

**NOAA  
FISHERIES**

Greater Atlantic  
Regional  
Fisheries Office

# Atlantic Salmon Recovery Plan

*How effective is NOAA Fisheries at Recovery Planning*

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# Recovery Plan for the Gulf of Maine Distinct Population Segment of Atlantic Salmon (*Salmo salar*)



U.S. Department of Commerce  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service



U.S. Department of Interior Fish and Wildlife Service  
Ecological Services and Fisheries (Lead)

Underlying message: Joint Jurisdiction without a defined vision made the plans development very challenging

Plan Status: DRAFT (out for public comment)

Developed by:

- 2009 – 2011:
  - Antonio, USFWS (Lead Author)
  
- 2011 – 2013:
  - Antonio, USFWS (Lead Author)
  - Dan Kircheis, NMFS
  
- 2013 – 2014:
  - Bill Ardren, USFWS (Technical Expert)
  - Dan Kircheis, NMFS
  
- 2014 – 2015:
  - Mary Parkin, USFWS (Recovery Planning Expert)
  - Lary Zicari, USFWS (Ecological Services Project Leader)
  - Peter Lamothe, USFWS (Project Leader for Federal Atlantic salmon hatcheries)
  - Dan Kircheis, NMFS (Fisheries Biologist)
  
- 2016:
  - Mary Parkin, USFWS (Recovery Planning Expert)
  - Peter Lamothe, USFWS (Project Leader for Federal Atlantic salmon hatcheries)
  - Dan Kircheis, NMFS (Fisheries Biologist)
  - Steve Shepard

Species Listing Status: Endangered, decreasing

## Gulf of Maine Distinct Population Segment

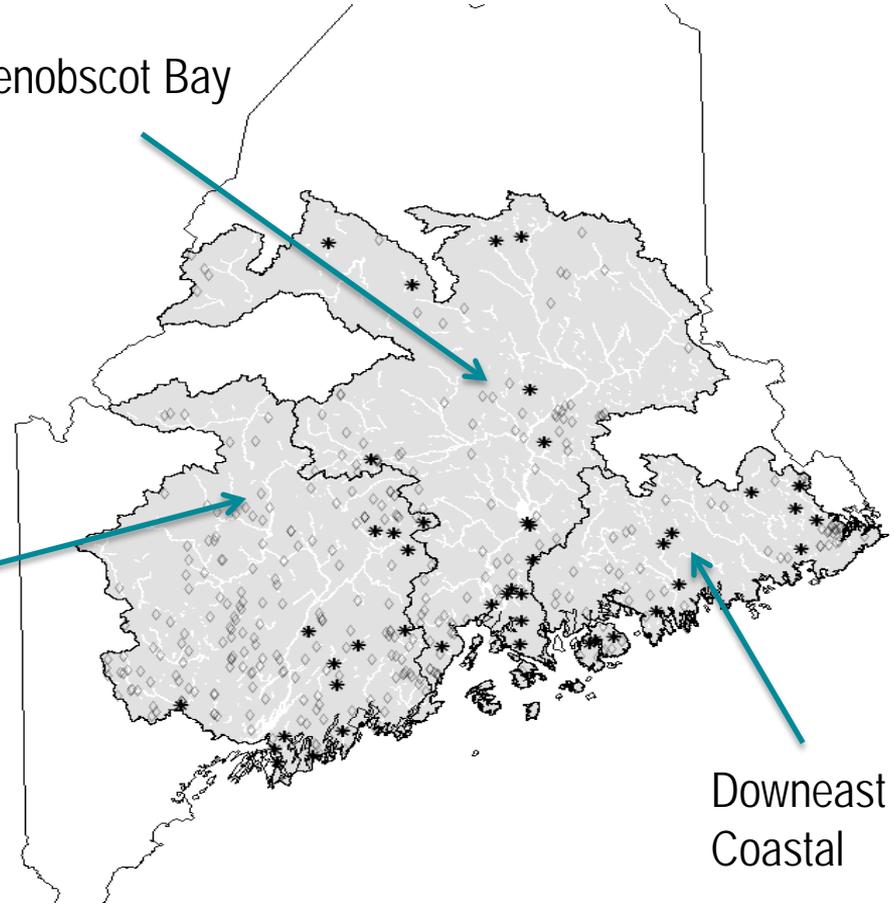
3 Salmon Habitat Recovery Units (SHRU's)

- ◆ Dams
- \* Dams with fishways

Merrymeeting Bay

Penobscot Bay

Downeast Coastal



# Recovery Outline

- No outline was developed
  
- There were numerous hang-ups through the process where an agreed upon outline would have expedited the process

# Recovery Planning Approach:

# Existing Mgt. Plans?

Atlantic salmon governance framework was the principle document used in support of the RP.

## The Framework was designed to:

*"establish a systematic, structured approach to making management decisions [for Atlantic salmon], focused on understanding critical uncertainties and on developing strategies that address key sources of ecological risk".*

# Was it useful?

- There was not a clear agreement between the agencies on how the framework would relate to the recovery plan.
- The “recovery actions” in the framework were not easily transferable as recovery actions for a recovery plan
  - Inconsistencies in action level details and specificity
  - Did not account for external actions

# The benefits...

- The governance structure identified in the framework was transferable into the plan
  - “Action Teams” were a product of the framework process
  - Consulted with throughout the RP’s development
- The use of the REV approach (explained later) gave us a work around to deal with the issues associated with the framework actions

# Approach:

## Ecosystem Approach

- Premise: Restore Atlantic salmon and the ecosystems upon which salmon depend
- Focus: Atlantic salmon and the co-evolved suite of diadromous fish
- Logic: These species co-exist for a reason
  - Prey buffering
  - Nutrients
  - Habitat conditioning (lampreys)
  - Food for salmon

# REV Approach

- REV = Recovery Enhancement Vision.
  - New means of recovery planning being adopted by the USFWS
  
- The REV approach relies heavily on web based content for the *introductory material, threats assessment and implementation strategy*, while the recovery plan largely focuses on the statutory elements (*recovery criteria, recovery actions, time and cost elements*)

# Rational for REV approach

- Existing peer reviewed information in the 2006 Status Review, 2009 listing rule and CH rules that did not need to be reinvented in the conventional recovery plan format
- Having the “moving parts” on a website provides comfort to stakeholders that changes can be made as they are needed
  - Lots of research and adaptive management projects are underway that influences what, when and how we implement recovery actions. This requires that we have the flexibility to adjust our work plans to accommodate these changes.
- The REV approach allowed us to lump recovery actions in the recovery plan at the SHRU level that were used to represent “specific sites”, while identify project level activities in an implementation plan located on the website and separate from the recovery plan

# Conventional Recovery Plan format was not working well for the salmon plan...

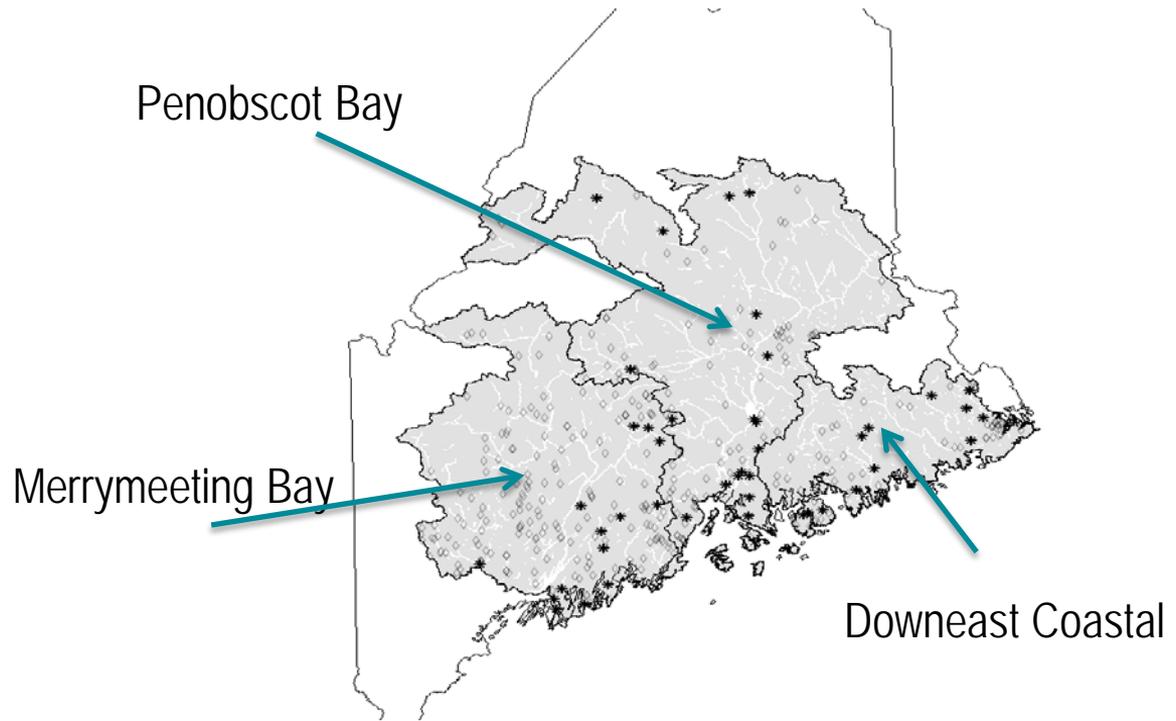
- Too much time was being spent re-creating and reviewing introductory material that was largely already available.
- The threats list was becoming unwieldy with widespread inconsistencies with the scale and detail in which threats were being described
- The introduction accounted for a very large component of the overall plan detracting from the recovery goals, criteria and threats.
- The writing of the plan could not keep up with the influx of new data and new information.
- Multiple agency involvement, a passionate NGO community and a very passionate, devoted, knowledgeable workforce has made this plan a challenge to develop.

# Stepping Down Recovery Actions

*Establishing benchmarks that provide an incremental methodology that takes you from critically endangered to recovery (at least that's the plan)*

# “Site Specific Recovery Actions” as described in the plan itself

- Described at the SHRU level
- Often are broadly described (e.g. remove dams, install fishways, etc...)



# Phased Approach to recovery:

*each Action in the plan is linked to a recovery phase*

## 4 phases of recovery:

1. ID threats and characterize habitat requirements (1990 – 2006) (what's wrong?)
2. Ensure the species survival and abate imminent threats to their continued existence (2006 – present) (stop the bleeding)

*Linked to down listing criteria*

3. Increase abundance, distribution, and productivity. Transition from hatchery dependence, to self sustaining. (enable healing)

*Linked to de-listing criteria*

4. Self sustaining population – Mechanisms are in place the prevent or abate all foreseeable threats to the long-term survival of the species (prevent it from happening again)

# Implementation Strategy (Website):

- 5 year work plans for each SHRU
- Identifies specific activities that we will be working on over the next 5 years. Activities will be linked back to the recovery actions in the recovery plan.

## Activities include:

- a) Those identified as highest priority relative to the phase of recovery that we are in
- b) Those that present themselves as an opportunity that if we do not act now, the opportunity may not be there later (*e.g. willing dam owner*)

# Basis for work plan approach:

- There are multiple pathways and restoration configurations that will allow for recovery of salmon in the DPS.
  - We know that we need to remove dams, install fishways and restore habitats, but we don't necessarily know the precise configuration that will ultimately get us to recovery.
  - We need to be prepared that some pathways will work, whereas others will not. Maintaining 5 year workplans of activities provides greater flexibility to adapt.

# Recovery Team

- A team of 2 USFWS staff and 1 NOAA Fisheries staff was assembled ½ way through the plans development to see the plan through to completion.
- NOAA-Fisheries consistently had 3 additional staff review draft content throughout the plans development.
- Numerous USFWS staff also participated in section reviews.

## What worked/What didn't:

- The REV process worked! Once we proceeded in this direction, the process went quickly
- There was not clear agreement on the vision between the agencies, and the vision changed throughout its development. This was reflected throughout the plans development and review process.

# Recovery Planning Engagement

- The Tribes and the State were afforded 2 opportunities during the plans development to review the plan and provide comments.
- Significant comments were provided by both the State and the Tribe that lead to considerable updates before the draft was published. The Tribes specifically looked for greater acknowledgement of the Tribes role in the recovery process.

# Recovery Science:

- There is currently no plan for an external peer review of the draft plan, though there has been a technical internal peer review, and a peer review by the lead State agency with management authority over Atlantic salmon
- Most information in the plan largely originates from peer reviewed materials
  - Listing documents
  - Status Review

# Recovery Planning Priority

- The Recovery Plan was a priority for NOAA Fisheries. Dedicated staff was made available to aid in its development.
- The Recovery Plan was initially a priority for the USFWS
  - the lead author was pulled from working on the plan early in its development
  - For the remainder of the plan, several USFWS staff invested considerable time into the plans development, though there was not a clear dedicated lead assigned to see it through to completion.

# Recovery Planning Time

- The plan took about 6 ½ years to complete. Development started shortly after the expanded listing of the DPS in June of 2009 to publication of a Draft in April 2016.

# Summary

## Development Strengths

- Upon adopting the REV approach:
  - Streamlined and expedited the development process
  - Provided greater flexibility by allowing more dynamic elements to be placed on the website rather than be constrained by a recovery plan where changes and amendments are harder to make
  - Phased approach provides more attainable goals and makes accomplishing those goals appear a little less daunting

## Development weaknesses

- Joint jurisdiction adds a layer of complexity because of differing philosophies and management approaches
- Lack of a clear vision and outline from the onset significantly hindered the plans development
- In this case the existing management plan (the Atlantic Salmon Framework), made the process more difficult as there was a desire by some to have the framework be the foundation for the recovery plan. In this case it was like fitting a square peg into a round hole.
- Revolving door of staff and lack of a dedicated lead

# Questions...?