Presentation Outline

• What is a recovery plan?
• New recovery planning approach
• Timeline of recovery planning events
• Summary table of threats to the MHI IFKW DPS
• Summary of recovery goal, objectives, criteria, actions, priorities
• Time & costs
What is a Recovery Plan?
What is a Recovery Plan?

• Guidance documents for the conservation and survival of listed species

• Have no force of law—they are not regulations

• Can seek the expertise of qualified agencies, institutions, and persons in developing and implementing recovery plans

• Must seek peer review and public comment on draft or revised recovery plans
Recovery Plans are *Extremely Important*

- Provide a roadmap to improve species status so that it can be delisted
- Help identify, organize, coordinate, and prioritize recovery actions
- Provide recovery criteria as a metric for when delisting can be considered and by which recovery progress can be monitored
- Help identify potential partners and funding sources to facilitate recovery
- Provide outreach and communication
New Recovery Planning Approach
New Recovery Planning Approach

3 individual documents instead of 1:

• Species Status Assessment
• Recovery Plan
• Recovery Implementation Strategy
Recovery Planning Approach

• **Species Status Assessment:**
  - Detailed info on species (biology, ecology, status, threats)
  - Can be updated readily without having to revise the entire recovery plan
  - Traditionally in *Background* of recovery plan (which could become quickly outdated and burdensome to update)

• **Recovery Plan:**
  - Focuses on 3 statutory requirements:
    - Site-specific recovery actions
    - Measurable criteria for downlisting & delisting
    - Time & cost estimates to achieve recovery

• **Recovery Implementation Strategy:**
  - Provides detailed implementation activities in a separate document
  - Can be readily updated without revising recovery plan
Recovery Planning Approach (cont’d)

Developing prototype web-based recovery plan concept

Moving away from static .pdfs to searchable & dynamic plans that are easier to update
Timeline of Recovery Planning Events
## Timeline of Recovery Planning Events

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov. 2012</td>
<td>Listed MHI IFKW as an endangered DPS</td>
</tr>
<tr>
<td>Oct. 2013</td>
<td>FR Notice of Intent to prepare recovery plan &amp; solicited relevant info</td>
</tr>
<tr>
<td>Sept. 2016</td>
<td>Published 23-page recovery outline to guide interim recovery efforts</td>
</tr>
<tr>
<td>Oct. 2017</td>
<td>Held 4-day recovery planning workshop with ~40 invited experts</td>
</tr>
<tr>
<td>Feb. 2018</td>
<td>Posted 27-page workshop summary online</td>
</tr>
<tr>
<td>Apr. 2019</td>
<td>Submitted Draft Species Status Assessment &amp; Draft Recovery Plan for peer review</td>
</tr>
<tr>
<td>May 2019</td>
<td>Peer review returned</td>
</tr>
<tr>
<td>Fall 2019</td>
<td>Anticipate publication of Species Status Assessment online; Draft Recovery Plan available for 60-day public comment period</td>
</tr>
<tr>
<td>Summer 2020</td>
<td>Anticipate publication of Final Recovery Plan</td>
</tr>
</tbody>
</table>
Summary Table of Threats to MHI IFKW DPS
## 19 current/future threats...

<table>
<thead>
<tr>
<th>Threat (Cause)</th>
<th>Relative Concern</th>
<th>Major Effect</th>
<th>ESA Listing Factor(s)</th>
<th>Extent</th>
<th>Frequency</th>
<th>Severity</th>
<th>Trend</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incidental take in non-longline commercial and recreational fisheries</td>
<td>5</td>
<td>Injury/mortality</td>
<td>E</td>
<td>Localized</td>
<td>Unknown</td>
<td>High</td>
<td>Increasing</td>
<td>Limited</td>
</tr>
<tr>
<td>Inadequate regulatory mechanisms of non-longline commercial and recreational fisheries</td>
<td>5</td>
<td>Injury/mortality</td>
<td>D</td>
<td>Range wide</td>
<td>Continuous</td>
<td>High</td>
<td>Stable</td>
<td>Clear</td>
</tr>
<tr>
<td>Small population size</td>
<td>5</td>
<td>Limited genetic diversity, inbreeding depression, other Allee effects</td>
<td>E</td>
<td>Range wide</td>
<td>Continuous</td>
<td>High</td>
<td>Unknown*</td>
<td>Clear</td>
</tr>
<tr>
<td>Competition with commercial non-longline fisheries</td>
<td>4</td>
<td>Reduced prey size and total prey biomass, reduced foraging success, reduced fitness (reproductive and/or survival)</td>
<td>A</td>
<td>Range wide</td>
<td>Continuous</td>
<td>Unknown but potentially high</td>
<td>Unknown</td>
<td>Unclear</td>
</tr>
<tr>
<td>Competition with recreational fisheries</td>
<td>4</td>
<td>Reduced prey size and total prey biomass, reduced foraging success, reduced fitness (reproductive and/or survival)</td>
<td>A</td>
<td>Range wide</td>
<td>Continuous</td>
<td>Unknown but potentially high</td>
<td>Unknown</td>
<td>Unclear</td>
</tr>
<tr>
<td>Environmental contaminants and naturally occurring biotoxins</td>
<td>4</td>
<td>Reduced prey quality and quantity, compromised health, reduced fitness, disease</td>
<td>A, C</td>
<td>Range wide</td>
<td>Continuous</td>
<td>Medium / high</td>
<td>Unknown</td>
<td>Clear</td>
</tr>
</tbody>
</table>
### 19 current/future threats…

<table>
<thead>
<tr>
<th>Threat (Cause)</th>
<th>Relative Concern</th>
<th>Major Effect</th>
<th>ESA Listing Factor(s)</th>
<th>Extent</th>
<th>Frequency</th>
<th>Severity</th>
<th>Trend</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short and long-term climate change</td>
<td>3</td>
<td>Compromised health, reduced foraging success, reduced fitness (reproductive and/or survival)</td>
<td>A, C, E</td>
<td>Range wide</td>
<td>Continuous</td>
<td>Low / medium</td>
<td>Increasing</td>
<td>Limited</td>
</tr>
<tr>
<td>Anthropogenic noise</td>
<td>3</td>
<td>Reduced communication, reduced foraging success, injury or mortality</td>
<td>A, E</td>
<td>Localized &amp; range wide</td>
<td>Intermittent / continuous</td>
<td>Medium</td>
<td>Stable or increasing</td>
<td>Limited</td>
</tr>
<tr>
<td>Cumulative &amp; synergistic effects</td>
<td>3</td>
<td>Chronic stress, reduced fitness (reproductive and/or survival) and resilience</td>
<td>A, C, D, E</td>
<td>Range wide</td>
<td>Continuous</td>
<td>Unknown / potentially high</td>
<td>Unknown</td>
<td>Unclear</td>
</tr>
<tr>
<td>Competition with commercial longline fisheries</td>
<td>2</td>
<td>Reduced prey size and total prey biomass, reduced foraging success, reduced fitness (reproductive and/or survival)</td>
<td>A</td>
<td>Range wide</td>
<td>Continuous</td>
<td>Potentially low</td>
<td>Stable</td>
<td>Unclear</td>
</tr>
<tr>
<td>Marine debris ingestion</td>
<td>2</td>
<td>Compromised health, reduced foraging success, mortality</td>
<td>E</td>
<td>Range wide</td>
<td>Intermittent</td>
<td>Low</td>
<td>Unknown</td>
<td>Limited</td>
</tr>
<tr>
<td>Intentional harm</td>
<td>2</td>
<td>Displacement, injury, mortality</td>
<td>E</td>
<td>Localized</td>
<td>Rare / Unknown</td>
<td>High</td>
<td>Unknown</td>
<td>Unclear</td>
</tr>
</tbody>
</table>

7 threats rated 1 (Low relative concern): oil spills, predation, incidental take (com. fish), interactions with marine structures, vessel strikes, whale/dolphin watching, & competition with marine species
Summary of Recovery Goal, Objectives, Criteria, Actions, and Priorities
**RECOVERY GOAL**

- **Overall goal** = to remove the MIHI IFKW DPS from the Federal List of Endangered and Threatened Wildlife.

- **Interim goal** = to reclassify the DPS from endangered to threatened status.
RECOVERY OBJECTIVES

Demographic
1. Ensure productivity & social connectedness of the MHI IFKW DPS (trend, abundance, and social clusters) have met or exceed target levels.

Threats-based
2. Address threats from fisheries including incidental take & competition with fisheries for prey.
3. Address threats from environmental contaminants & biotoxins.
4. Address threats from anthropogenic noise.
5. Better understand the effects of climate change and manage accordingly.
6. Ensure regulatory mechanisms (i.e., state & federal management and post-delisting monitoring), are in place prior to delisting.
7. Ensure secondary threats & synergies among threats are not limiting recovery of the population.
## RECOVERY CRITERIA

<table>
<thead>
<tr>
<th>Status</th>
<th>Demographic Criteria</th>
<th>Threats-based Criteria</th>
</tr>
</thead>
</table>
| Reclassified from Endangered to Threatened (i.e., downlisted) | **Productivity:** Increasing average annual population trend is ≥ 2% over one generation (25 years), and there are, at a minimum, 248 individuals.  
**Survey:** Abundance survey occurs on a regular (~biennial) basis and is sufficient to assess the population status and detect changes in trends; and  
**Social connectedness:** At least 3 social clusters, and no more than 50% of the population exists within a single social cluster. | The 20 reclassification threats-based criteria are satisfied. |
| Reclassified to Recovered (i.e., delisted) | **Productivity:** Population is stable or increasing over at least one generation (25 years), and there are, at a minimum, 406 individuals; and  
**Survey:** Abundance survey occurs on a regular (~biennial) basis and is sufficient to assess the population status and detect changes in trends; and  
**Social connectedness:** At least 3 social clusters, and no more than 50% of the population exists within a single social cluster. | The 20 reclassification and 16 delisting threats-based criteria are satisfied. |
RECOVERY ACTIONS

~100 recovery actions divided into 7 categories:

1. population dynamics
2. recreational and non-longline commercial fisheries
3. contaminants and biotoxins
4. noise
5. climate change
6. outreach
7. secondary threats and synergies
<table>
<thead>
<tr>
<th>Priority 1</th>
<th>An action that must be taken to prevent extinction or to prevent the DPS from declining irreversibly.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority 2</td>
<td>An action that must be taken to prevent a significant decline in the DPS’ population/habitat quality, or some other negative effect short of extinction.</td>
</tr>
<tr>
<td>Priority 3</td>
<td>All other actions necessary to provide for the full recovery of the DPS.</td>
</tr>
</tbody>
</table>
LASTLY, TIME & COSTS
TIME & COSTS

• Project a ~50-year timeframe to achieve delisting of the MHI IFKW DPS.
  o Accounts for ~2 generations of MHI IFKWs
  o Assumes high resource investment into implementation of recovery actions.

• Conservative estimate ~$75-100M to recover DPS.