



SAN ANTONIO  

---

RIVER AUTHORITY

Leaders in Watershed Solutions

# *Rangia* Clam Investigation

BBASC Meeting  
December 9, 2014

# Overview

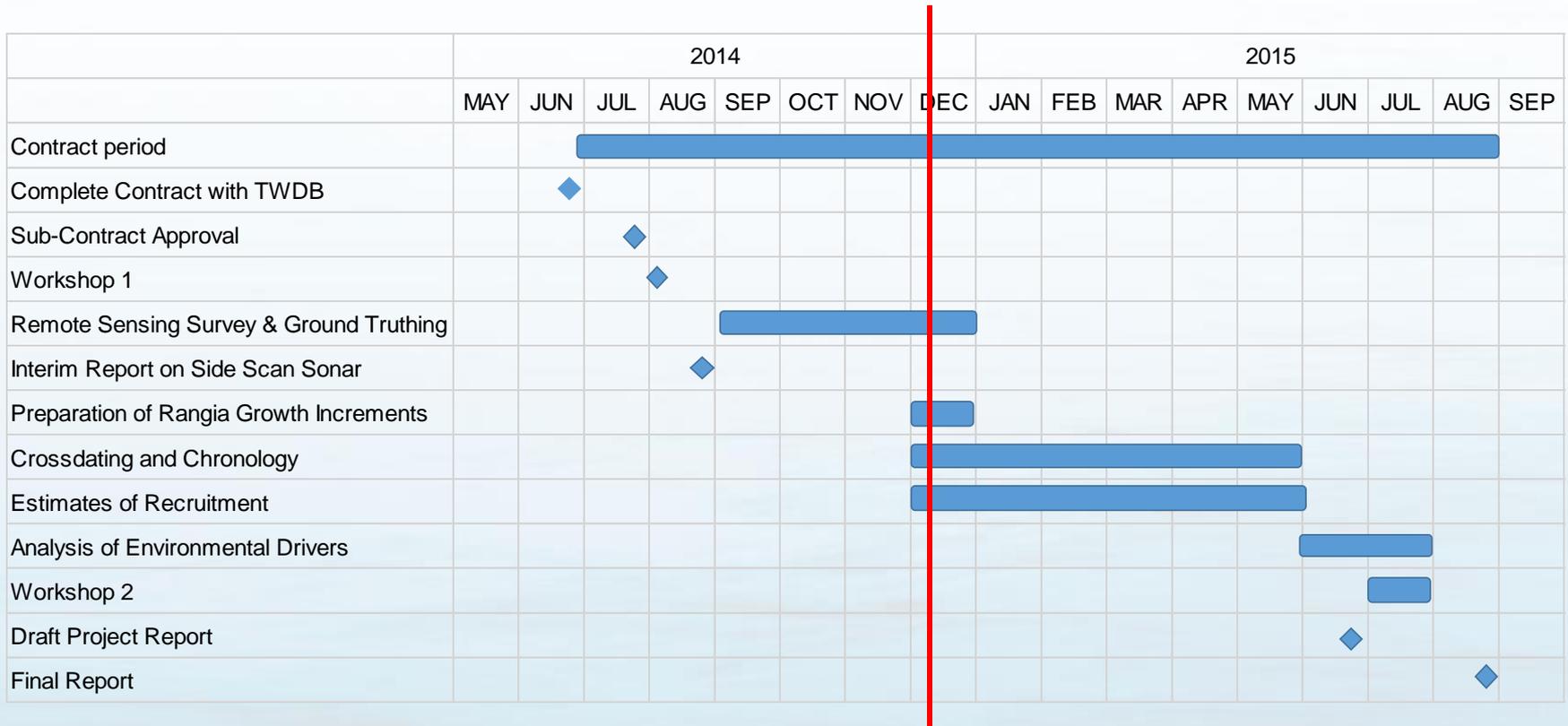
- Funded through Texas Water Development Board (\$150K) and the San Antonio River Authority (~\$20K).
- Working with:
  - University of Texas at Austin Marine Science Institute (UTMSI)
  - Bio-West Inc.

# Overview

- Project Goals
  - Map *Rangia* beds in portions of San Antonio Bay
  - Correlate environmental flows with *Rangia* growth and recruitment.



# Timeline



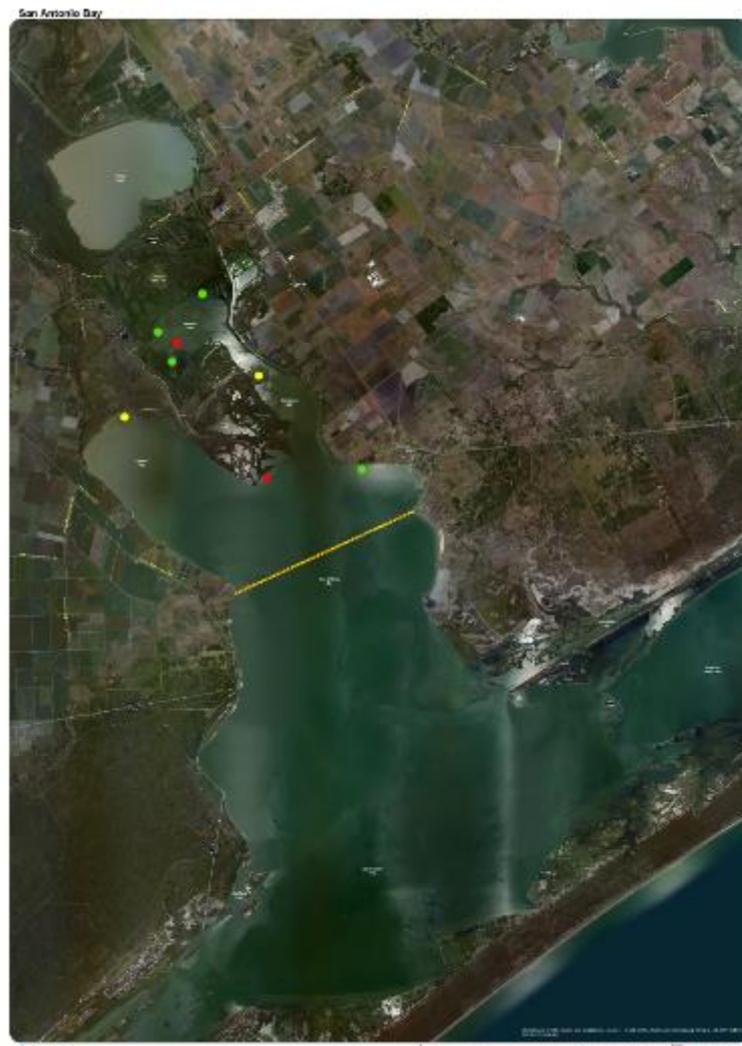


# Study Area

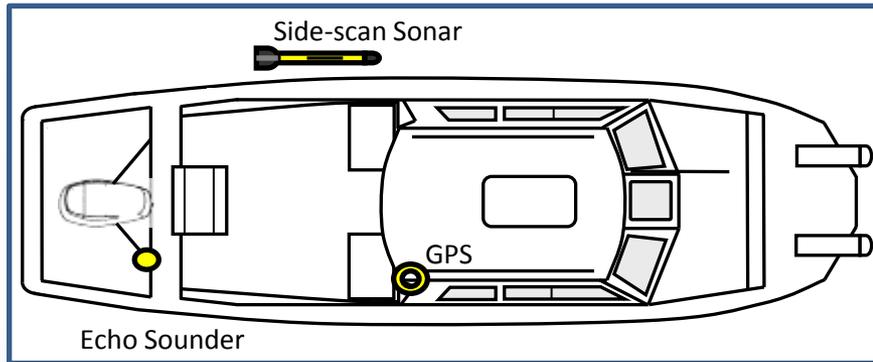


# Methodology

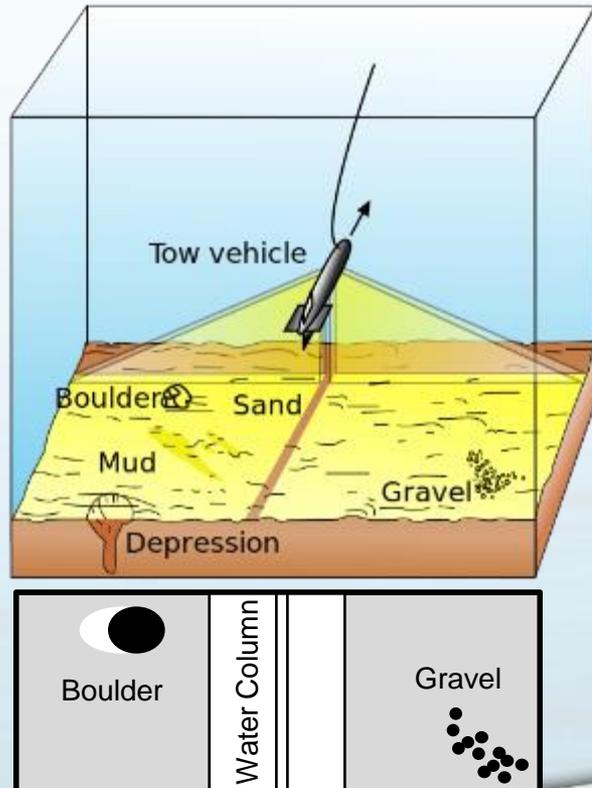
- Public Meeting  
August 8, 2014



# SIDE-SCAN SONAR DATA COLLECTION



Sonar towfish is tethered to the side of the vessel.



Acoustic soundings are recorded continuously from both sides of towfish.

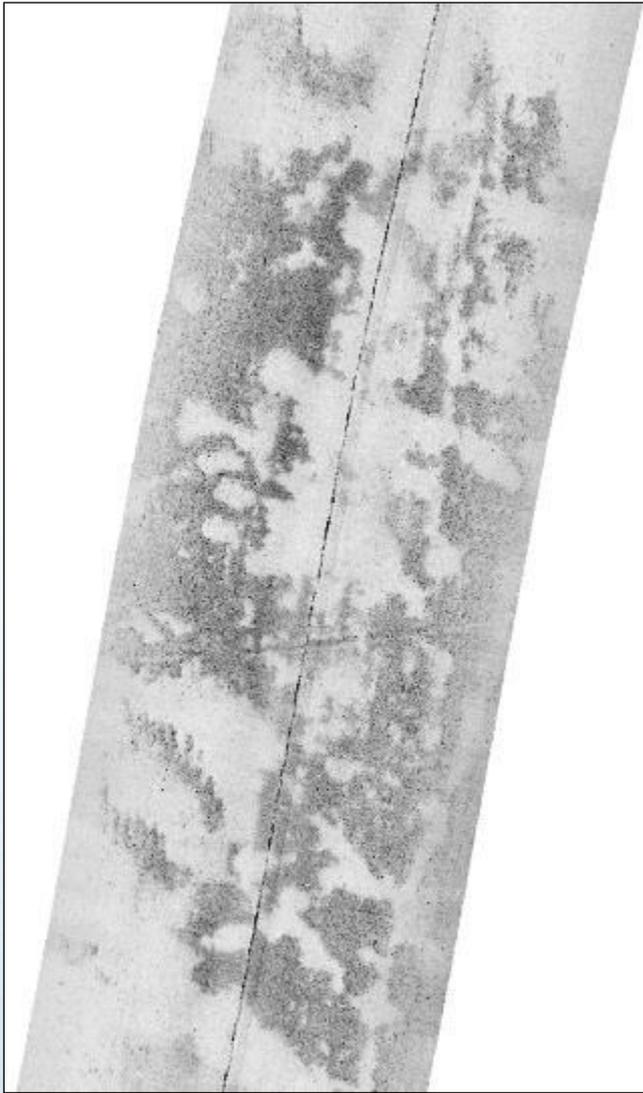
Hard substrate appears in contrast to soft substrate. Water column is edited out of final image.



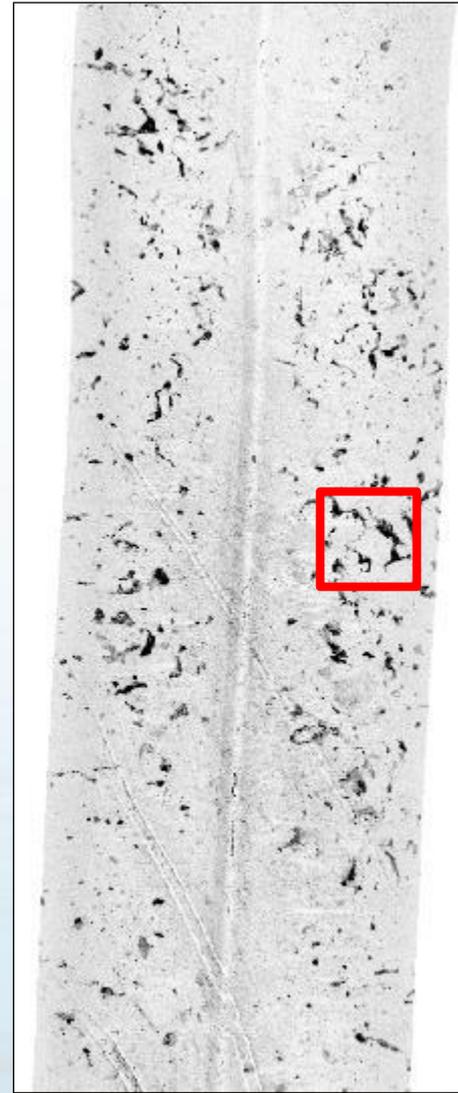




## OYSTER REEF



## RANGIA BED



# Groundtruthing







# Develop a Chronology

- Growth increments in the hinge area can be used to determine the age and growth of clams, much like tree ring data.



# *Rangia*

(from Aransas Bay)



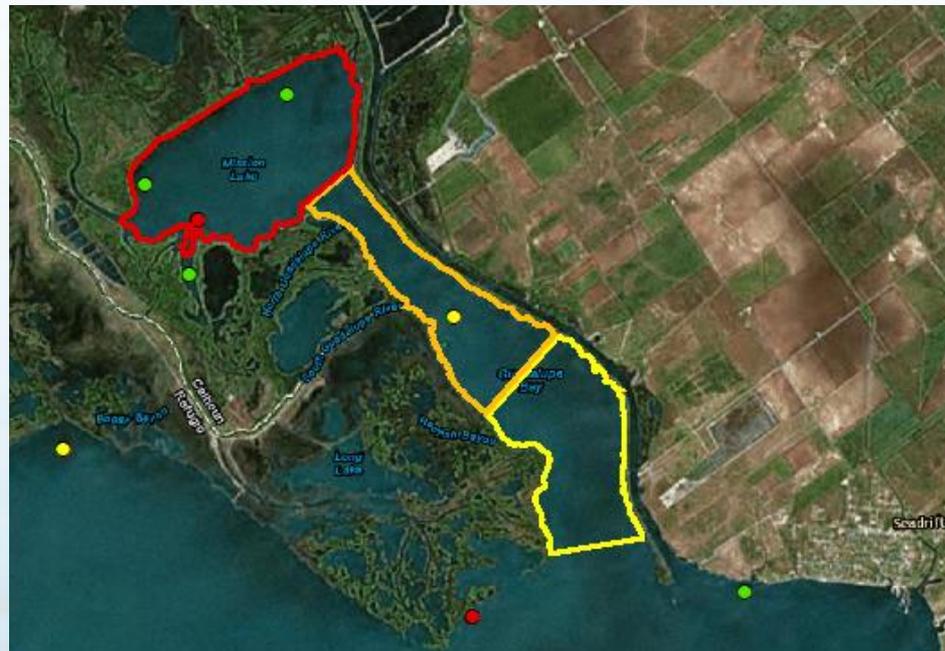
# From the Chronology

Correlate with Environmental Flows:

- Growth increment width
- Recruitment

# Accomplishments

- Mapping using Side Scan Sonar  
September 8, 2014



# Accomplishments



# Potential Outcomes

- Map of potential *Rangia* beds
- Correlation of *Rangia* growth and recruitment.



# BBASC Benefits

- Knowledge of environmental flow conditions in San Antonio Bay that favor growth and recruitment of *Rangia* clams.



# Questions



Rebecca Reeves  
San Antonio River Authority  
[rreeves@sara-tx.org](mailto:rreeves@sara-tx.org)