New England Fishery Management Council
50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116
John Pappalardo, *Chairman* | Paul J. Howard, *Executive Director*

MEMORANDUM

DATE: **May 30, 2007**

TO: Multispecies Oversight Committee

FROM: Skate PDT

SUBJECT: **Rebuilding advice for Amendment 3**

The PDT analyzed new life history data for winter skate and developed the following recommendations about rebuilding potential for winter and thorny skate, as well as some advice regarding measures that would be effective at controlling catch and reducing mortality.

1. An eight percent annual change in biomass of winter skate is needed to rebuild to the target in 10 years. A nine percent change in biomass of thorny skate is needed to rebuild to the target in 25 years.

2. A mean generation time for female winter skates has been estimated to be about 15 years over a range of reasonable assumptions. Thorny skates have similar life history parameters and probably have a similar mean generation time.

3. For winter skate, rates of biomass change have ranged from 0.17 during 1975 to 1987 to -0.08 during 1999-2005.

4. Based on intrinsic rate of change calculations, a catch reduction of approximately 25% from the 1989-2006 average is needed to stabilize the winter skate population at present biomass level. Compared to 2005, this represents a 5% reduction in catch assuming a discard mortality rate of 25%. Assuming a 50% discard mortality rate, the 2005 landings would on average stabilize winter skate biomass.

5. Based on intrinsic rate of change calculations, a catch reduction of approximately 60% from the 1989-2006 average is needed to achieve a 10% per year increase in the biomass of winter skate. Compared to 2005, this represents a 50% reduction

in catch assuming 25% discard mortality and a 40% reduction in catch assuming 50% discard mortality.

6. Estimates of the recovery potential for little skate may be possible to calculate with existing data, but additional analysis is needed.

7. The main problem preventing thorny and smooth skate from increasing in biomass is discarding. Some reduction is needed to begin rebuilding thorny and preventing smooth skate from becoming overfished, but the PDT cannot estimate with current information how much reduction is needed. These species primarily occur in the Gulf of Maine. Port samples are also seeing landings of prohibited skates.

8. The increasing landings in the wing fishery is the major concern for the conservation of winter skates. However, incidental landings and discards in state water and offshore small mesh fisheries (fisheries that do not require DAS use) that target other species (e.g. summer flounder, whiting, squid, and scup) may also be a concern.

9. Gear restricted areas may be very effective at reducing incidental catch of certain skate species in need of conservation and should be evaluated. There appear to be sufficient contrast in commercial CPUE by gear to identify small areas that could be effective.

10. Some type of adjustment mechanism should be implemented as an accountability measure within Amendment 3. One form of AM might institute automatic adjustments in specifications based on changes in biomass relative to a pre-specified annual benchmark. Another form that should be considered is an automatic adjustment in the annual catch limit (ACL) that accounts for a previous year's overage.