

RI Marine Fisheries Council  
**Winter Flounder Advisory Panel**  
**Meeting Minutes**  
**January 17, 2012, 6:00 PM**  
 URI GSO, Narragansett, RI

C. Powell, Chairman	M. Bucko*
J. Carvalho <sup>A</sup>	P. Karcz*
S. Trivisono*	G. Allen <sup>A</sup>
M. Lanni*	J. Jarvis
J. Barker	
D. Fox	J. Lake, RIDFW Staff

(\*Primary AP member; <sup>A</sup> Alternate member)

C. Powell, Chair called the meeting to order. Six of twelve panel members or alternates were present. First on the agenda was a presentation given by J. Lake RIDFW staff concerning stock status (see attached) of the southern new England/mid Atlantic bight (SNE/MA) winter flounder. The presentation explained the data and methodology used at the most recent winter flounder stock assessment (SAW52). The model used in determining biological reference points was changed to a statistical catch at age model. Natural mortality rate was raised to 0.3 to account for increased predation and the affect of climate change (warmer winters) on the population. Climate change (warmer winters) was shown to be a negative factor affecting winter flounder recruitment. The result of the model show that the SNE/MA winter flounder stock is not experiencing overfishing but the stock is overfished. Additionally the model showed that the stock will not meet the 2014 rebuild date.

After the stock status talk J. Lake displayed some pertinent current regulations in place for the 2012 fishing season for consideration. He explained that this was what is already in place (status quo) and asked if there was agreement with them.

**Commercial Regulations**

- Minimum Size 12"
- No Closed Season
- 50 lbs/vs/day possession limit

**Recreational Regulations**

- Minimum Size 12"
- Open Seasons:
  - April 28 – May 27, 2012
  - September 29 – October 28, 2012
- 2 fish/person/day possession limit
- No Commercial or Recreational harvest in Narragansett Bay north of the Colregs line, and in Point Judith Pond and the Harbor of Refuge.

M. Lanni and P. Karcz stated they would favor changing the commercial limit from 50 to 0 lbs per vessel day. This approach would protect the already low population further. J Carvalho stated he is in favor of keeping the limit as is because it allows fishermen to keep their incidental winter flounder catch instead of making them wasteful discards. He stated no vessels target winter flounder and that a 50 lbs limit used by a small state only dragger fleet of 5 -10 active vessels would not have a large impact. J Lake added that the limit also allows for the collection of commercial biological data. All of the other panel members present supported the status quo providing that science supports allowing a small commercial and recreational harvest. The chair will follow up with M. Lanni and P. Karcz to determine if they will submit and alternate proposal. **The majority of the AP supported keeping the winter flounder regulations already in place for 2012.**

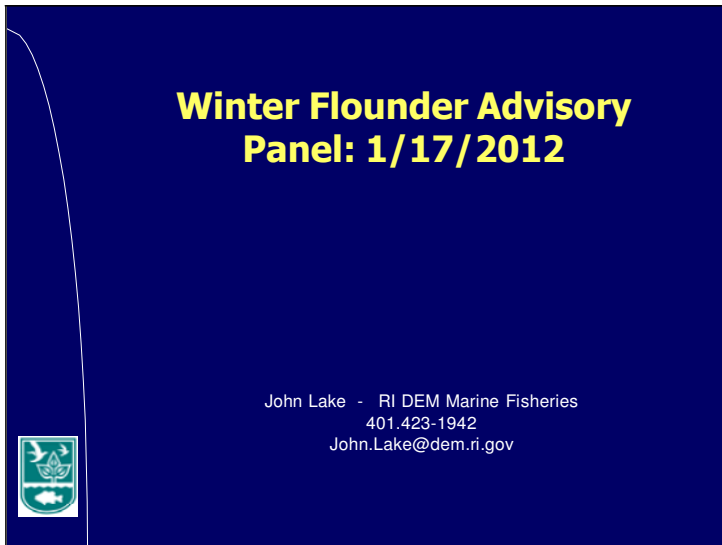
Next the chair gave a presentation from G. Allen and M. Bucko concerning starting a study of the decline of winter flounder in Narragansett Bay (see attached). G. Allen reminded the panel that RISAA is willing to offer financial support for the project but RIDFW is reluctant to take monies from outside stakeholder groups and would rather use in house funds. J. Lake concurred citing issues with accepting money from private/stakeholder organizations. G. Allen stated that the first two parts of the study should identify the factors contributing to the collapse of winter flounder in the bay and evaluate whether current monitoring is sufficient to classify the population. J. Lake explained that many surveys which target winter flounder in the bay are ongoing and will continue to monitor the population. If additional measures are needed they can likely be added. The chair suggested monitoring winter flounder spawning stage from fish caught on the RIDFW Spring trawl survey. J. Carvalho was concerned with the presentations portrayal of discard mortality being a significant factor in the decline of the population stating that the mesh sizes used in the bay are large enough to allow flounder to escape and that there is no directed fishing for flounder in the bay anymore and the grounds being fished do not have many flounder. He would like to see data supporting the claim. During the proposal there was much discussion on predation on winter flounder in RI waters. M. Lanni stated that management has gone as far as it can go and that it is time to find creative ways to remove the predators notably cormorants and seals. **The entire group agreed that the RIDEM should begin to look into ways to obtain federal permits to remove cormorants and seals from RI waters.**

The issue of creating areas of the bay where bottom tending gear would be prohibited was raised in the proposal. J. Carvalho was opposed to this idea stating that there are already many areas of the bay where towing is prohibited and adding more takes away from the meaning of the regulations. There have been restrictions in place for 15 years which have produced no discernable effect. Fishing effort has also dramatically reduced in this time frame , now there are only 5 – 10 boats who drag the bay and have little impact on the winter flounder population. The last part of the presentation concerned using aquaculture to enhance the local winter flounder stocks. J Lake explained the RIDFW did run a winter flounder hatchery in the distant past with no measurable effect. M. Bucko stated he thought it would be a good short term solution to enhancing recruitment but wondered how cost effective it would be and how to account for site fidelity. J. Jarvis commented that oyster aquaculture cages make good predation refuges

for YOY winter flounder. M Bucko suggested that the RI Recreational Saltwater Angler License be used as a match to federal funds to fund the study. J. Lake stated the most appropriate RIDFW funding source would be via their US Fish and Wildlife Sport restoration grant but others may exist. **At the end of the presentation the group arrived at the consensus that RIDEM should look into how to fund the study of winter flounder in Narragansett Bay to be carried out in house or by an outside entity (Academia or Consultant). The study should address the four phases from the presentation.**

After discussion of the proposal J. Barker gave a brief presentation on the winter flounder aquaculture work being done by Prof. Fairchild at UNH which uses methodology from Japan to enhance flounder populations. He feels it has merit and a similar program should be implemented in RI. He has contacted Sen. Reed and Sen. Whitehouse urging them to pursue federal funding for winter flounder aquaculture. He notes that other states run hatcheries as a collaborative effort. He feels that if a program such as this is to succeed RIDEM should partner with the private sector.

Having no other business the meeting concluded at 8:15 PM.



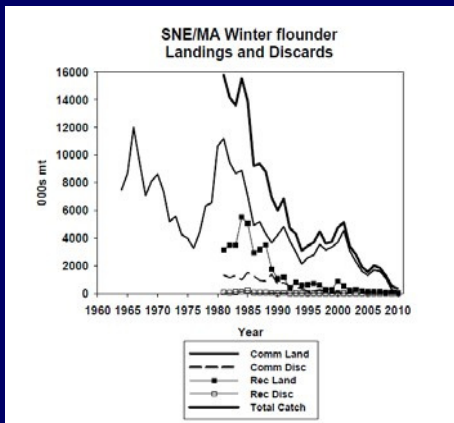


Figure A9 Commercial landings (1964-2010), commercial discards (1981-2010) recreational landings (1981-2010), recreational discards (1981-2010) and total fishery catch (1981-2010) for the SNE/MA winter flounder stock complex.

### Map of SNE/MA Winter flounder stock

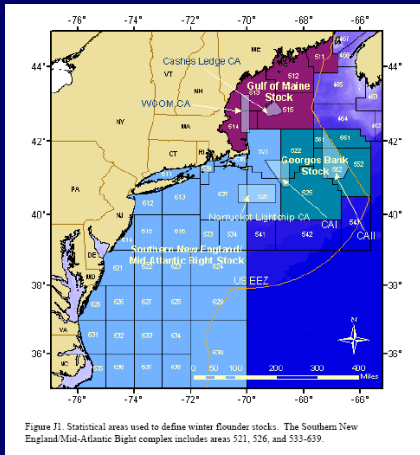


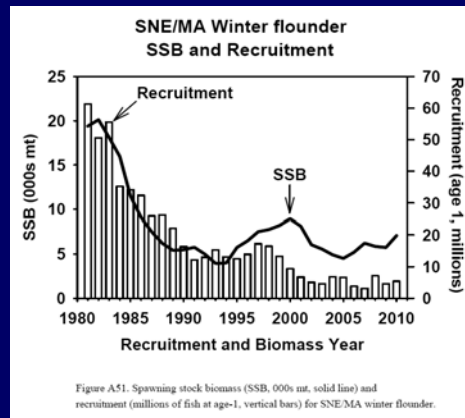
Figure J1. Statistical areas used to define winter flounder stocks. The Southern New England-Mid-Atlantic Bight complex includes areas 521, 526, and 533-639.

## Stock Assessment – Model & Data Overview

### Assessment Overview

- Most recent peer reviewed assessment for winter flounder occurred at the 52<sup>nd</sup> Stock Assessment Workshop at the NEFSC, Woods Hole, MA, June 6- 10, 2011
- Fishing mortality (F) & stock biomass estimates were generated using Statistical Catch at Age Model (ASAP SCAA),  $F_{MSY}$ ,  $SSB_{MSY}$  and MSY calculated with a stock recruitment model.
- Natural mortality (M) value was increased from 0.2 to 0.3 for all winter flounder stocks across all ages.
- Although not incorporated in the analysis, based on the stock recruitment model, warm winter temperatures are suggested to have a negative effect on recruitment of SNE/MA winter flounder.

## SNE/MA Winter Flounder Recruitment



## Stock Assessment – Model & Data Overview

### Data Considered in Assessment Models

#### Fishery Dependant Data (1981 – 2010)

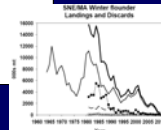
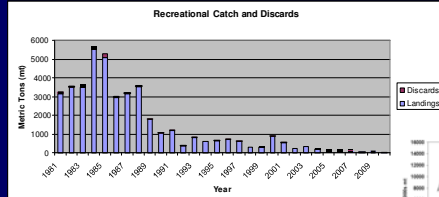
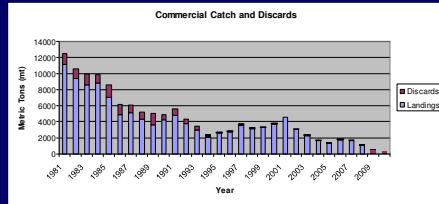
Commercial & Recreational landings & discards  
Port Sampling      To assess biological  
MRFSS (MRIP)      composition of catch

#### Fishery Independent Data

NEFSC Trawls (Spring, Fall, Winter)  
State Trawl surveys: MA, RI, CT, NY, NJ, DE, URI-GSO  
State YOY indices: MA, RI, NY, DE



## SNE/MA Winter Flounder Fishery Dependent Data Landings and Discards



## Location of Commercial SNE/MA Catch

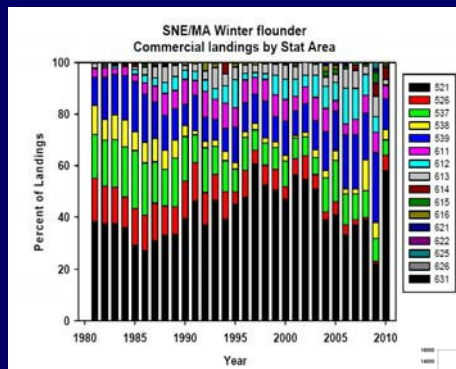
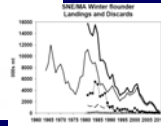
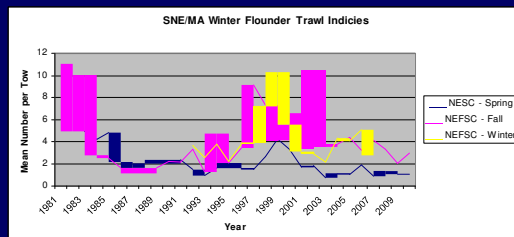


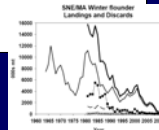
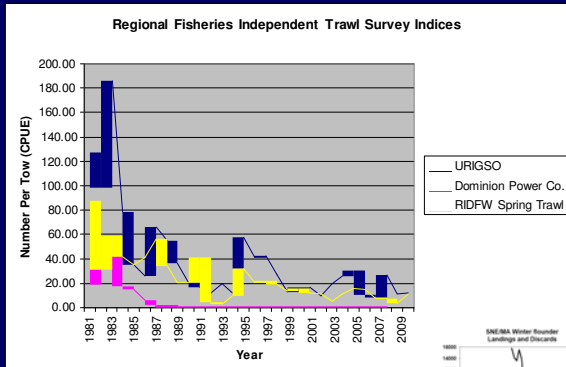
Figure A10. Commercial fishery landings of SNE/MA winter flounder by statistical area.



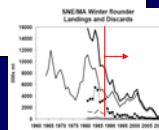
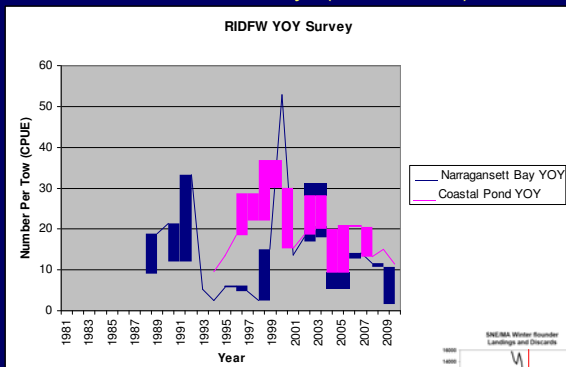
## Winter Flounder Fishery Independent Data – NEFSC Trawl Survey



## Winter Flounder Fishery Independent Data – RI Trawl Survey



## Winter Flounder Fishery Independent Data – RIDEM Seine Surveys (Recruitment)



## Status & Projections

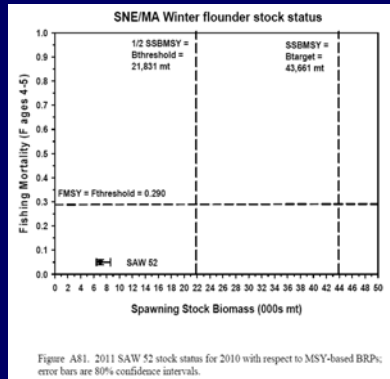
Based on SAW52 ASAP SCAA model

$F_{MSY}$	0.248	
$F_{2010}$	0.051	
$F_{2010}/F_{MSY}$	$0.051/2.90 = 18\%$	No Overfishing
$SSB_{MSY}$	46,661 mt	
$SSB_{Threshold}$	21,831 mt	
$SSB_{2010}$	7,076 mt	
$SSB_{2010}/SSB_{MSY}$	$7,076/46,661 = 16\%$	Stock is Overfished
<b>Projected 2011</b>		
$F_{2011}$	0.100	
Total Catch 2011	842 mt	
$SSB_{2011}$	9,177 mt	
$SSB_{MSY}$	46,661 mt	

< 1 % chance that stock will be rebuilt to  $SSB_{MSY}$  46,661 mt by 2014



## 2010 SNE/MA Winter Flounder Stock Status



SNE/MA winter flounder stock is not Overfished but Overfishing is occurring

$F_{2010}/F_{MSY}$	0.051
$SSB_{2010}/SSB_{MSY}$	7,076 mt



## RI 2012 Winter Flounder Regulations

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RIDFW recommends status quo



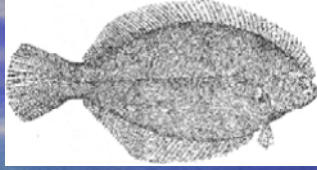




Thank You – any questions?



## Winter Flounder Proposal Presentation given by Chris Powell



### Winter Flounder Proposal George Allen & Mike Bucko

**To keep in mind** – Winter flounder is only one species in a web of species in Narragansett Bay. A disruption of the life history equilibrium of one species can have a cascading effect on the whole ecosystem. This can result in the niche of one species being taken by another making recovery of the target species difficult.

### Proposed Step 1.

**Determine the extent and factors contributing to the collapse of winter flounder in Narragansett Bay & Coastal Ponds.**

**Extent:** Can be determined with surveys

#### **Factors that may impact winter flounder populations:**

- \* Water Quality changes – DO, toxics, chemicals, nutrients (nitrification & eutrophication)
- \* Habitat loss & degradation – dredging, development, sedimentation
- \* Over-fishing
- \* By-catch and discard mortality – gulls and other predators
- \* Climate Change – increasing water temps. & sea level rise
- \* Niche displacement
- \* Food web disruptions
- \* Predation – *Crangon*, gulls, seals, cormorants etc

Marine Fisheries Staff comments:

- \* Worthwhile idea
- \* Need resources to do this – personal and \$\$
- \* Repeat the Collie study of 2002 with new data
- \* Using this to measure response and improvements to population
- \* Life history analysis ala Collie to evaluate bottlenecks for management responses
- \* Study to look at by-catch data previously collected to evaluate mortality. This was done, data showed substantial mortality with no MFC action taken

**Proposed Step 2:**

**Monitor winter flounder populations to assess the size and distribution of spawners, YOYs, and 1 & 2 year old fish in Narragansett Bay and coastal ponds.**

We have data:

- \* Historical studies: Winter Flounder Tagging Study in Narr. Bay and Mt. Hope Bay. Other Division studies and published work.
- \* Ongoing studies: Trawl Survey, Juvenile Finfish Surveys in NB and Coastal Ponds, Fyke Net/Tagging Study in Coastal Ponds.
- \* Egg and Larval Studies: MRI/Normandeau, DEM, URI, Rome Pt. etc.

Marine Fisheries Staff comments:

- \* Need additional monitoring to determine reproduction and recruitment areas of bay and coastal ponds
- \* Monitoring would provide a baseline for measuring recovery
- \* Additional monitoring would be justified
- \* Existing surveys (monitoring) with possible changes (eg. additional stations) are adequate
- \* We probably have adequate data to perform an adequate assessment
- \* Need staff to do this or contract person or student
- \* Need observer coverage of the bay fisheries

### **Proposed Step 3**

**Determine areas of the Bay where aggregations of spawners, YOY, and 1&2 year old flounder occur and set up protected areas and prohibit bottom tending gear in these areas.**

My comments:

- \* We do have studies that identify spawning areas and juvenile nursery areas: tagging studies, finfish surveys and juvenile surveys
- \* We don't know where age 1 and 2 flounder go
- \* We could propose seasonal closures of areas to bottom tending gear (trawls, bullrakes and dredges) during spawning and incubation periods

Marine Fisheries Staff comments:

- \* Current winter flounder fishing restriction - by-catch and discard mortality may be a problem
- \* Bottom tending gear is disruptive to habitat and demersal egg masses
- \* Fisherman don't like the term sanctuary
- \* Protections may need to be in place year around to protect juveniles
- \* Would gear restrictions benefit YOYs and 1-2 year olds since most gear is used in deeper water? eg. trawling and bullraking
- \* Do juveniles occur in deeper water >20ft? New studies could answer this question
- \* One hypothesis - due to rising water temp fish are altering this dynamics and have moved into deeper water therefore making them more susceptible to gear and predators. Current data might answer this hypothesis

**Proposed Step 4**

**Evaluate whether winter flounder aquaculture (hatchery) would be a viable tool to enhance stock recovery.**



To consider:

This species is easily spawned and raised in a hatchery but the effort, cost and benefits have to be considered.



Marine Fisheries Staff comments:

- \* Japan has had some success in this area
- \* UNH researcher has a grant to examine this for New England
- \* We should keep tabs on the UNH research and findings
- \* Restoration using existing gene pools from Narragansett Bay and coastal pond populations
- \* Caging study on spawning population in suitable habitat to monitor recruitment from spawns



Bottom Line:

We need to ask -

- \* This is a very complex issue with many factors affecting the species and the fishery.
- \* Do we have the resources to address the proposal?
- \* What is the probability of restoring the fishery?
- \* Considering other fishery issues and resource limitations is winter flounder restoration worth pursuing at this time?