

# Overview of the Marine Mammal Protection Act (MMPA)



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# Goals of the Marine Mammal Protection Act (MMPA)

- **To maintain the optimum sustainable population (OSP)\* and ecosystem function of marine mammal stocks**
- **To restore depleted stocks to their optimum sustainable population levels**
- **To reduce mortality and serious injury (bycatch) of marine mammals incidental to commercial fishing operations to insignificant levels approaching a zero mortality and serious injury rate**

*\*OSP is defined as ... the number of animals which will result in the maximum productivity of the population or the species... [MMPA, sec. 3(9)]*

# MMPA Strategy for Reducing Bycatch of Marine Mammals

- Prepare stock assessment reports (SARs)
- Categorize fisheries according to levels of bycatch (list of fisheries)
- Register participants in category I and II fisheries (marine mammal authorization program)
- Monitor category I and II fisheries (observer program)
- Require reporting of all injuries and mortalities
- Develop take reduction plans

# Stock Assessment Reports (SAR)

- Describe the geographic range of the affected stocks
- Provide for the stock a minimum population estimate, current and net productivity rates, and current population trends
- Estimate the potential biological removal (PBR) level for the stock
- Describe commercial fisheries that interact with the stock
- Estimate the annual human-caused mortality and serious injury
- Categorize the status of the stock as one that either -
  - Has a level of human-caused mortality and serious injury that is not likely to cause the stock to be reduced below its optimum sustainable population
  - Is a strategic stock...
- SAR undergo review by independent scientific review group (SRG).

*\*Section 117 of the MMPA calls for the establishment of three independent regional review groups to advise the secretary of commerce on above and other issues and deemed appropriate*

# Potential Biological Removal (PBR)

*“The maximum number of animals, excluding natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population” [MMPA, sec. 3(20)]*

# PBR Calculations

- The potential biological removal level is the product of:
  - The minimum population estimate ( $N_{\min}$ )
  - One-half the maximum theoretical or estimated net productivity rate of the stock ( $R_{\max}$ )
  - A recovery factor between 0.1 and 1.0

$$\text{PBR} = N_{\min} \times \frac{1}{2} R_{\max} \times F_R$$

# List of Fisheries (LOF)

- **Prioritizes and identifies fisheries according to the degree of mortality and serious injury that occurs incidental to commercial fishing**
- **Two-tiered, stock specific approach**
  - **Tier 1: relationship between marine mammal mortality/serious injuries and all fisheries**
    - If total mortality/serious injury across all fisheries  $\leq 10\%$  PBR
    - Then...All fisheries category III
    - Else...Go to tier 2
  - **Tier 2: relationship between marine mammal mortality/serious injury and a specific fishery**
    - Category I: mortality/serious injury  $\geq 50\%$  PBR
    - Category II:  $50\%$  PBR  $>$  mortality/serious injury  $> 1\%$  PBR
    - Category III: mortality/serious injury  $\leq 1\%$  PBR

# Fishery Classification Criteria

Category I: fisheries with “frequent” bycatch of marine mammals

- Frequent = has an annual removal of  $\geq 50\%$  of any stock's PBR

Category II: fisheries with “occasional” bycatch of marine mammals

- Occasional = with other fisheries, has an annual removal of  $> 10\%$  of any stock's PBR, and is by itself responsible for the annual removal of between 1% and 50% of any stock's PBR

Category III: fisheries with a “remote likelihood” of bycatch of marine mammals

- Remote likelihood = with other fisheries, has an annual removal of  $\leq 10\%$  of any stock's PBR, or is by itself responsible for the annual removal of  $< 1\%$  of every stock's PBR

# Examples of Fishery Categorizations

- **Category I**
  - Northeast/mid-Atlantic American lobster trap/pot
  - Northeast sink gillnet
  - Mid-Atlantic gillnet
  - Mid-Atlantic mid-water trawl
- **Category II**
  - Atlantic mixed species trap/pot (e.g., Hagfish, Jonah crab)
  - Atlantic blue crab trap/pot
  - Southeastern U.S. Atlantic shark gillnet
  - Southeast Atlantic gillnet
  - Northeast mid-water trawl
  - Northeast and mid-Atlantic bottom trawl
- **Category III**
  - Southeast U.S. Atlantic, gulf of Mexico golden crab trap/pot
  - Delaware bay inshore gillnet

# Marine Mammal Authorization Program

- To engage in the lawful incidental taking of marine mammals in a category I or II commercial fishery, an owner of a vessel:
  - Must be issued and carry onboard a MMAP certificate
  - Report marine mammal injury or mortality
  - Take an observer if requested
  - Comply with applicable take reduction plans and emergency regulations
- At the beginning of each year; permitted vessel owners in integrated fisheries are sent an MMAP certificate for the year, the terms and conditions of the authorization, and marine mammal injury and reporting forms

*Section 118*

# Observer Programs

- NMFS is required to establish a program to monitor incidental mortality and serious injury of marine mammals in commercial fisheries in order to:
  - Obtain statistically reliable estimates
  - Determine the reliability of reports
  - Identify changes in fishing methods and technology that may increase or decrease incidental mortality and serious injury

*MMPA section 118(d)*

# Reporting

- Report all incidental mortality and injury of marine mammals in the course of commercial fishing operations to NMFS within 48 hours of the end of each fishing trip
- Applies to all U.S. Commercial fisheries
- Standard form

*MMPA section 118(e)*

# Take Reduction Teams and Plans

- Section 118 of the MMPA requires NMFS to develop and implement take reduction plans (TRP) designed to assist in the recovery or prevent the depletion of each strategic stocks which interact with a **category I or II fishery**
- Section 118 MMPA calls for the establishment of take reduction teams (TRT) to develop, and submit to NMFS a take reduction plan for strategic stocks of marine mammals

# Strategic Stocks

1. Human-caused mortality  $>$  PBR level
2. Threatened or endangered status under the ESA or a depleted listing under the MMPA\*
3. Declining and likely to be listed under the endangered species act (ESA), or MMPA in the foreseeable future

\*A depleted stock is below its optimal sustainable population (OSP) size...

# Take Reduction Plan Goals

- Immediate goal “...reduce, within 6 months of its implementation, incidental mortality or serious injury of marine mammals incidentally taken in commercial fishing operations to levels less than PBR...”
- Long-term goal “...to reduce, within 5 years of the plan’s implementation, the mortality and serious injury (bycatch) of marine mammals...to insignificant levels approaching a zero mortality and serious injury rate, taking into account the economics of the fishery, the availability of existing technology, and existing state or regional fishery management plans.”...” (ZMRG)

# Take Reduction Teams

- **Tasked with the development of Take Reduction Plans (TRPs)**
- **Members will have expertise regarding the conservation/biology of the marine mammal species or the fishing practices which result in the take of such species, e.g.**
  - Fishing Associations/Fishermen
  - Federal/State Representatives
  - Councils/Commissions
  - Scientists
  - Conservationists

# Content of Take Reduction Plans

- **Review of SARs and new information.**
- **Estimate of total number of marine mammals being taken annually by species and by fishery.**
- **Discussion of all alternate measures considered and reviewed by team and why rejected/accepted.**
- **Recommended regulatory and voluntary measures.**
- **Estimates of the percentage of the required bycatch reduction that will be achieved by each recommended measure.**
- **Monitoring plans to determine the success of each measure.**
- **Recommended dates for achieving specific objectives of the TRP.**
- \* *TRPs for stocks listed under the ESA must be consistent with any ESA recovery plan.*

# Potential Take Reduction Measures

- **Fishery-specific limits on bycatch (quotas)**
- **Time/area closures**
- **Alternative fishing gear/techniques/technologies**
- **Education and outreach materials/workshops**

# TRP Development Process

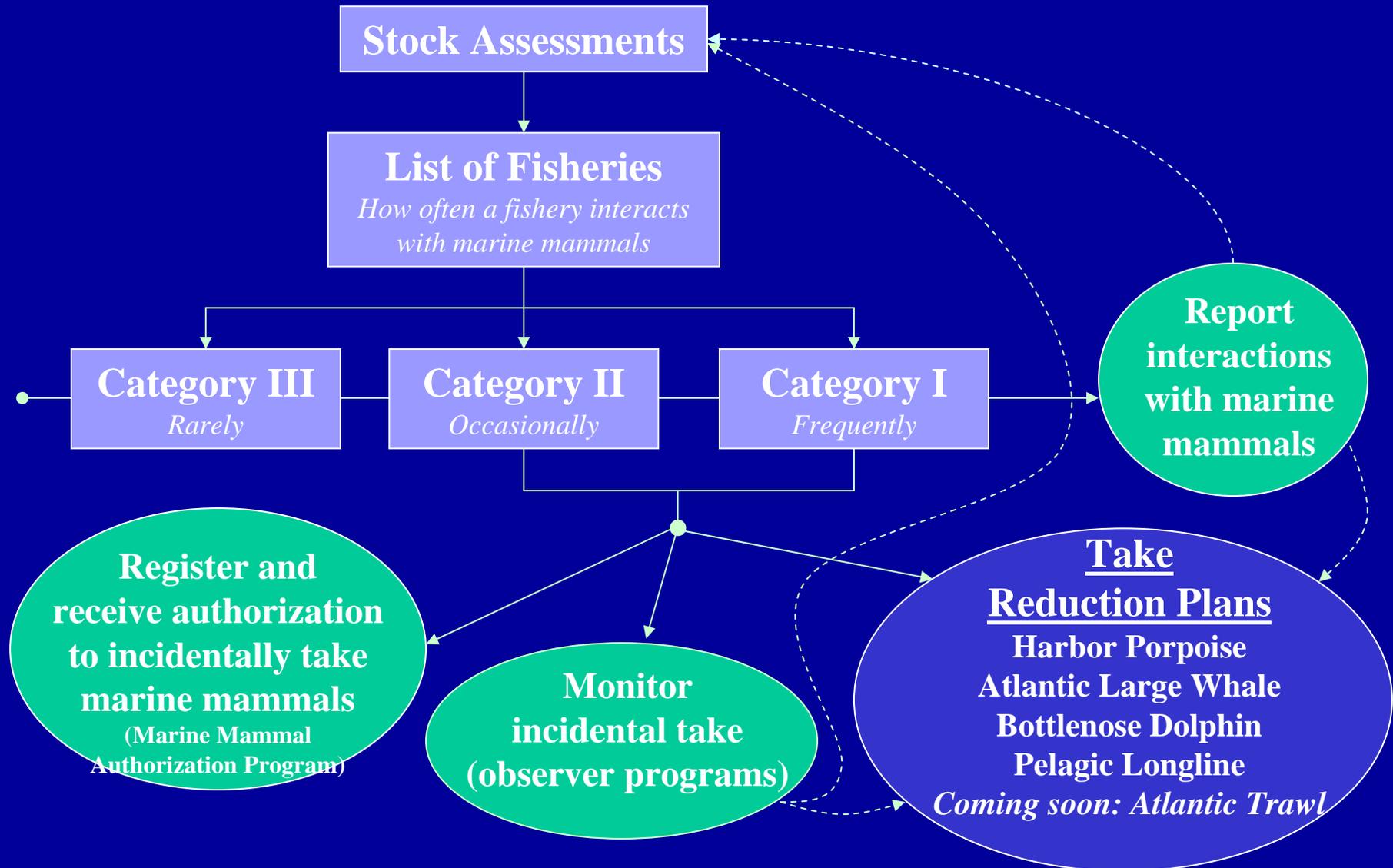
- Not later than 6 months after establishment of the TRT, a draft TRP shall be submitted to NMFS\*
  - Draft TRP should be consensus; If not, major/minor views will be included
  - NMFS reviews draft TRP and within 60 days publishes in federal register (FR), the plan including any changes it deems appropriate and proposed regulations to implement the plan
  - Ninety day public review/comment period
  - Sixty days after close of comment period, NMFS will issue a final plan and implementing regulations
  - Team will meet every six months, or other interval, to monitor plan implementation
  - Where mortalities and serious injuries are less than PBR
    - Not later than 11 months after establishment of the TRT, a draft TRP shall be submitted to NMFS
    - If the TRT does not submit a plan within 11 months, no later than 13 months after team establishment, NMFS will publish in the FR a proposed plan and implementing regulations
- \* *If the TRT does not submit a plan within six months, no later than eight months after team establishment, NMFS will publish in the FR a proposed plan and implementing regulations*

# Take Reduction Plans

- Focus attention on category I and II fisheries that interact with strategic stocks
- *Examples:*
  - Atlantic large whale TRP - northeast sink gillnet; Gulf of Maine, U.S. Mid-Atlantic lobster trap/pot
  - Harbor porpoise TRP - northeast sink gillnet, U.S. Mid-Atlantic coastal gillnet
- Category III fisheries are considered to have a negligible impact on marine mammals
  - Category III may have representatives on a TRT but the fishery cannot be regulated by the TRP unless it is elevated to a category I or II fishery

# Marine Mammal/Commercial Fisheries Interactions

*“Commercial fisheries shall reduce incidental mortality and serious injury of marine mammals to insignificant levels approaching a zero mortality and serious injury rate...”*



# Endangered Species Act

- Sections of the Act
  - **Section 4** - Determination of Endangered Status
  - **Section 9** - Take Prohibitions
  - **Section 7**
    - **7(a)(1) - affirmative conservation mandate**
    - **7(a)(2) – Interagency consultation (federal - duty to avoid jeopardy)**
  - **Section 10** – Permits
    - 10(a)(1)(A) - Take is related to conservation activities
    - 10(a)(1)(B) - Applies to all non-federal parties that are engaging in activities that could result in take. Take must be incidental.