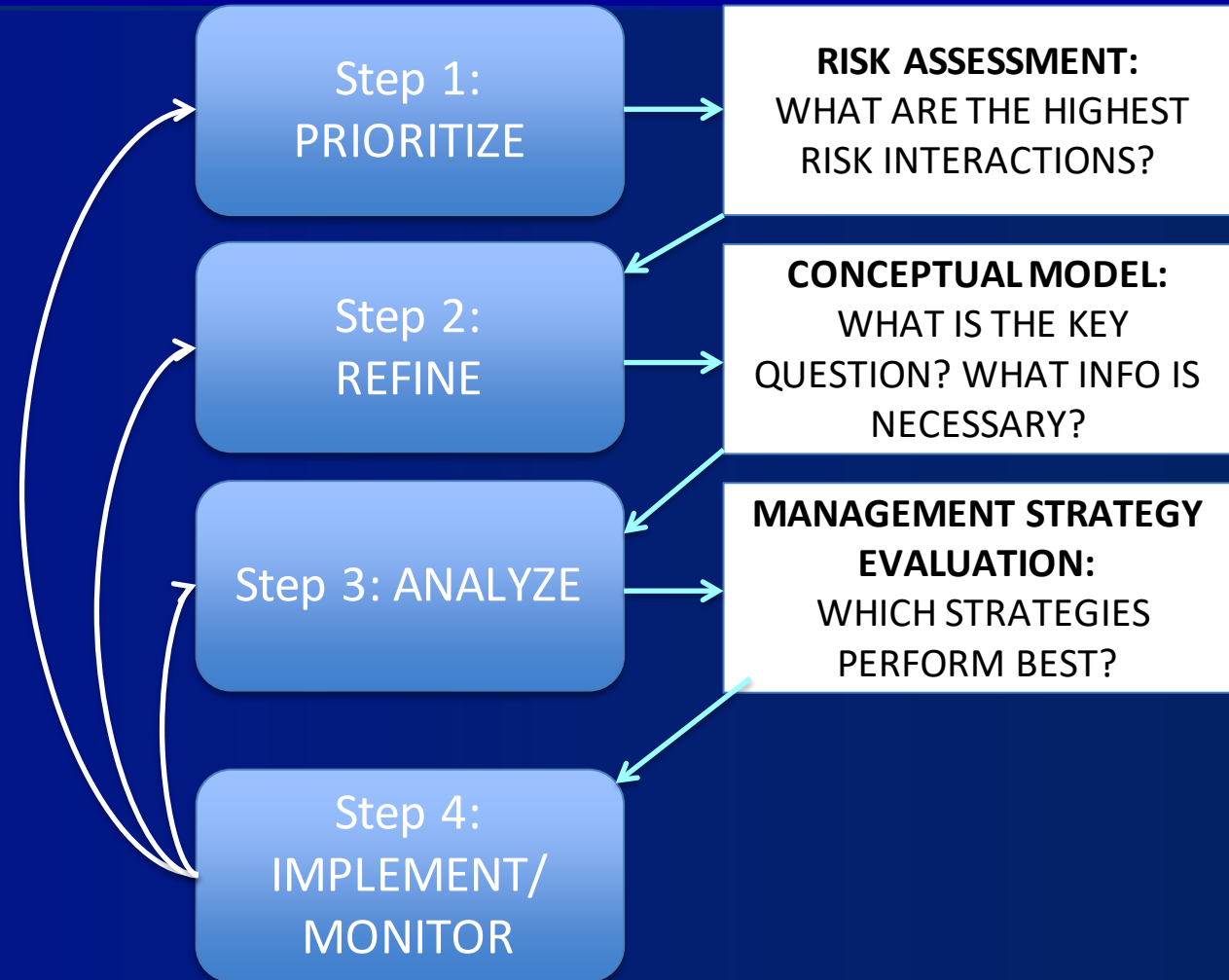


EAFM Activities Update

April 6, 2021

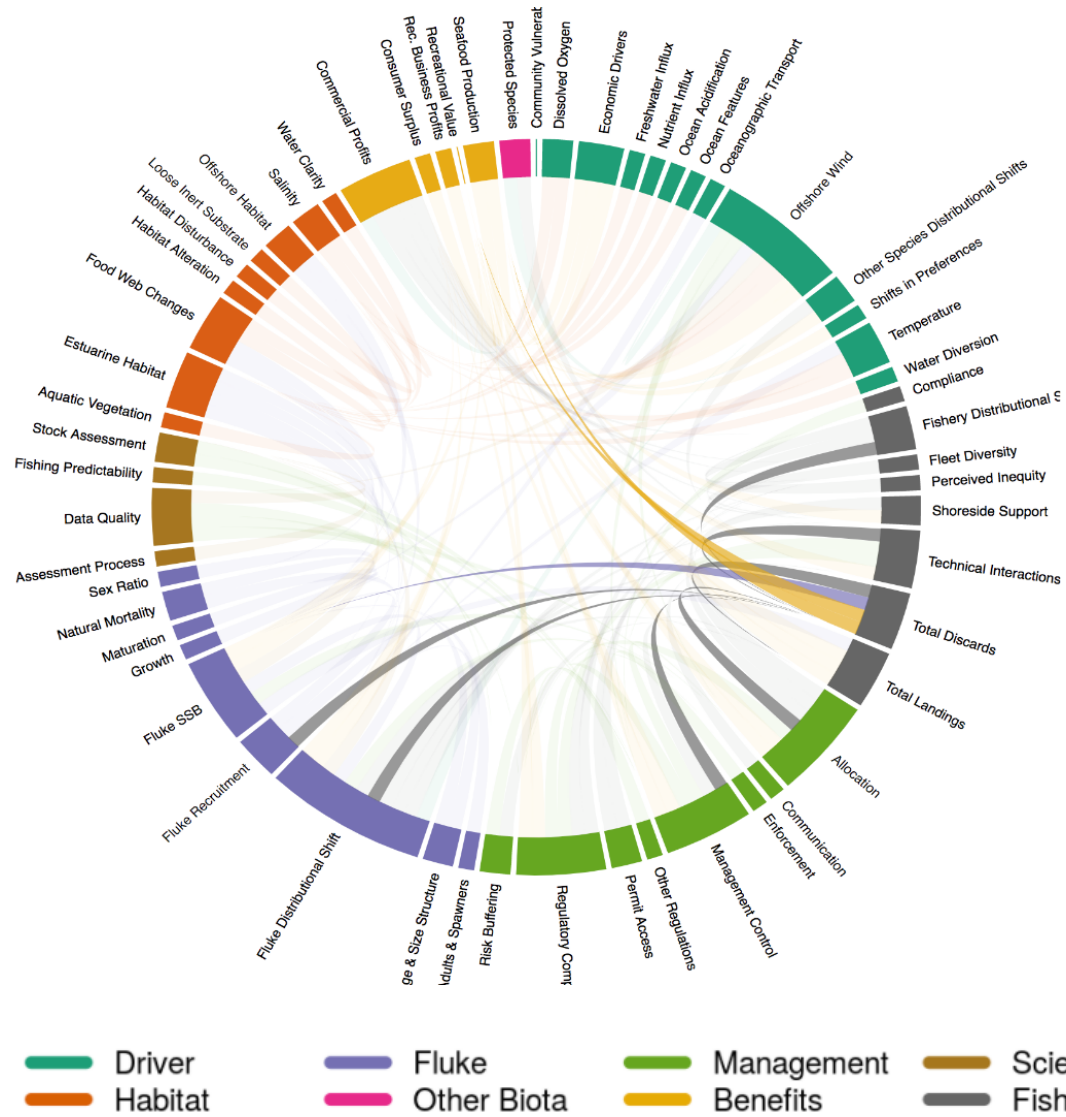
Council's EAFM Decision Framework

- Developed a strategic, deliberative, and structured process
 - Goal of incorporating species, fleet, habitat and climate interactions into management
 - Planning tool to help Council transition and incorporate EAFM approaches
- Completed **Step 1** (2017) and **Step 2** (2019); Initiated **Step 3** (2020)



Source: Sarah Gaichas, http://www.mafmc.org/s/3_Habitat_in_IEAs_Gaiches.pdf

Conceptual Model Management Question



Evaluate the biological and economic benefits of minimizing summer flounder discards (live and dead) and converting discards into landings in the recreational sector. Identify management strategies to effectively realize these benefits.

- Opportunity to align EAFM work with traditional Council management process
- Different approach and process to evaluate management challenges to address and reduce regulatory discards
- EAFM issue and focus – seven linked risk factors: Management, Summer Flounder Stock, Science, Fishing Fleets, and Benefits

Management Strategy Evaluation (MSE) – What? Why?

- MSE is a tool to test different strategies (e.g., regulations, HCR) and their ability to achieve specified management objectives before implementation
 - Evaluate and balance trade-offs of strategies in an ecosystem context
- Uses quantitative model(s) to simulate a population, its ecosystem, different strategies, and their interactions
- It won't specify a single outcome or strategy to address all objectives
- Use an inclusive stakeholder process to help the Council/Board identify clear objectives and strategies

Stakeholder Outreach and Input

4 different initiatives identified

1. AP kick-off webinar and mock workshop
2. Online scoping feedback
3. Regional MSE workshops
4. Core stakeholder group workshops

Early and continued engagement

Scoping Feedback Form -

Broad stakeholder input covering a variety of topics for input



Regional Workshops -

Smaller (although could still be large), targeted group, and more focused input



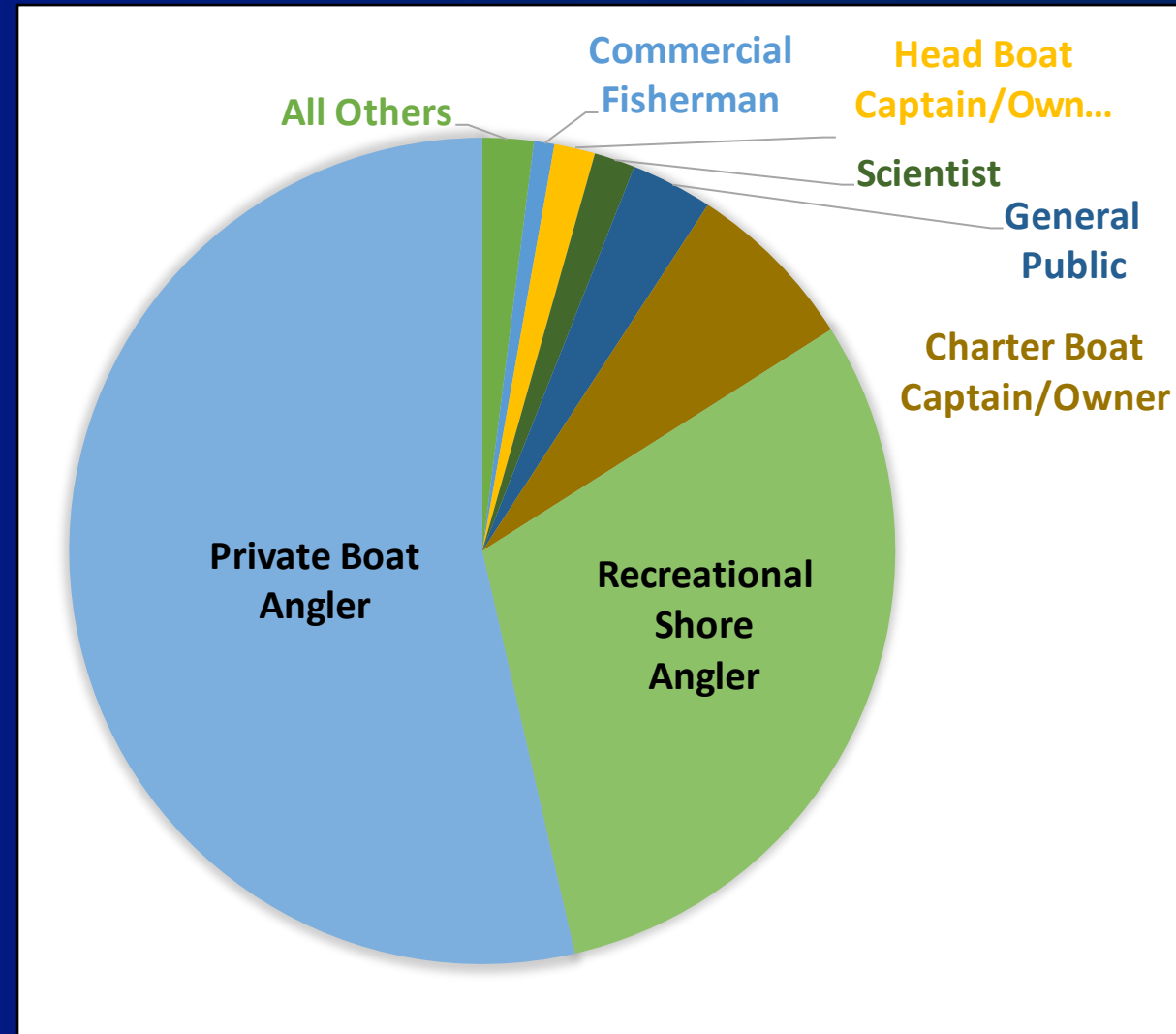
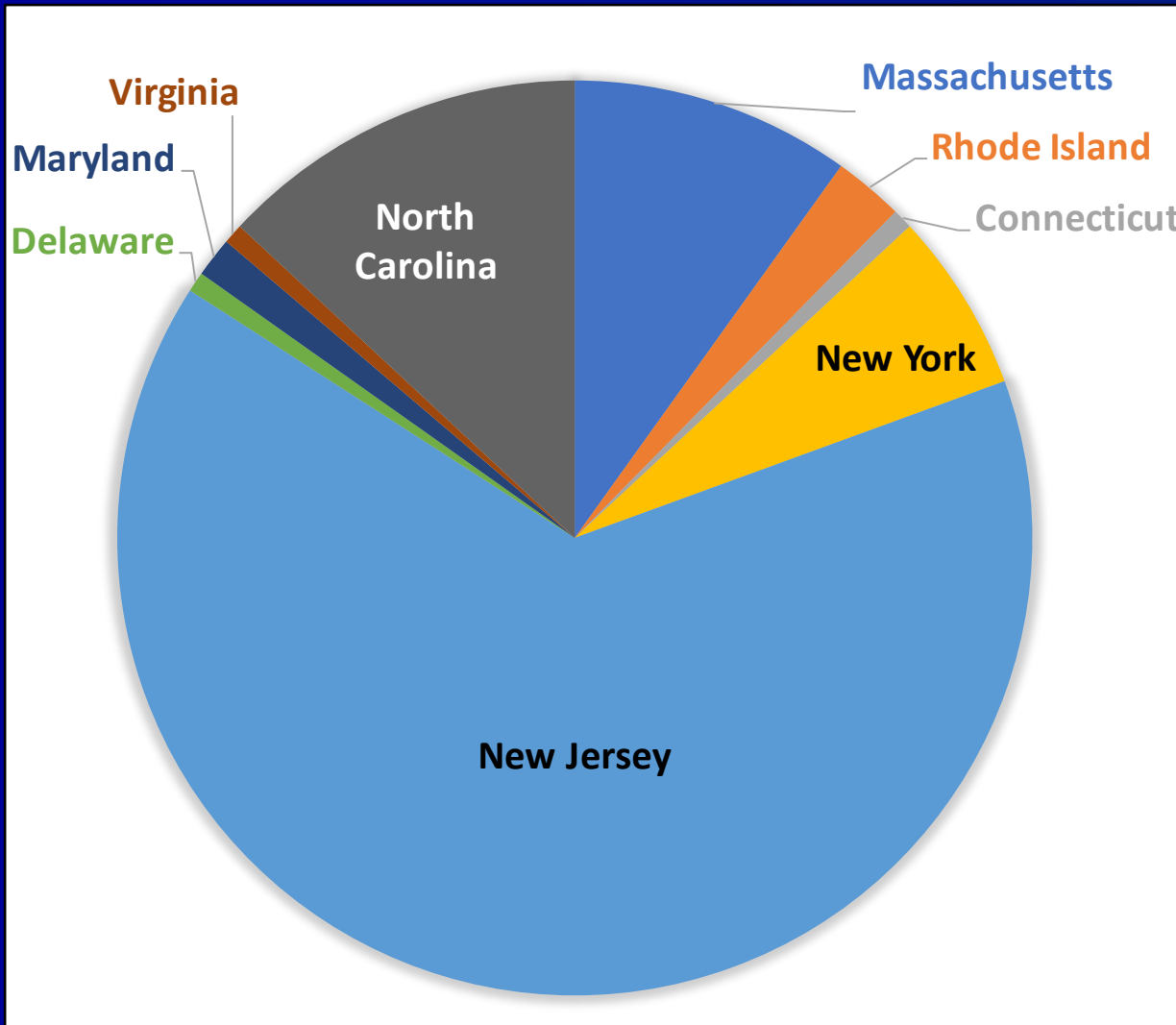
Core Stakeholder Group -

Small, representative group (10-15 members) providing direct input and feedback during 3 workshops

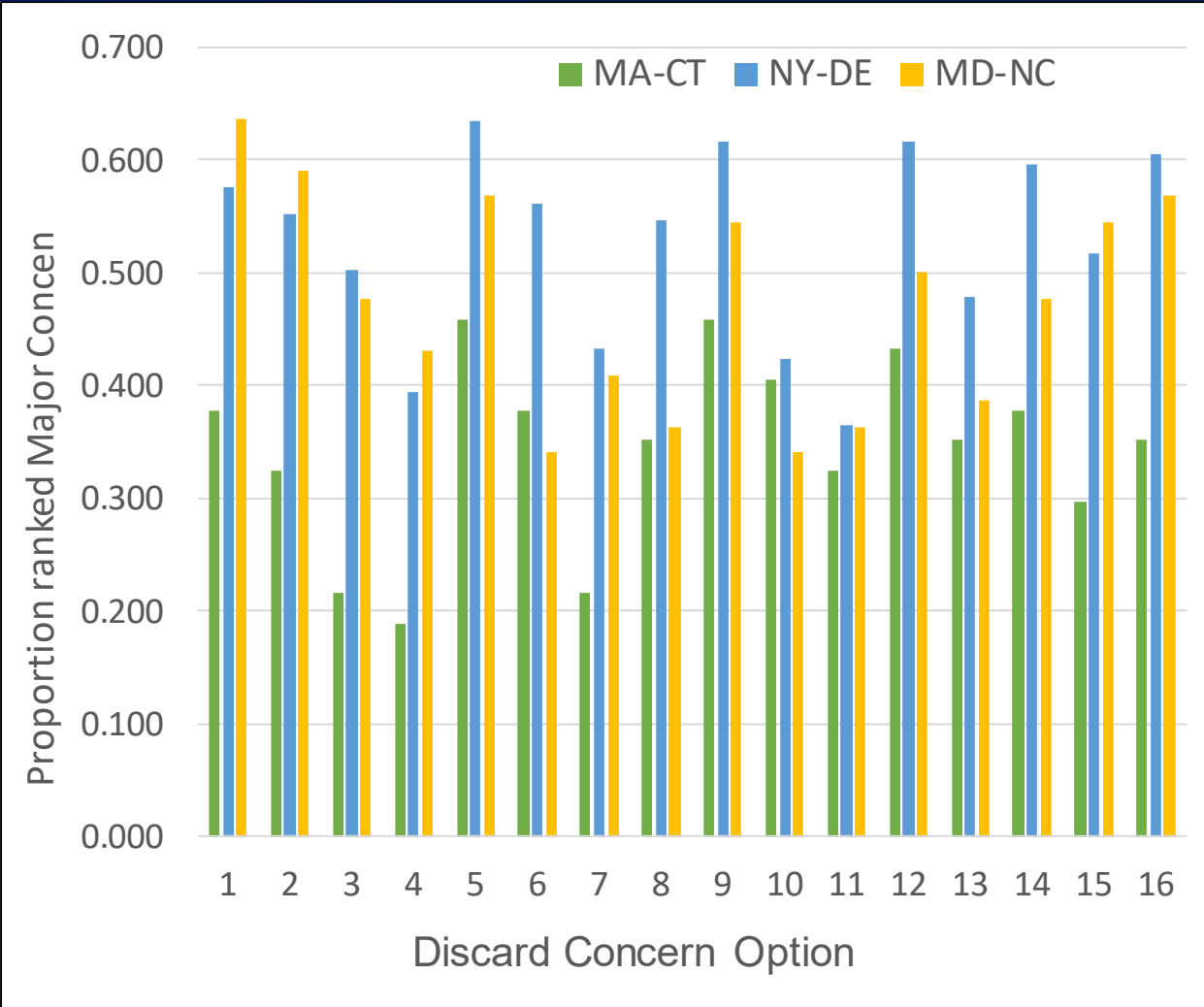
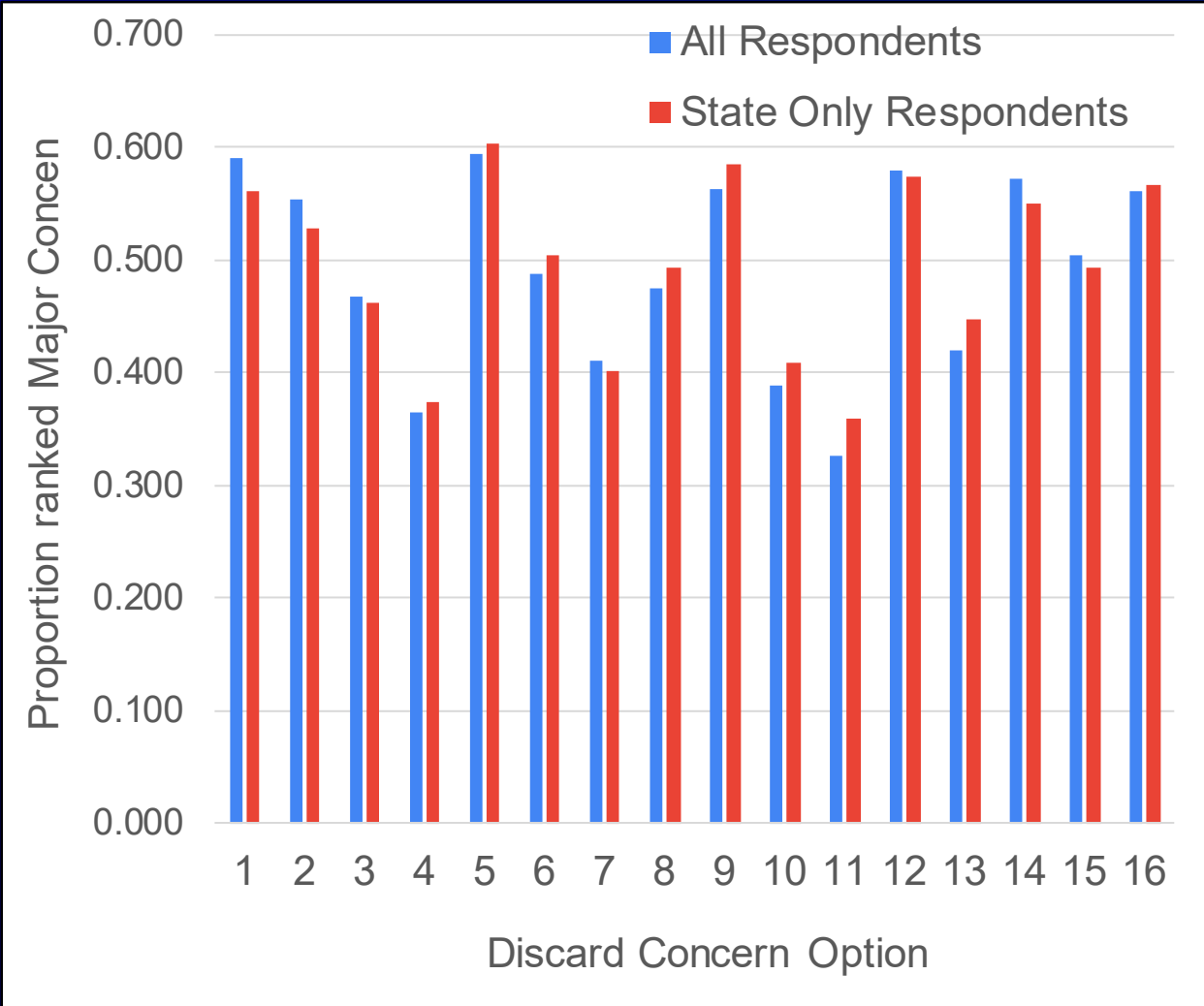
Overview Stakeholder Scoping Feedback

- Online stakeholder feedback form available from January 11 – 25, 2021
- Combination of mandatory, close-ended and optional, open-ended questions
- Topics included – concerns, objectives, strategies, data, unknowns
- Solicitation for core stakeholder group – collected additional demographic info
- 818 individual responses – at least one from each state from MA-NC
 - 285 responses with additional demographic info – used for regional analysis discussed here
- Information collected to help focus regional workshops and be evaluated as part of MSE project

Regional Stakeholder Demographics



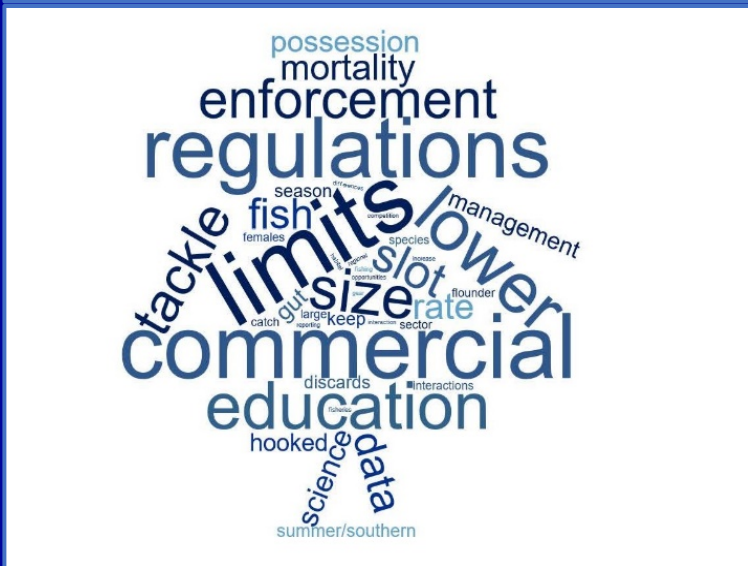
Discard Concerns



Management Objectives – Top 5 Priorities

Rank	All Respondents	MA-CT	NY-DE	MD-NC
1	Maximize chances a trip produces a legal sized fish	Minimize risk of overfishing and stock becoming overfished	Maximize chances a trip produces a legal sized fish	Improve quality of recreational fishing experience
2	Improve quality of recreational fishing experience	Minimize the mortality of released summer flounder	Minimize the mortality of released summer flounder	Minimize negative biological impacts to the summer flounder stock
3	Minimize the mortality of released summer flounder	Minimize negative biological impacts to the summer flounder stock	Minimize the differences in regulations between neighboring states	Maximize recreational fishing participation in all sectors
4	Minimize the differences in regulations between neighboring states	Maximize chances a trip produces a legal sized fish	Improve quality of recreational fishing experience	Minimize risk of overfishing and stock becoming overfished
5	Minimize risk of overfishing and stock becoming overfished	Improve quality of recreational fishing experience	Reduce the harvest of female summer flounder	Minimize the mortality of released summer flounder

Open-Ended Response – Use in MSE



- Discard Concerns – Broad Categories
 - Commercial Fishery
 - Enforcement and Education
 - Regulations
 - Gear and Tackle
 - Management
 - Science and Data

Open-Ended Response – Use in MSE

Common general themes	Possible to model (Y/N/M/Proxy)	Within scope of MSE (Y/N/M/Proxy)
Ban use/get rid of commercial gill nets, bottom trawls, small mesh	Y	N
Angler education programs: proper handling, safe release, proper release of gut hooked fish, guidelines to maximize fish survival	Proxy	Proxy
Increase opportunities to keep a fish; angler satisfaction	Y	Y
Loss of summer flounder habitat; impacts of beach replenishment projects	M	M/N
Lower the size limit (e.g., 14", 15", 16", or 17"); allowance for one large (e.g., >22") fish	Y	Y

Stakeholder Feedback Scoping Information

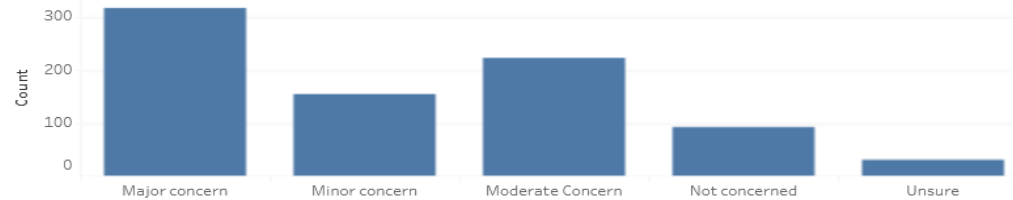
MAFMC Survey Dashboard

Welcome to the MAFMC Survey Dashboard! This dashboard shows responses to the MAFMC MSE Summer Flounder Stakeholder Survey. To begin, choose an option from the dropdown below. Then, click a bar, pie section, State, or response on any graph to filter by that attribute. For instance, you can click a state to show only responses from that state. This allows you to view survey responses and demographics by location, role, or level of concern for a particular topic.

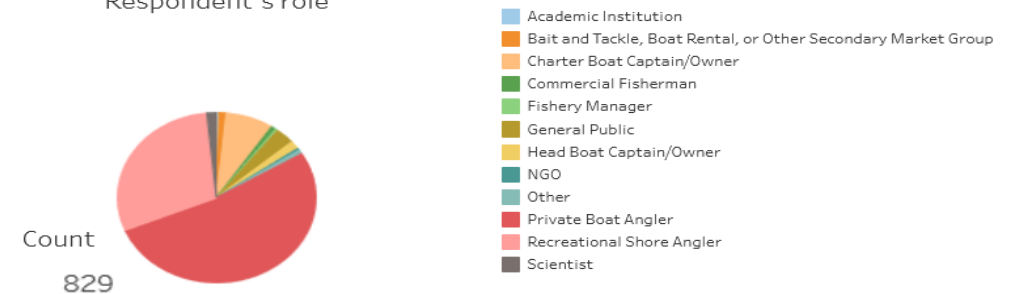
Select a potential topic of concern about discard-related impacts in recreational summer flounder fisheries:

Lack of angler knowledge of proper discarding techniques to reduce mortality

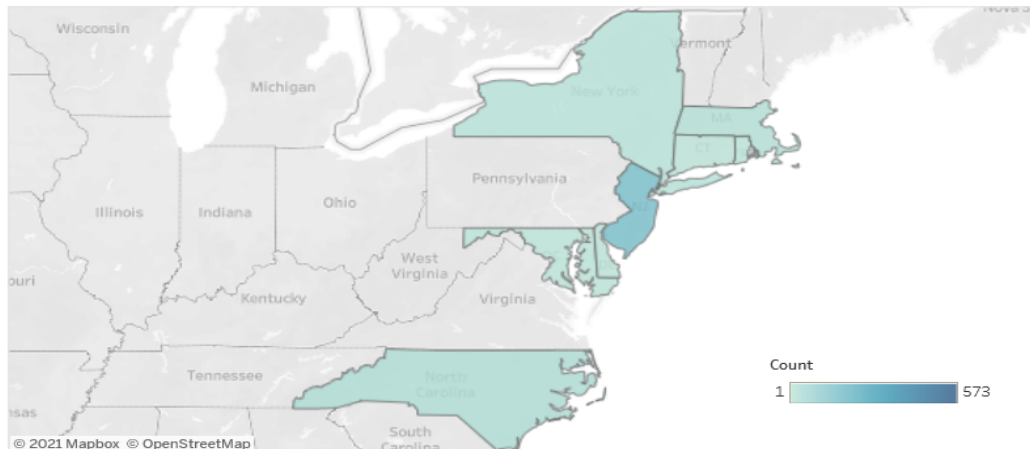
How concerned were respondents about this topic?



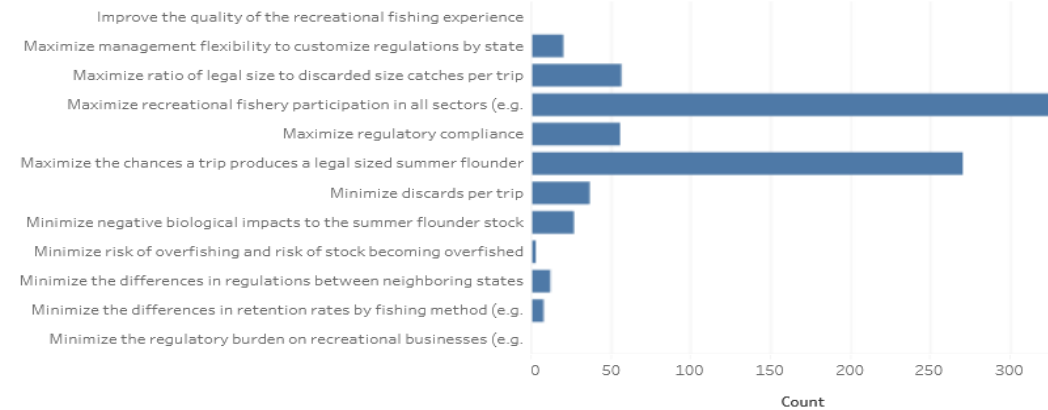
Respondent's role



Number of responses per state



What management objectives do respondents feel are the most critical to achieve from this MSE process?

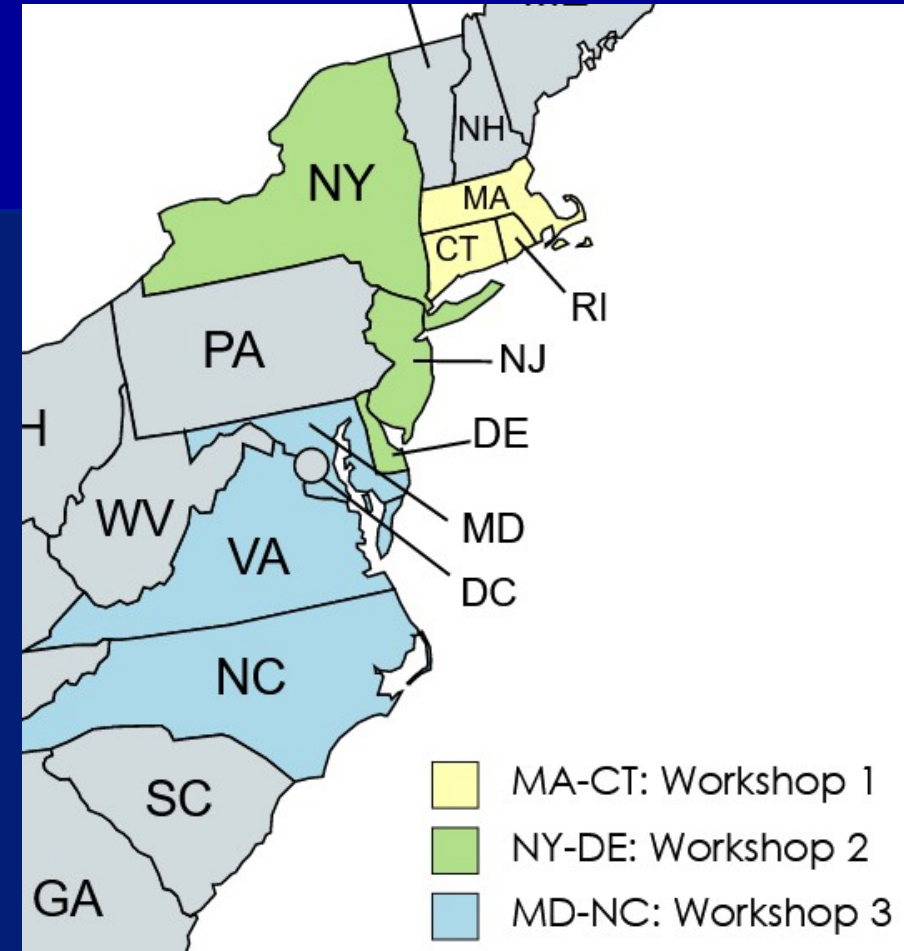


What are respondents concerned about regarding recreational summer

What uncertainties do respondents believe will aid in predicting the range of

Regional MSE Workshops

- Approach: similar topics and stakeholder participation as scoping form but more structured and interactive
- Workshop format:
 - Intro presentations – EAFM process, basics of MSE, summary of scoping results
 - Discussion and input – full and breakout groups
 - Concerns, objectives, strategies
 - Core group overview
- MA-CT: Monday, March 29th 5:30 – 8:00 P.M.
- NY-DE: Wed, March 31st 5:30-8:00 P.M.
- MD-NC: Monday, April 5th 5:30-8:00 P.M.



Core Stakeholder Group

- Working in large groups can be challenging and inefficient
- Move to more focused and smaller groups to effectively progress through the MSE
 - 12-15 core stakeholder group participants
 - Represent a range of fishery perspectives
 - Participate in three workshops
- Significant interest in participating – 282 individuals and 185 recommended by peer
- Technical WG beginning to review interest and make recommendations



Next Steps and Planned Approach

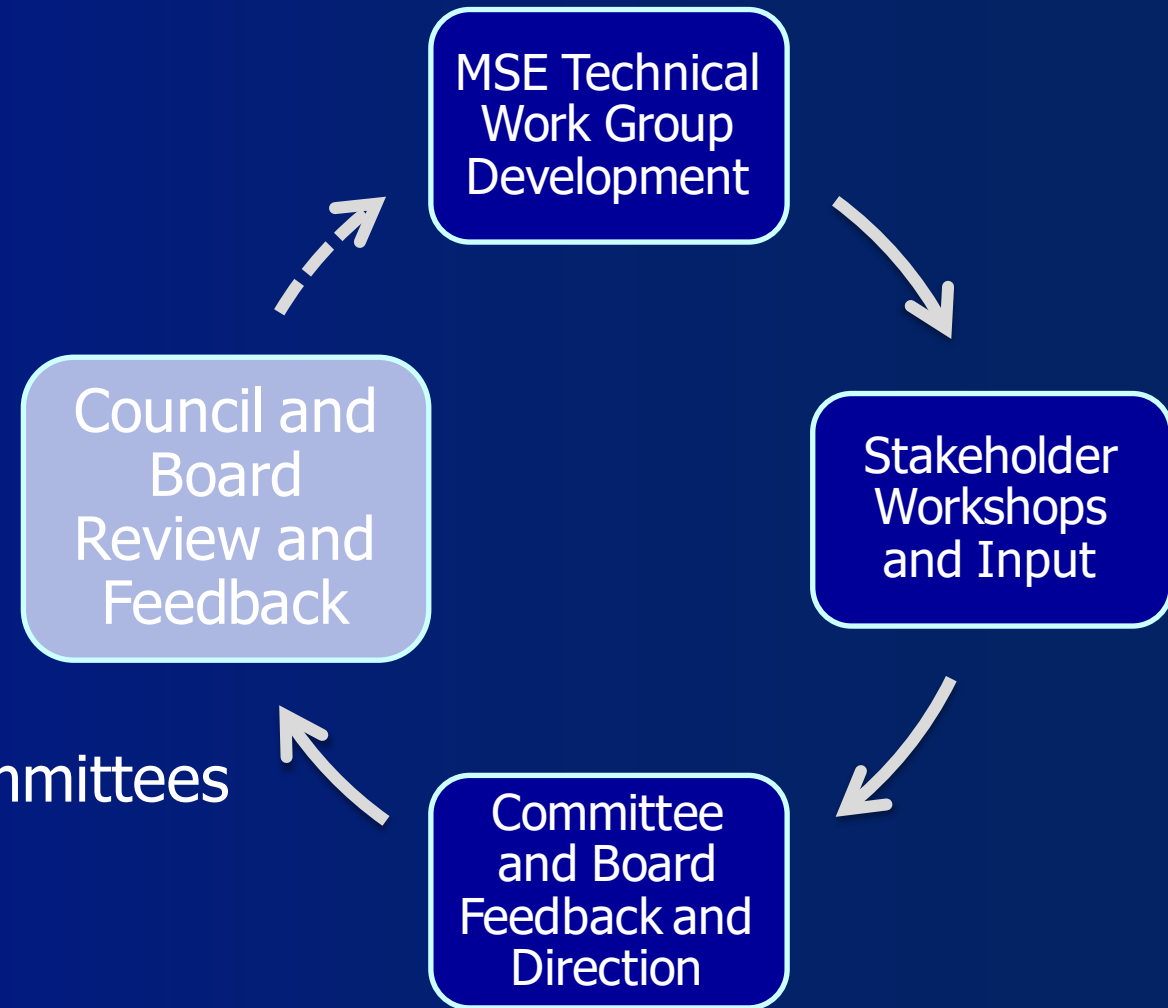
- Planning 3 core stakeholder group workshops (next 8 – 10 months)

- W1: Identify management objectives, performance metrics, and uncertainties
- W2: Input on initial model development and results
- W3: Review updated model and “final” results

- Iterative process with Core Group → Committees

→ Council and Board

- August and December joint meetings



Anticipated Tasks and Timeline

Task/Activity	Timeframe (subject to change)
Finalize technical work group membership and initial meeting	May 2020
Kick-off webinar and mock workshop with Council and ASMFC advisory panels	September 2020
Stakeholder scoping feedback form	January 2021
Regional MSE workshops	March – April 2021
Finalize core stakeholder group; initial core stakeholder workshop and Committee/Board sub-group meeting to develop objectives/performance metrics/uncertainties; data synthesis, initial model development and linking existing models	May – August 2021
Simulation testing of management strategies; model refinement as necessary; deliver interim results at second stakeholder workshop and Committee/Board sub-group meeting	September – December 2021
Continue with MSE analysis; third stakeholder workshop and Committee/Board sub-group meeting to review draft final results; refine models and results, as needed	January 2022 – March 2022
Review final results; Council and ASMFC Board considers potential management alternatives and action to address recreational summer flounder discards	April/May 2022

Other EAFM Related Activities

- Project: *Short-term forecasts of species distributions for fisheries management*
- Co-PI with M. Pinsky and A. Fredston, Rutgers University
- Develop and test new methods and models to predict short-term (1-10 year) climate induced distribution shifts
- Focal species: summer flounder, *Illex*, spiny dogfish, and gray triggerfish

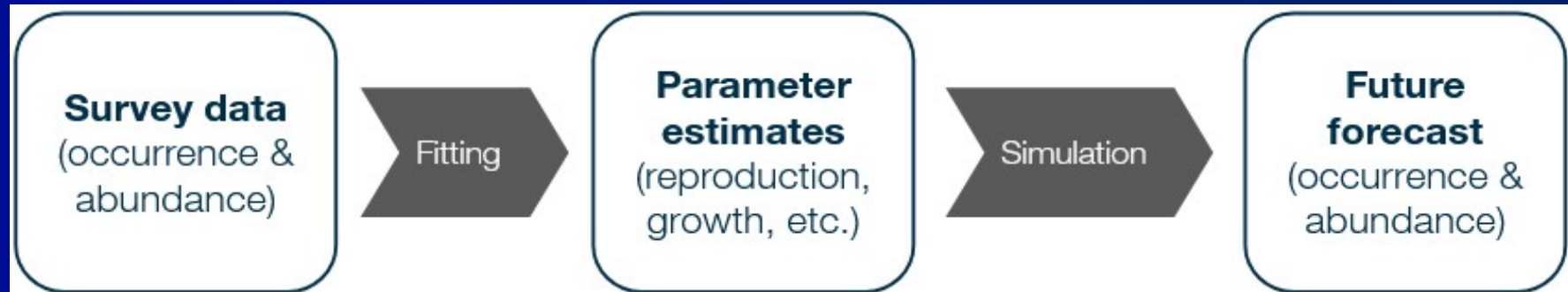
Mismatch in timescales



Figure by Pinsky – from July 1, 2020 Lenfest webinar presentation

Short-Term Distribution Project

- Dynamic range models include:
 - Spatial population structure (spatial patches)
 - Dispersal between adjacent patches
 - Life stage structure (small juv., large juv., adults)
 - Temperature dependent growth or fecundity
- Completing process models and developing observation models



Short-Term Distribution Project

- Upcoming Outreach and Communication
 - April – manuscript submission on model and methods, simulation testing, and test case application
 - Summer 2021 – abstract submissions to Ecological Society of America and the Applied Mathematics annual meetings
 - Late summer/early fall – webinar with EOP Committee and AP to present and get feedback project development and preliminary results
- Anticipated timeline
 - Summer 2021 – fitted model for each focal species completed
 - 2022 – incorporate fishing pressure in model; complete project

Meeting Goals

- Today, just an update on EAFM activities
- No specific Council action needed
- Offer any feedback or direction

<https://www.mafmc.org/actions/summer-flounder-mse>

Questions??