

TEXAS

PARKS &

WILDLIFE

- Jennifer Bixby
- Hatchery Biologist – Sea Center Texas
- TPWD Coastal Fisheries Hatchery Program
- Flounder Stock Enhancement
- Q&A

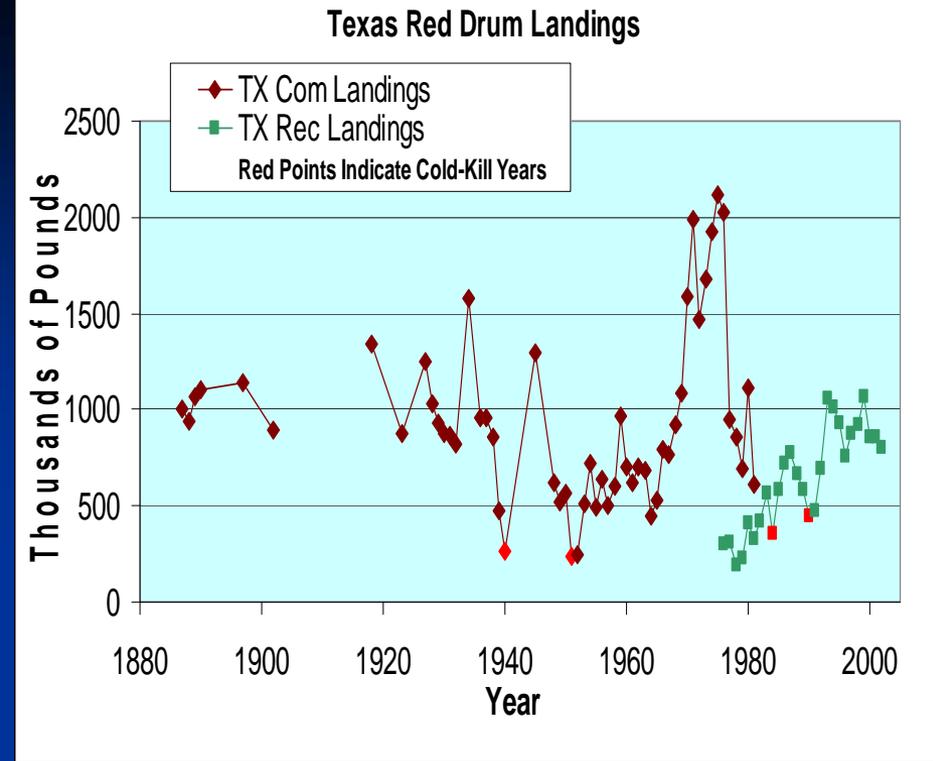
TEXAS' FISHERIES MANAGEMENT TOOLS

- Fishery Monitoring Programs
- Fishing Regulations
- Law Enforcement
- Habitat Conservation
- Research
- Stock Enhancement



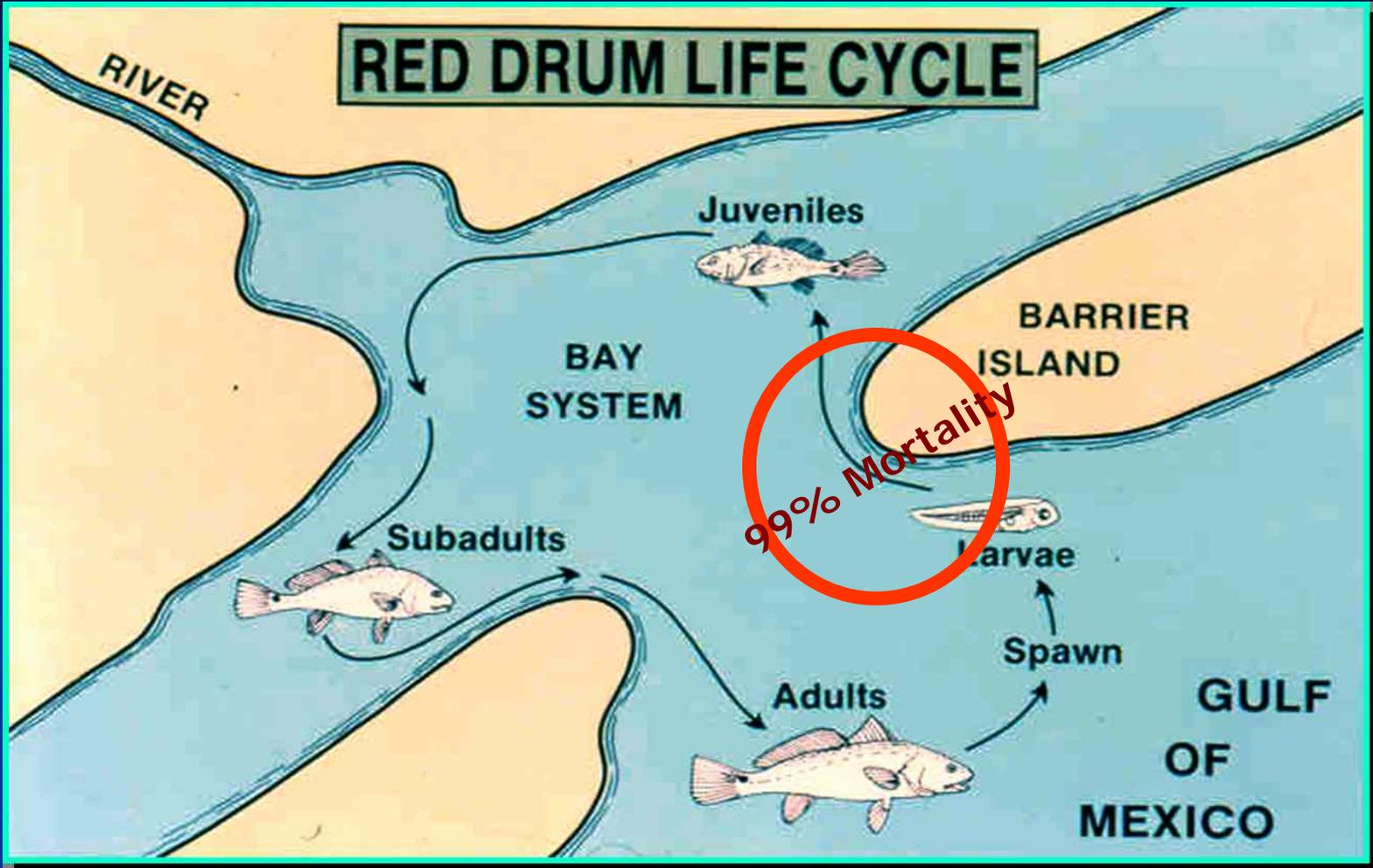
RED DRUM WARS

- In The 1970's There Was A Dramatic Decline In Numbers Of Red Drum (e.g., Habitat Destruction, Over-fishing, and Illegal Netting).

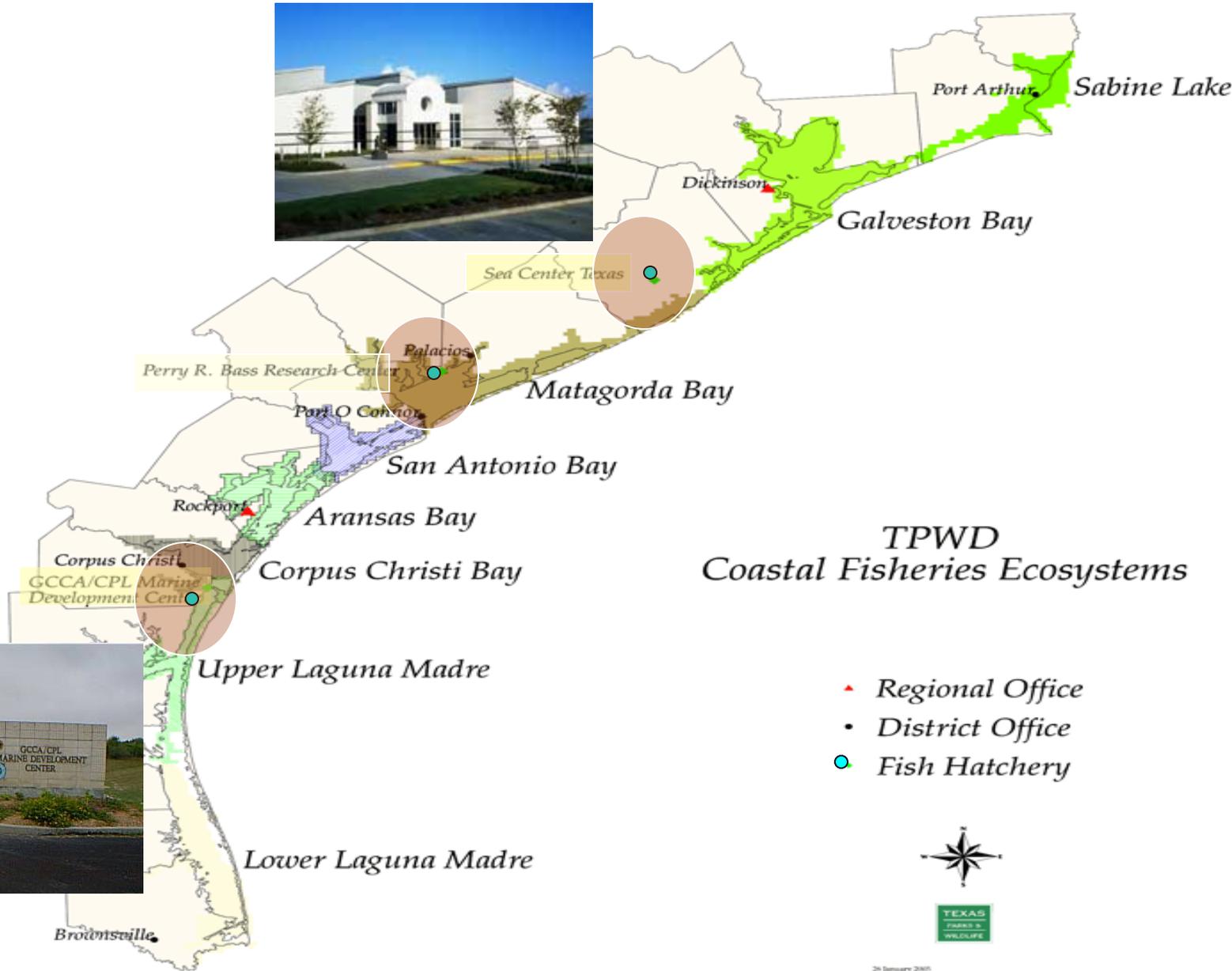


- 1975 TPWD Began A Monitoring Program To Gather Quantifiable Data And Determine The Status Of The Red Drum Population.
- 1981 Texas Legislature Banned The Sale Of Red Drum And Spotted Seatrout.
- 1988 State Waters Closed To All Nets.

STOCK ENHANCEMENT RATIONALE



- ❖ Stock Enhancement Involves Rearing Juveniles At Hatcheries And Then Releasing Them Into The Wild as a Mechanism of Supplementing Natural Populations.

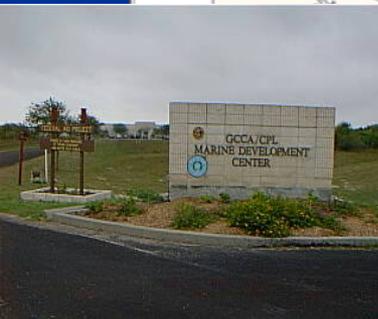


TPWD Coastal Fisheries Ecosystems

- ▲ Regional Office
- District Office
- Fish Hatchery

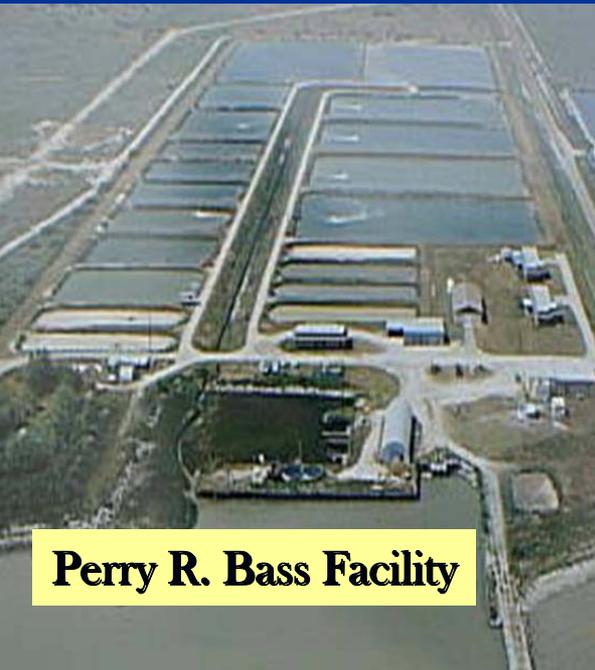


24 January 2005
 Projection: Statewide Mapping System
 Map compiled by the Texas Parks & Wildlife Department
 GIS Lab. No claims are made to the accuracy of the data
 or to the suitability of the data to a particular use.



CURRENT STATUS

FACILITY	STAFF	ACRES OF PONDS
Sea Center Texas	17	35
Perry R. Bass	3	22
Marine Development Center	16	39
<i>TOTALS</i>	<i>36</i>	<i>96</i>



Perry R. Bass Facility

Annual Production Capacity At Full Operation:

Red drum = 34 million Fingerlings

Spotted Seatrout = 5 million Fingerlings

Number Of Red Drum And Spotted Seatrout Produced To Date:

Red Drum = 552 million Fingerlings

Spotted Seatrout = 57 million Fingerlings

A Changing Emphasis

From a historical perspective, our red drum stock enhancement program has evolved from a program of recovery (during the 80's) to one that helps maintain the population size (during the 90's) to a program of flexible response (presently).



A Changing Emphasis

Flexible Response

Specialized Fisheries - snook & tarpon

*Disaster Recovery – freezes,
harmful algal blooms, hypoxia
and pollution events*





Possible causes of the decline in southern flounder population

- Overfishing
- Bycatch by bay shrimp trawlers
- Rise in water temperature

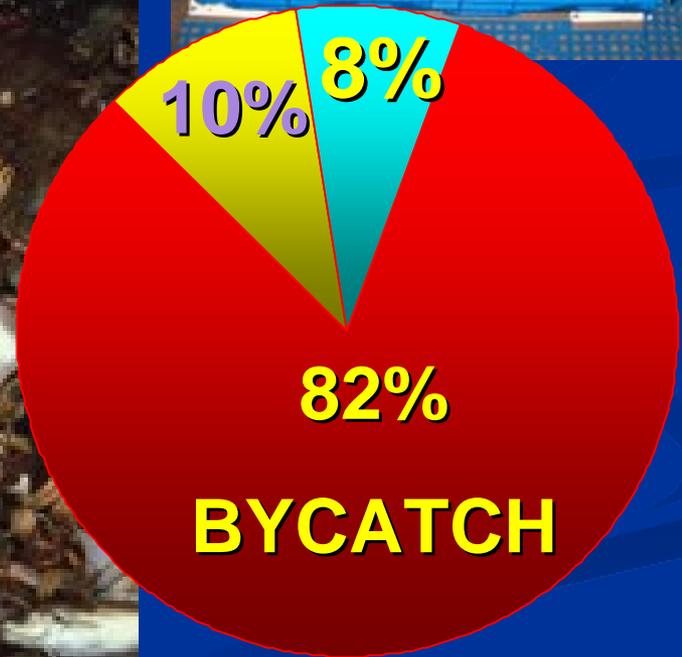
Total Fishing Mortality – Southern Flounder



RECREATIONAL



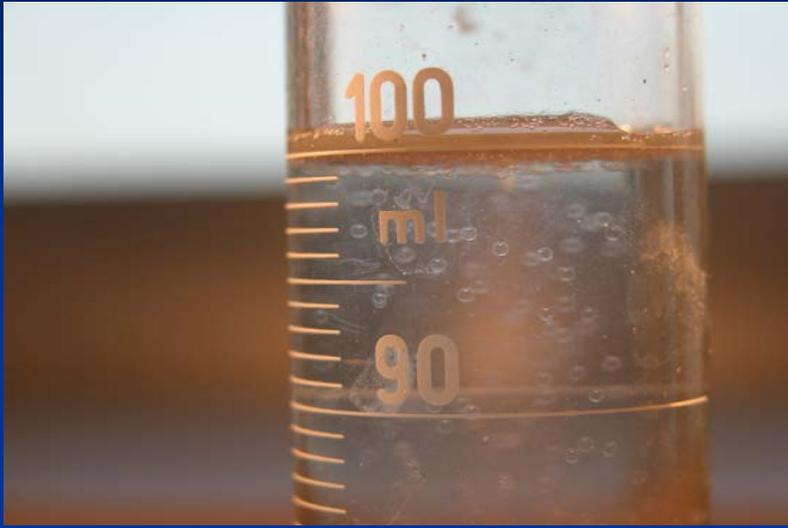
COMMERCIAL



Bycatch by bay shrimp trawlers

- Estimated at 9.7 million individuals/year (Matlock, 1982).
- Mean total length of 176 mm (7 inches), all age-0.
- Bay shrimp trawl effort peaked in 1994 but has decreased 90% by 2005.

Flounder larviculture



S. Flounder Pond Harvest And First Stocking Into Texas Coastal Waters- April 4, 2006



Size Ranges From 35-101 mm TL
Mean Size = 54 mm
Age = 103 Days Post-hatch
82% Survival Rate In Pond



1,473 Flounder Fingerlings
Stocked Into Aransas Bay

Summary

- Female population has decreased approximately 50% since 1984.
- Fishing mortality estimates indicate overfishing in most years.
- Decrease in bycatch shows positive signs but may not be enough to reverse current trends.
- Recruitment is negatively impacted by warmer water temperatures during the winter.

New Flounder Regulations Effective September 1, 2009

- 5 fish recreational limit, 30 fish commercial limit
- Minimum limit stays at 14 inches
- November closed for flounder (except for hook and line – 2 per day)

Any Questions?

