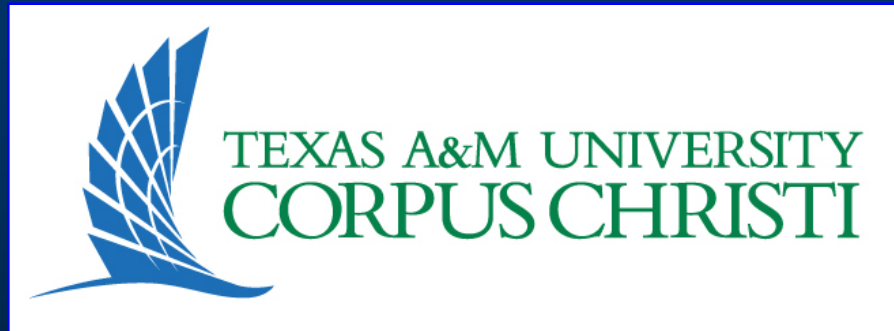


Identifying Potential User Conflicts and Solutions for Off-Bottom Oyster Culture in Texas

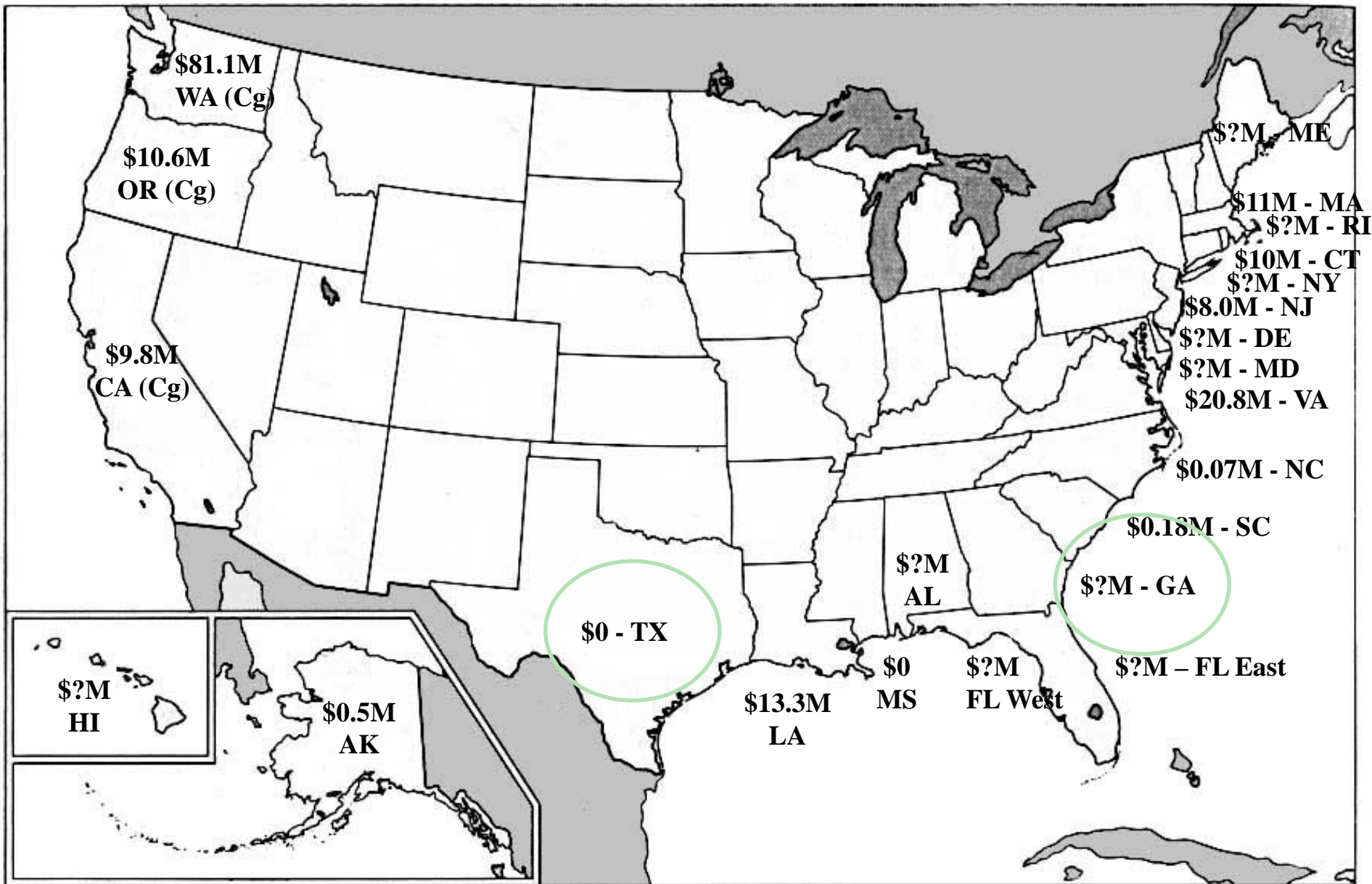
John Scarpa



Project ACQ-210-039-2017
TAMU-CC IRB 100-18



USDA Oyster Aquaculture – 2013 (~\$152M)



**Aquaculture is the
fastest growing form
of global food production.**

**It accounts for about
40 percent of the seafood
consumed by humans
worldwide, and almost
half of the seafood
consumed by Americans.**

Aquaculture Contacts

Texas Aquaculture Association

P.O. Box 10564
College Station, Texas 77842
979-690-1635 Fax 979-690-1965
TAA@txaquanet.org
www.texasaquaculture.org

Texas Sea Grant College Program

Garrod Treese, Aquaculture Specialist
2700 Earl Rodder Freeway, Suite 1800
College Station, Texas 77845
979-845-7527 Fax 979-845-7525
g-treese@tamu.edu
www.texas-sea-grant.tamu.edu

Texas Agrilife Extension

Dr. Michael Masser
Dept. of Wildlife and Fisheries
102C Naylor Hall
College Station, Texas 77843-2258
979-845-7473 Fax 979-845-7101
mmasser@tamu.edu
www.utmsi.tamu.edu

Texas Parks & Wildlife Department

Jody Gray
Program Leader
Inland Fisheries
4200 Smith School Road
Austin, Texas 78744-3291
512-369-8037 fax 512-369-4656
jody.gray@tpwd.state.tx.us
www.tpwd.state.tx.us

Texas Department of Agriculture

Chris Drews
Coordinator
Weights and Measures, Eggs
and Aquaculture
P.O. Box 12847
Austin, Texas 78711
512-463-7401
800 TELL TDA
christopher.drews@tda.state.tx.us
www.tda.state.tx.us

Texas Commission on Environmental Quality

Watershed Permitting Section
(MC 148)
P.O. Box 13087
Austin, Texas 78711
www.tceq.state.tx.us

Wastewater Discharge Permits

David Galindo
512-239-0951
dgalindo@tceq.state.tx.us

Aquaculture General Permit

Yvonna Miramontes
512-239-6922
ymiramont@tceq.state.tx.us

Texas General Land Office

P.O. Box 12873
Austin, Texas 78701-2873
800-998-4010
www.glo.state.tx.us

Coastal Licensing

Tony Williams
512-463-5055
tony.williams@glo.state.tx.us

Coastal Management Program

Tammy Brooks
512-463-9212
tammy.brooks@glo.state.tx.us

Coastal Grants, Education & Outreach

Sheri Land
512-463-5058
sheriland@glo.state.tx.us

Texas Aquaculture

A Regulatory Guide

*"... we must turn to the sea
with new understanding
and new technology. We
need to farm it as we
farm the land."*

- Jacques Cousteau

Coastlines

**FL: 1350 miles
(8436 tidal)**

**LA: 397 miles
(7721 tidal)**

**TX: 367 miles
(3359 tidal)**



TEXAS OYSTER FISHERY MANAGEMENT PLAN

Fishery Management Plan Series
Number 1



TEXAS PARKS & WILDLIFE DEPARTMENT
4200 SMITH SCHOOL ROAD
AUSTIN, TEXAS 78744

1988

Public Season:
1 Nov – 30 April

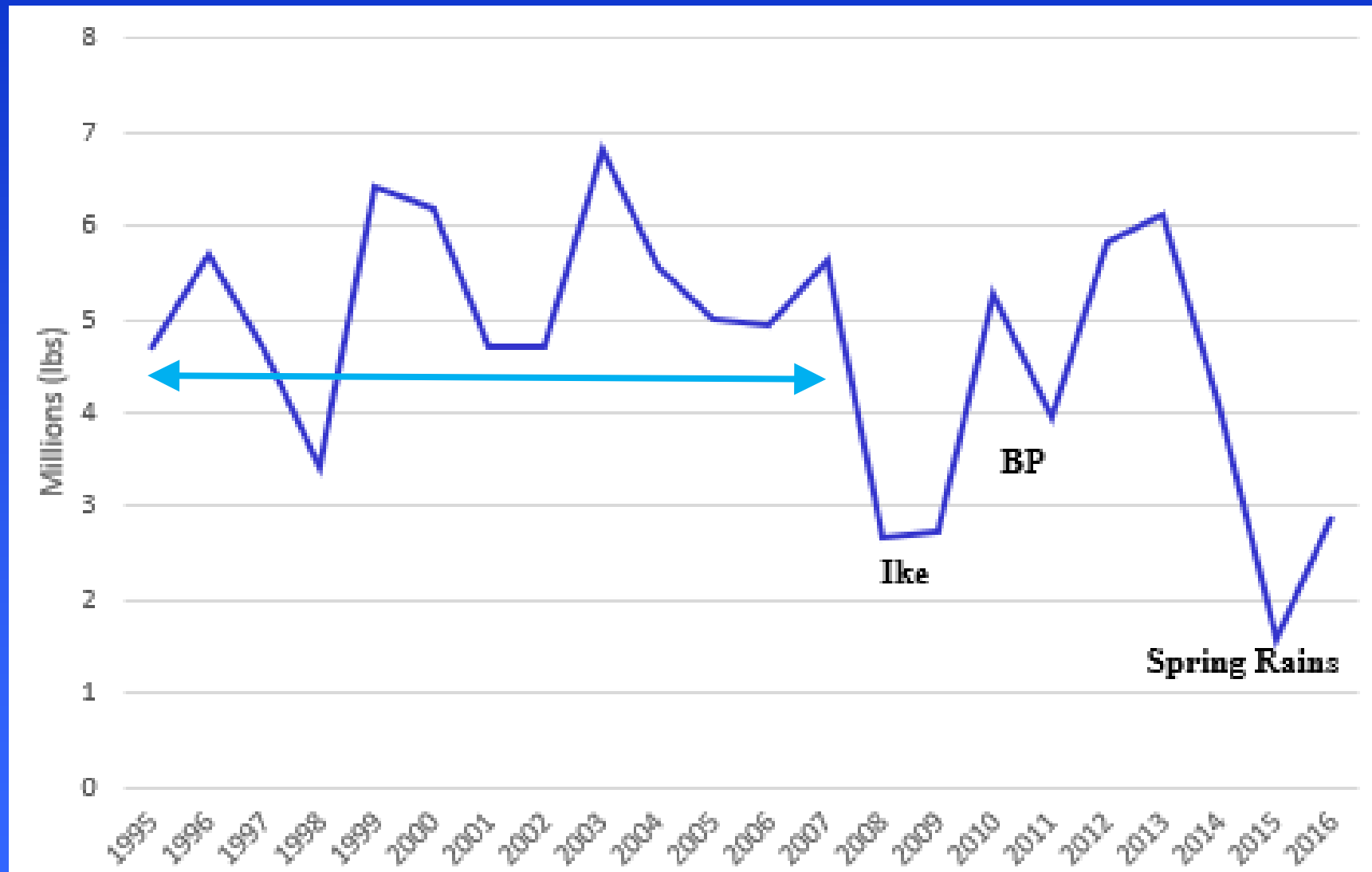
Size: 3 inches (H)

Devices: Hand,
Tong or Dredge

Public Reefs

Private Leases
(Galveston Bay)

Texas Oyster Landings (20 yrs)

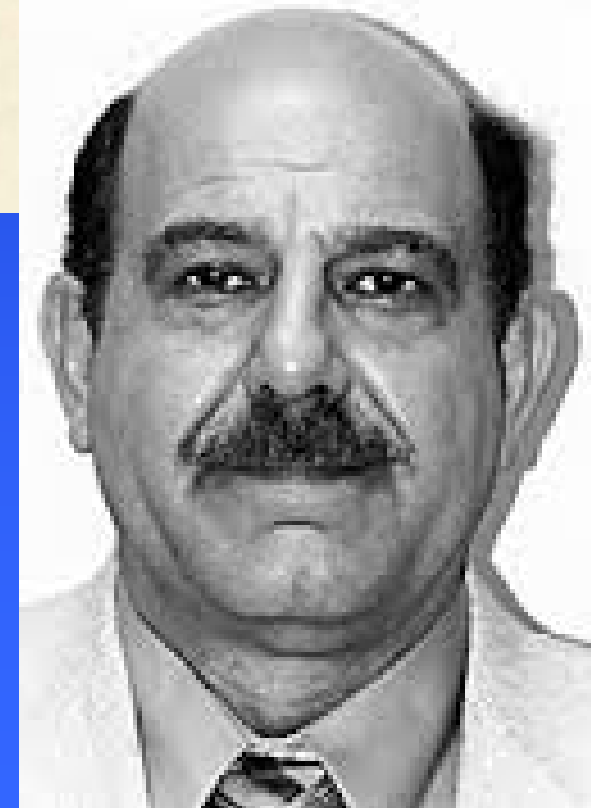


**CULTCHLESS EASTERN OYSTER (*CRASSOSTREA VIRGINICA* (GMELIN 1791)) CULTURE ON
THE TEXAS GULF COAST: A FEASIBILITY ANALYSIS AND COMPARISON TO
TRADITIONAL OYSTER FISHING**

**MIRELLA MARTINEZ,¹ LEONARD DIMICHELE^{1,3} AND
SAMMY M. RAY²**

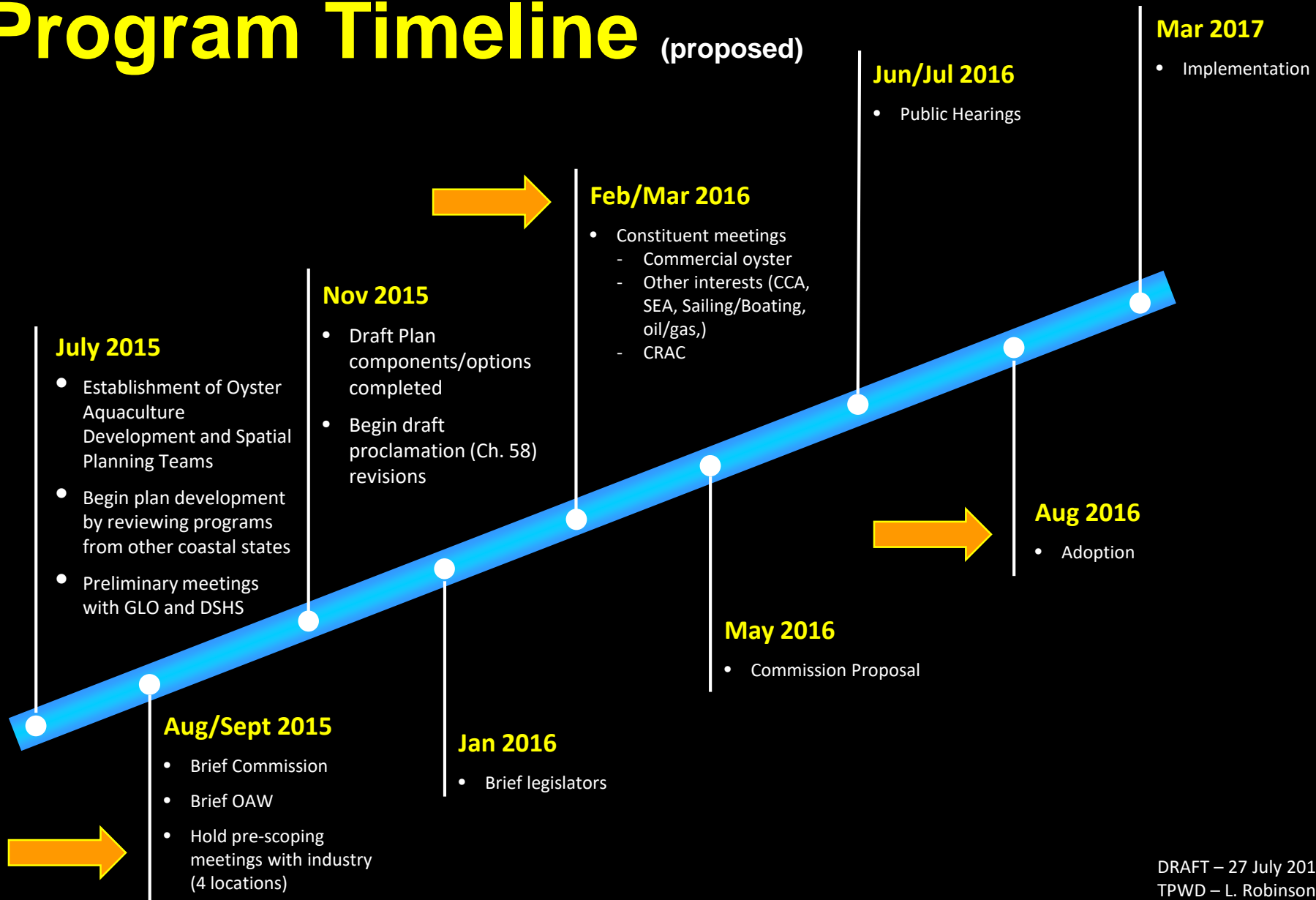
*¹Department of Wildlife and Fisheries Sciences
Texas A & M University
College Station, Texas 77843*

*²Department of Marine Biology
Texas A & M University at Galveston
Galveston, Texas 77553*



Dr. Leonard DiMichele (2014)

TPWD Oyster Aquaculture Program Timeline (proposed)





Commonalties

(State Agencies, Non-Governmental Organizations, Commercial)

No group was opposed

Sustainability (e.g., siting, seagrass, genetics)

State Agency authority

Impediments

State agencies; authority

Support for increased costs (e.g., monitoring)

Spatial Planning (i.e., **user conflict**, sustainability)

User Conflicts



Adjustable long-line system, Grand Bay, AL (Auburn Univ.)



Floating trays of Choptank Oyster Co.,
Chesapeake Bay, VA (2013) (4 acres)





Recruitment Script (cont.)

There are no known or suspected risks to your participation in this study. The questions asked are general. For example, they inquire about your knowledge of or interest in the topic, with a view to identifying people who are likely to be interested in the study. You will receive no direct benefit from participating in this study, but your answers may influence regulations and legislation designed to protect the public.

Participation in this study is voluntary. All information you provide will be anonymous and confidential and processed with maximum care and security. The data collected through this study will not be used for a purpose other than the study's completion.

You may withdraw from the study at any time without penalty or loss of benefits or services to which you are otherwise entitled.

This study has been reviewed and approved through the Texas State University System's Institutional Review Board (IRB). Your participation in this study is voluntary and you may withdraw from the study at any time without penalty or loss of benefits or services to which you are otherwise entitled.



Survey (Pre- & Post- Presentation)

Pre-Presentation:

What is your general opinion of the aquaculture industry?

Pos, Neg, No opinion

What is your opinion of bivalve (oyster, clam) aquaculture?

Pos, Neg, No opinion

Post-Presentation:

What is your general opinion of the aquaculture industry?

Pos, Neg, No opinion

What is your opinion of bivalve (oyster, clam) aquaculture?

Pos, Neg, No opinion

What impediments do you know of, or concerns that you have, with allowing off-bottom oyster culture in Texas?

Do you have any solutions to the impediments / concerns you identified?

Positive Response to Question: General Opinion of Aquaculture and Bivalve Aquaculture

	Pre-Presentation	Post-Presentation	Change
1 – General Aqua (n=19/20)	57%	80%	+ 23
1 – Bivalve Aqua (n=20/19)	73%	84%	+9
2 – General Aqua (n=27/27)	81%	93%	+12
2 – Bivalve Aqua (n=29/27)	75%	89%	+14
3 – General Aqua (n=43/40)	42%	75%	+33
3 – Bivalve Aqua (n=43/40)	37%	80%	+43

Comments

Navigation restrictions;

Reduced access to areas;

Lack of public understanding of benefits;

"Industrial" visual impacts

Select barren areas (away from shoreline & popular fishing areas; **Use high density farms**; clearly mark, **education program**; more bottom culture to offset any loss of access; minimize visual impacts; **start small**

Comments

In my opinion, it is better to let mother nature take its course to produce oysters on its own.

Let the professionals handle what's happening, apparently it works in other part of the country. Need to follow the other states.

HB 1300

Thank You

Assistance from:
William Balboa
Rhonda Cummins

Questions?

