



Status of Hudson River Anadromous Fish Stocks

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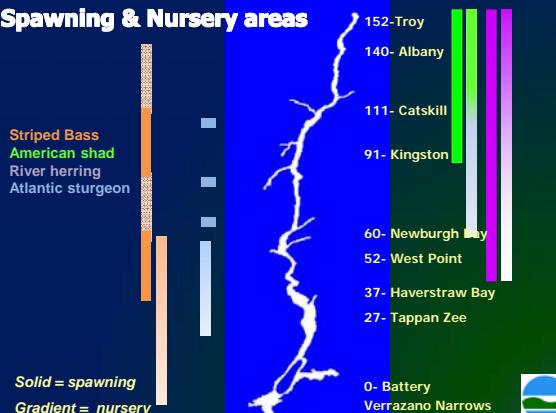


Life History

- **Anadromous**
 - Greek meaning “running up”
- **Marine species**
 - Use fresh-water natal estuary for spawning and nursery
 - Fish return to ocean
- **Coast-wide occurrence**




Spawning & Nursery areas



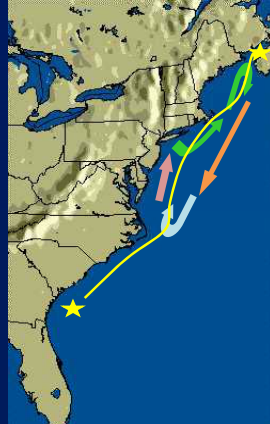
Species:
 Striped Bass (orange)
 American shad (green)
 River herring (purple)
 Atlantic sturgeon (blue)

Locations (Mile markers):
 152- Troy
 140- Albany
 111- Catskill
 91- Kingston
 60- Newburgh Bay
 52- West Point
 37- Haverstraw Bay
 27- Tappan Zee
 0- Battery Verrazano Narrows


Solid = spawning
Gradient = nursery



Coastal migration





- **American shad**
 - Bay of Fundy to VA
- **River herring**
 - Bay of Fundy to ?
- **Striped bass**
 - ME to NC
- **Atlantic sturgeon**
 - Bay of Fundy to GA

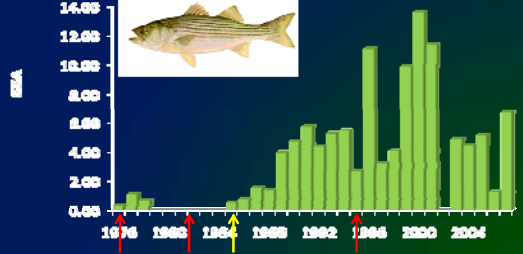


Coast-wide Resources

- **Shared coastal management**
- **States work cooperatively**
 - **Fishery Management Plans**
 - Annual monitoring requirements
 - Adults and juveniles
 - Fishery dependent & independent
 - **Habitat plans**
 - Fish population benchmarks
 - Mortality rates
 - Spawning stock biomass
- **Adaptive management**





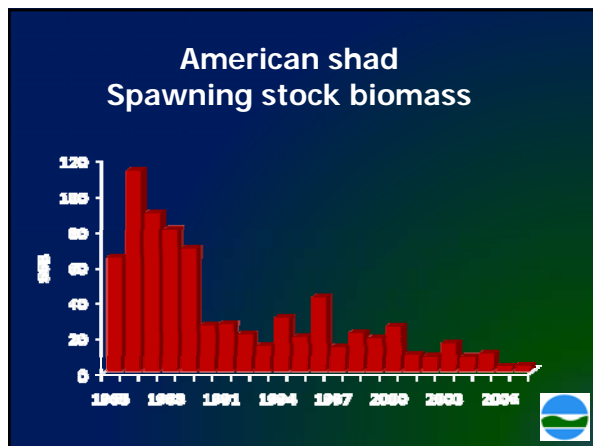
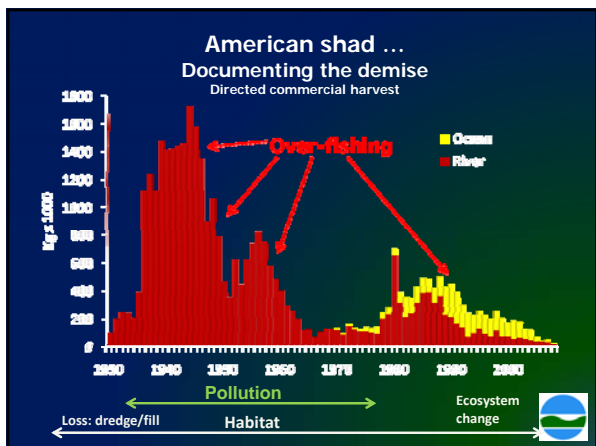
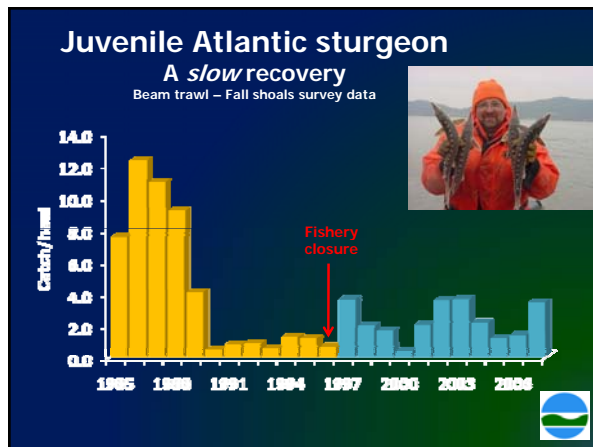
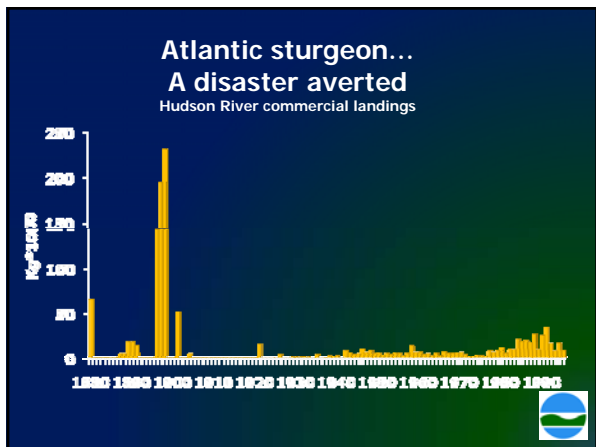
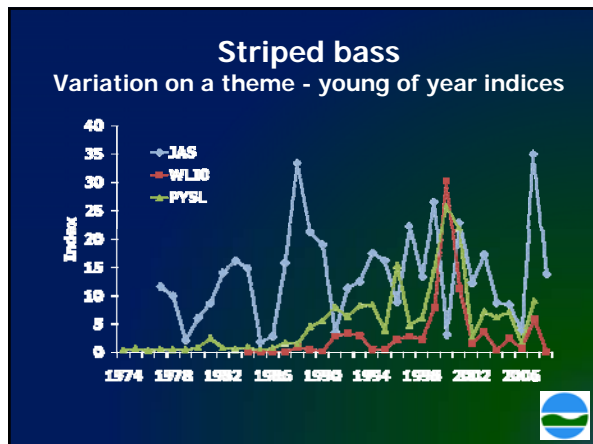
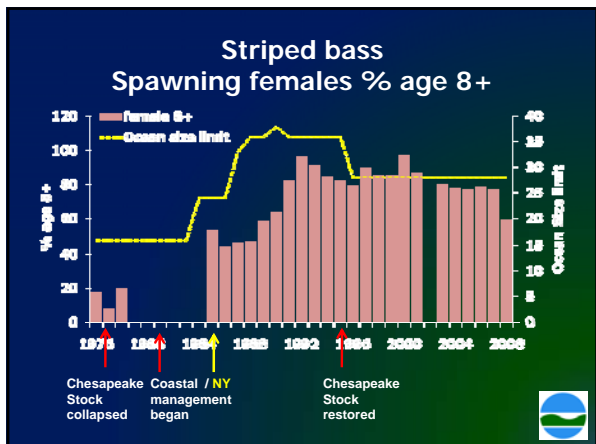
The success story: Striped bass Spawning stock abundance

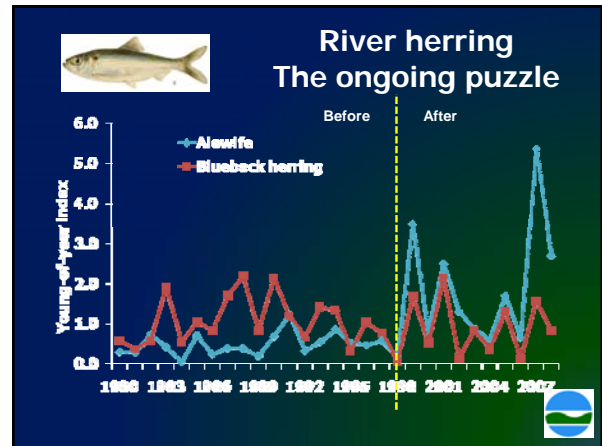
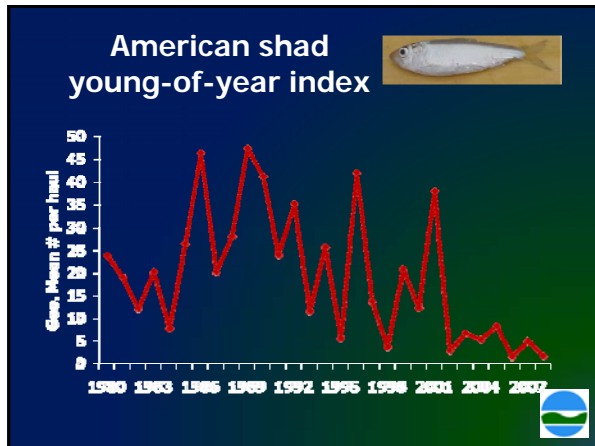


1976 1980 1984 1988 1992 1996 2000 2004

Chesapeake Stock collapsed Coastal / NY management began Chesapeake Stock restored







- ### Fishery Management perspective
- The success: Striped bass
 - The collapses
 - Atlantic sturgeon
 - Moratorium in 1996, 1998 on coast
 - Recovery is very slow
 - American shad
 - Ocean Directed fishery closure 2005
 - NY River & marine closure 2010 (proposed)
 - Recovery time remains unknown
 - *The uncertain future*
 - River herring
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- The Estuary is where life begins...
the ocean is where it continues ...
- Good production generally indicates:
 - Sufficient adults for sufficient young
 - Continuous circle
 - Good ecosystem quality
 - River & Ocean
 - With effective management
 - Fish production can be the ultimate ecological index
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