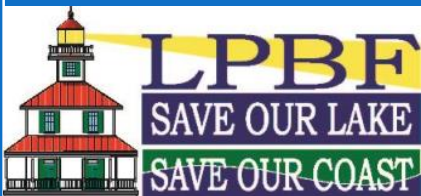


BAYOU LIBERTY HOME SEWER INSPECTION PROGRAM

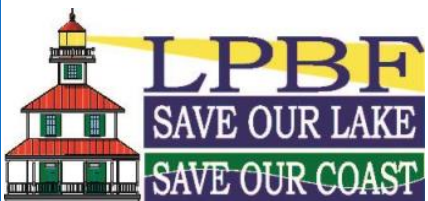
John O'Donnell MSPH





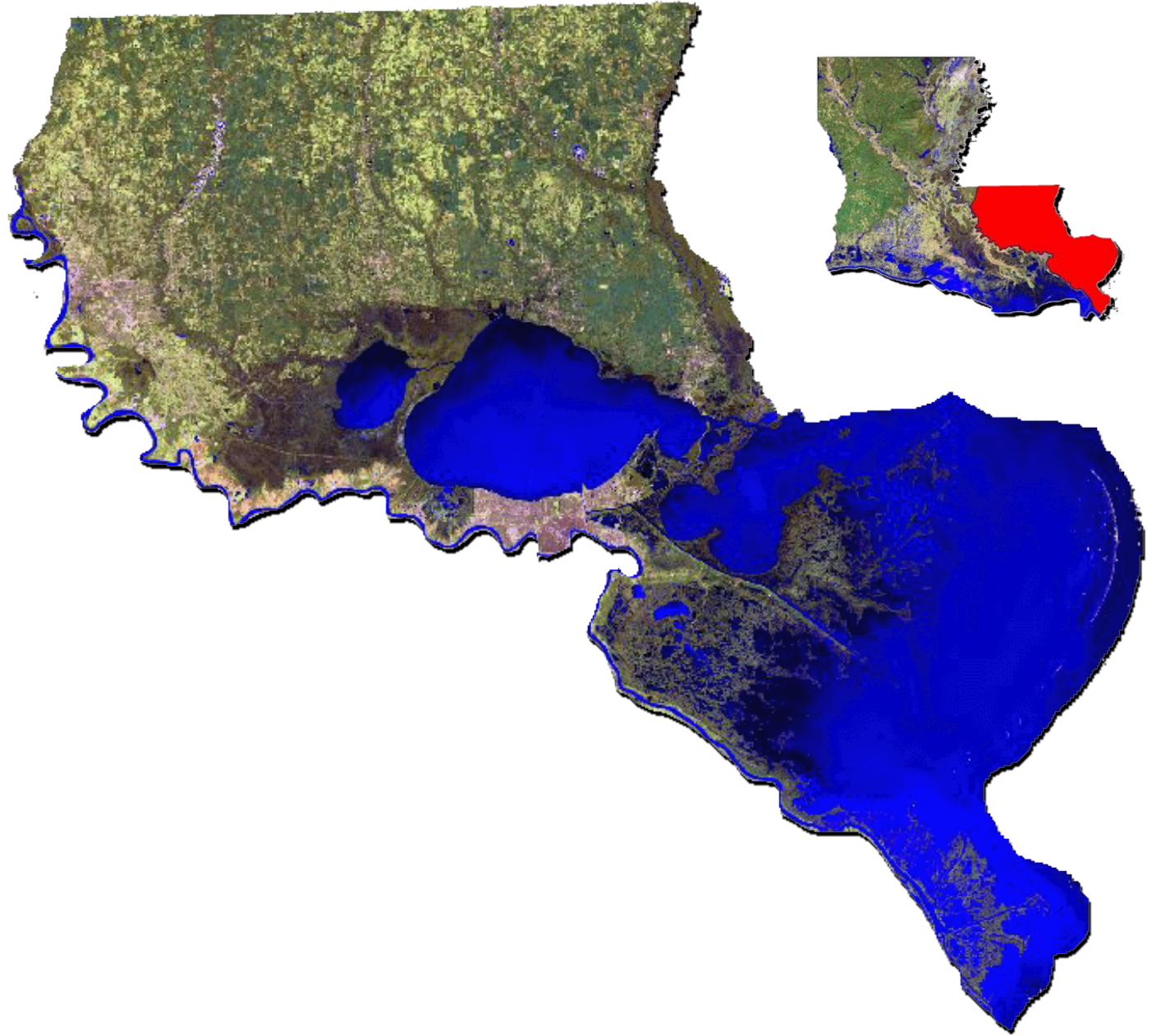
LPBF

- Created in 1989
- Restoring and preserving water quality and coast.
- Restoration, education, monitoring, advocacy



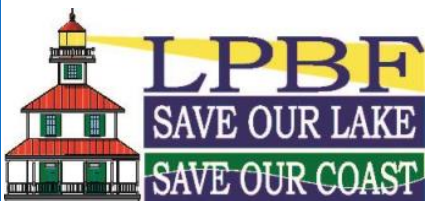
Background

- Lake Pontchartrain Basin
- 9,500 mi² estuarine watershed
- 16 Louisiana parishes
- 630 mi² Lake



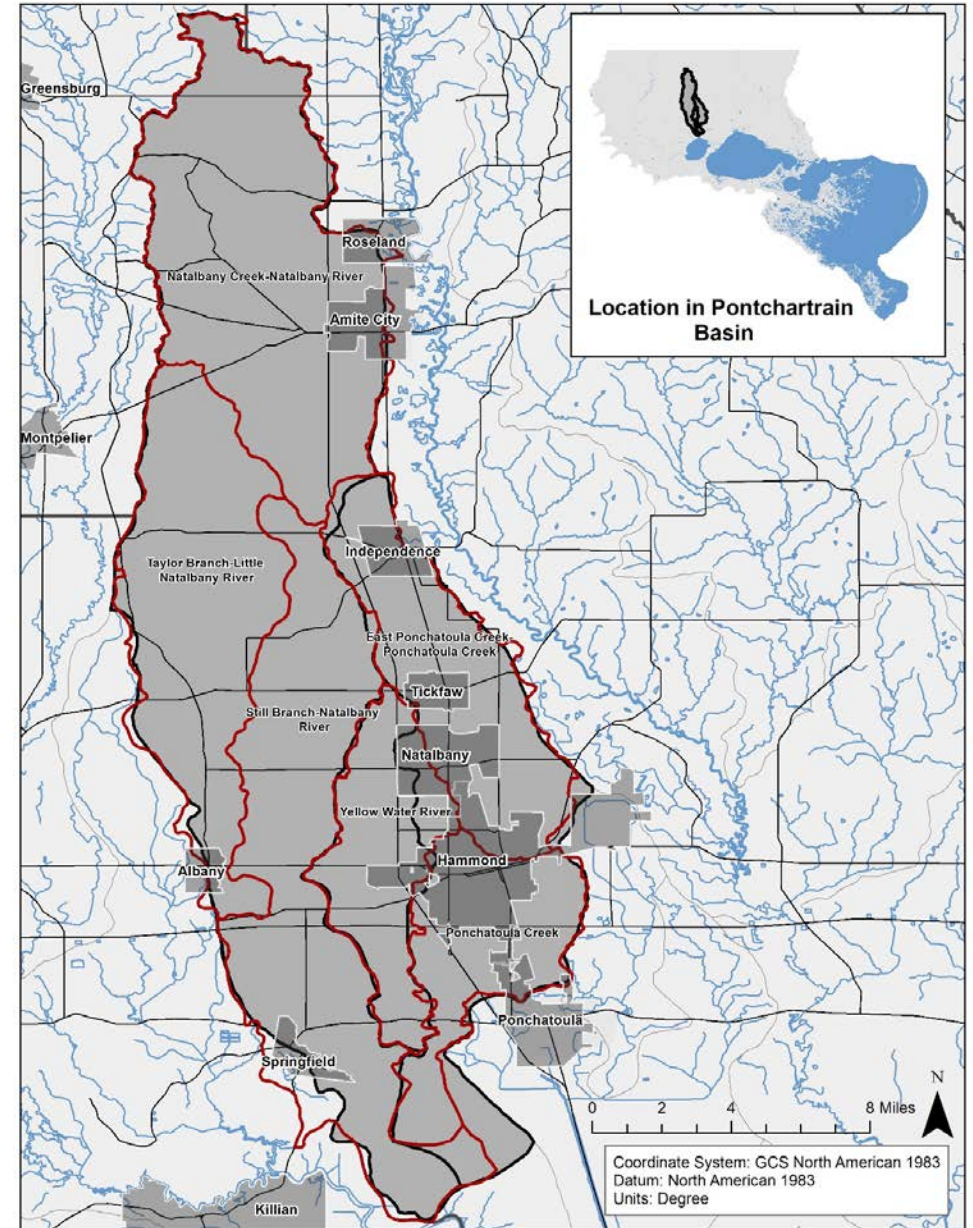
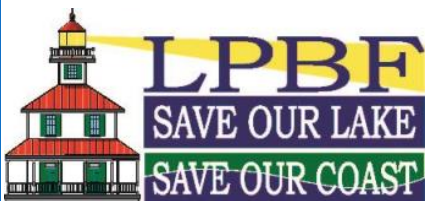
Background

- 2004 – LPBF published a paper discussing the increase of urbanization on the north shore on water. (Calvin et al. 2004)
- 2004 - 2009 – Population boom in St. Tammany Parish (2.6%/yr vs .98%)
- 2012 – Watershed Implementation Plan (WIP) between LPBF and LDEQ modelling On Site Sewer Facilities (OSSF) Issues.
- 2013 – First project in the Yellow Water River and Ponchatoula Creek Watersheds.



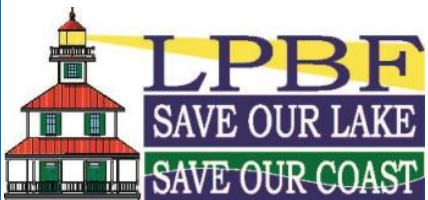
Background

- From 2013-2015 LPBF and Louisiana Department of Health (LDH) sweep Yellow water and Natalbany River watershed.
- 134 Aerated Treatment Units (ATUs) repaired
- Approximately 67,000 gallons per day (GPD) of wastewater improvement.
- Yellow Water, Ponchatoula Creek/River, and Natalbany delisted for secondary contact.



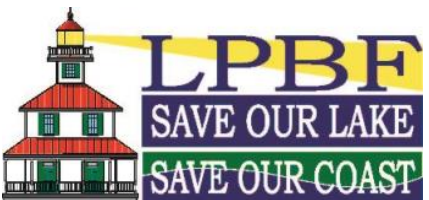
Problem

- 2016 -Bayou Liberty impaired for D.O. and Nutrients
- LDEQ lists On-Site Sewer Facilities (OSSF) as culprit
- St. Tammany Parish and LPBF apply for Region 6 funds.



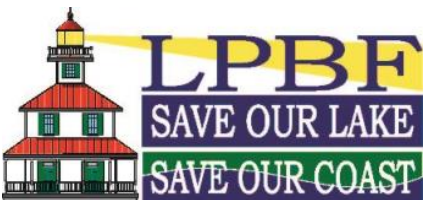
Solution

- Plan new inspection program
- >800 Homes.
- >300,000 GPD of wastewater 50% of which is undertreated.
- Intensive Home inspection program.
- Monthly Monitoring (lab and in situ)

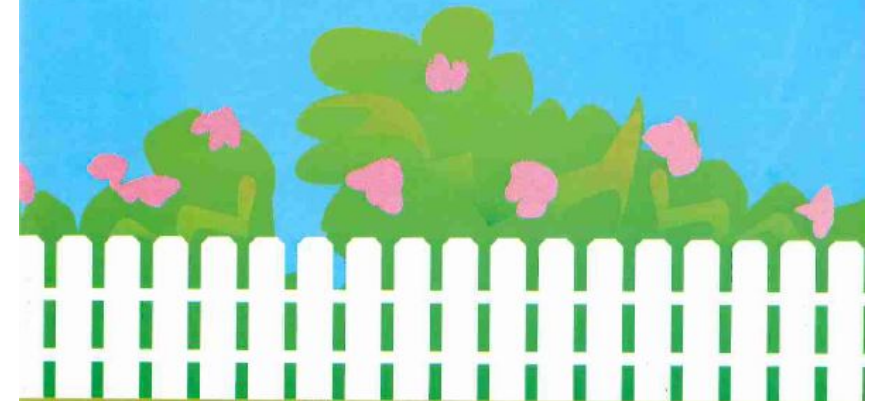


Home Inspections

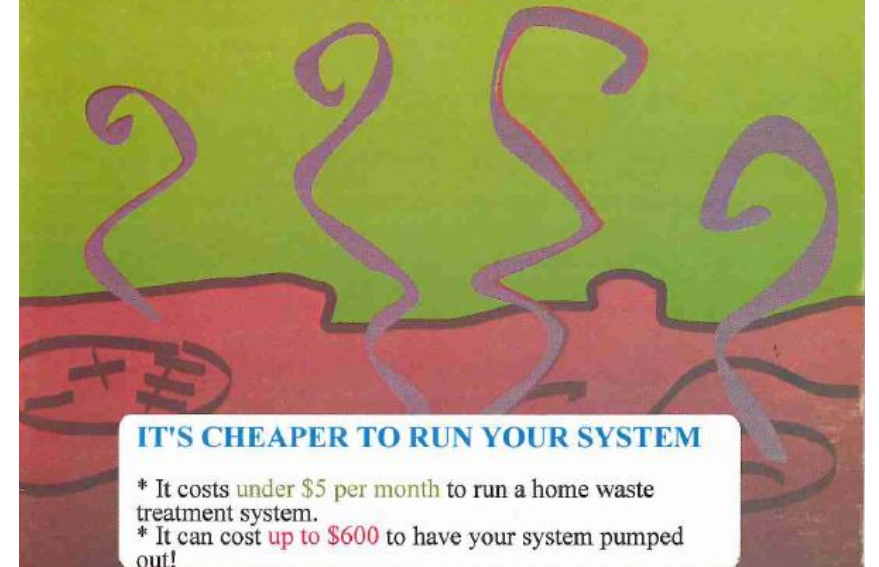
- Meetings with St. Tammany developing protocol
- Included knowledge learned from previous program in Tangipahoa
- Problems initially reaching out to homeowners.
- Made use of LPBF Educational materials



Not in My Backyard!



Uncovering the Dirty Secrets of Your Home **Sewage** System

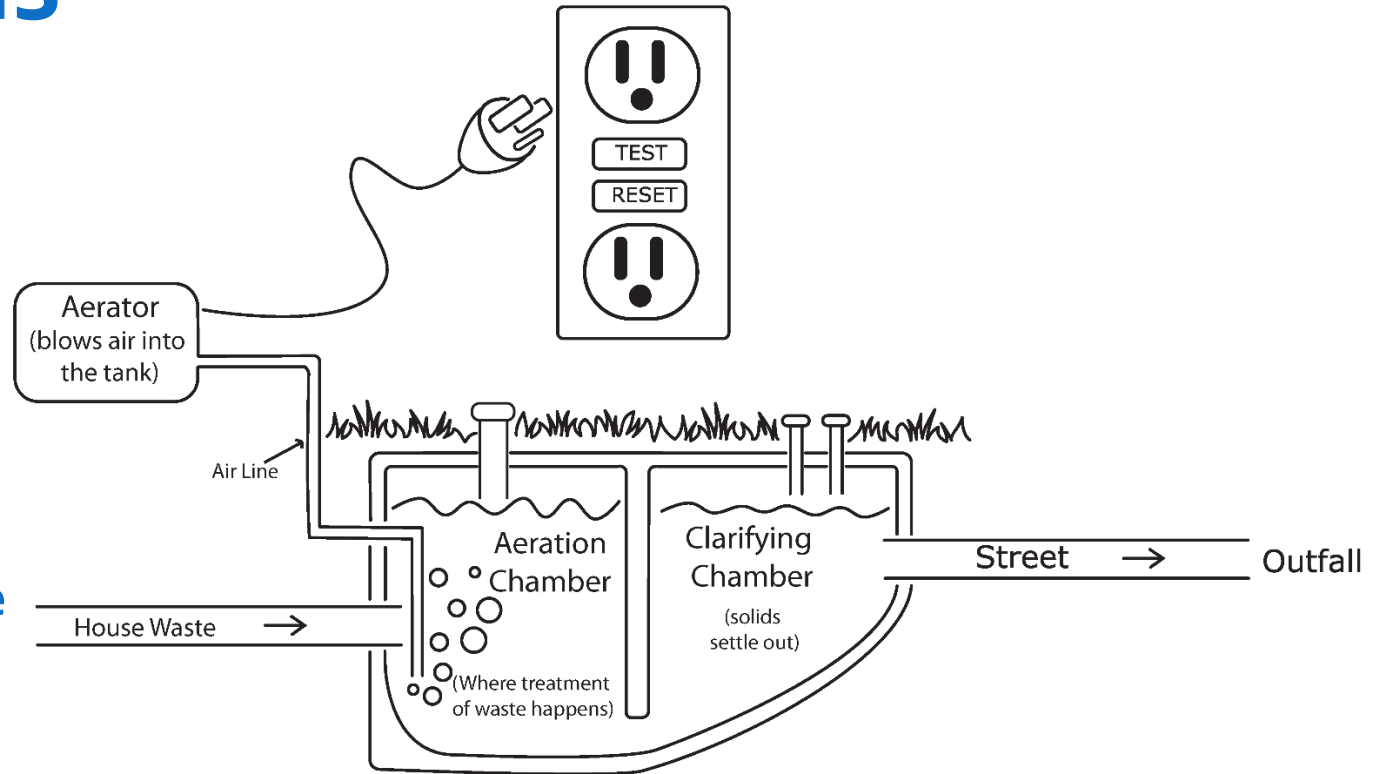


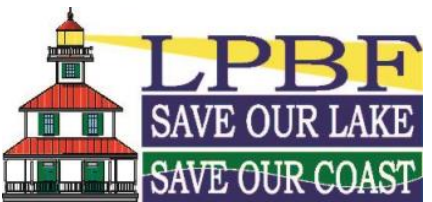
IT'S CHEAPER TO RUN YOUR SYSTEM

- * It costs **under \$5** per month to run a home waste treatment system.
- * It can cost **up to \$600** to have your system pumped out!

Home Inspections

- Door To Door Inspections
 - Training
 - Class IV operator
 - Education
 - What a system is
 - Where the important parts are
 - Inspections
 - What's wrong
 - How they can fix it







Methodology

- Monthly Monitoring:
- In Situ
 - pH
 - DO
 - Temperature
 - Conductance



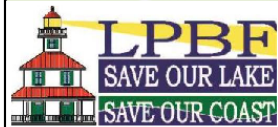
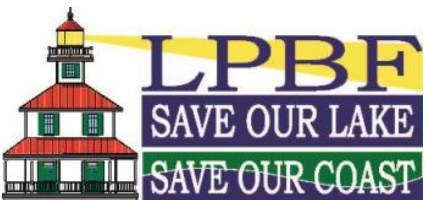
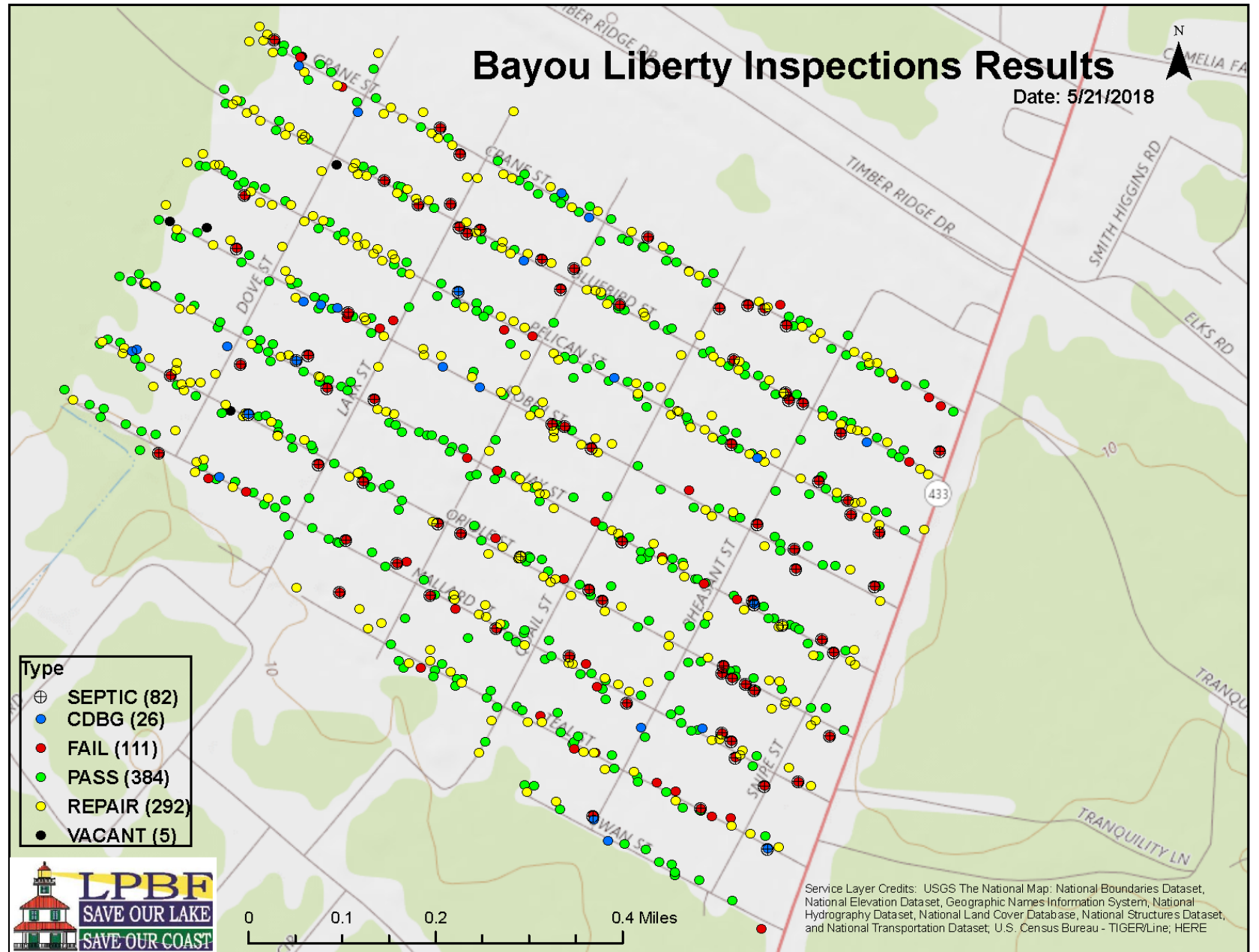
Methodology



- Laboratory Testing
 - BOD
 - Ammonia
 - Phosphorus
 - Fecal

GIS

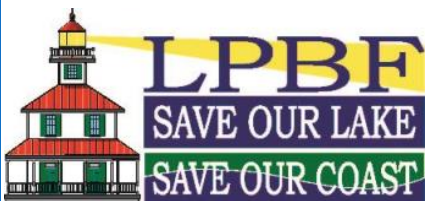
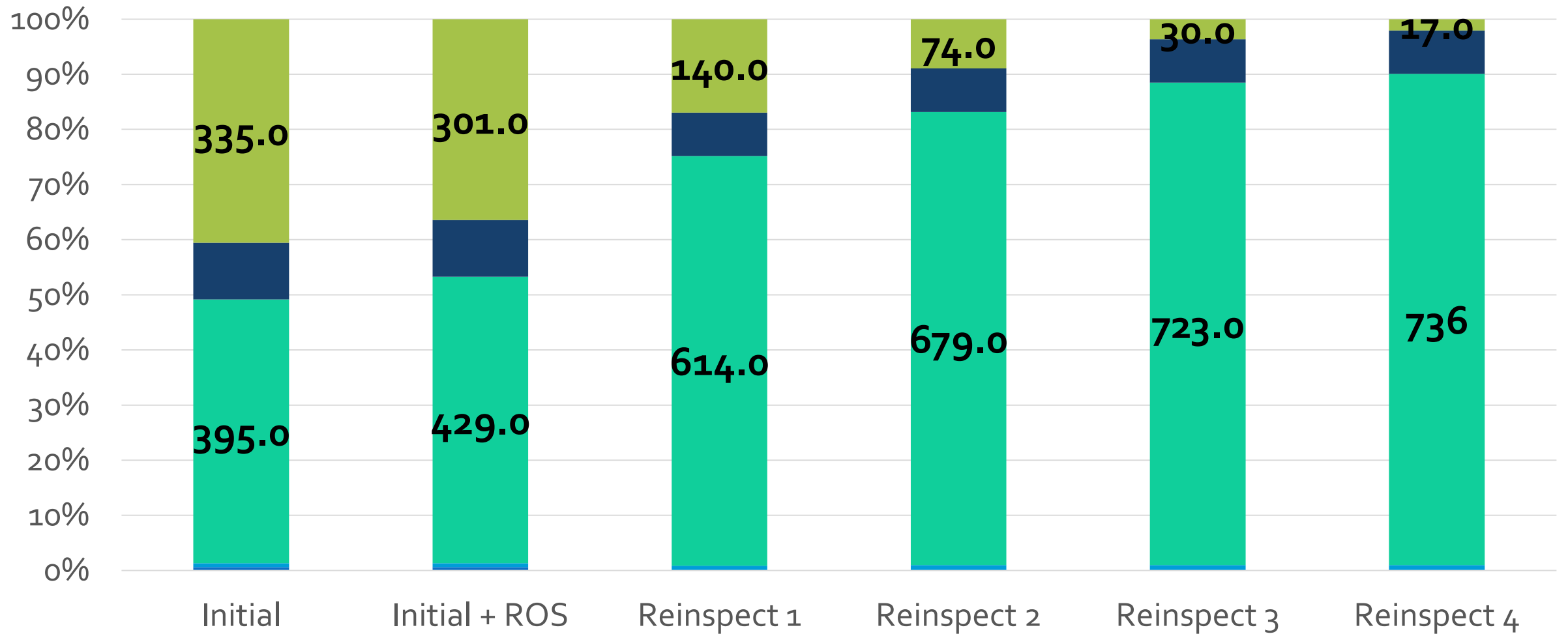
- 826 Homes Inspected
- 582 Re-Inspections
- 1408 Total Inspections
- 48.8% Initial Failure Rate
- 82 Septic Systems
- 26 CDBG Grant Applications



RESULTS

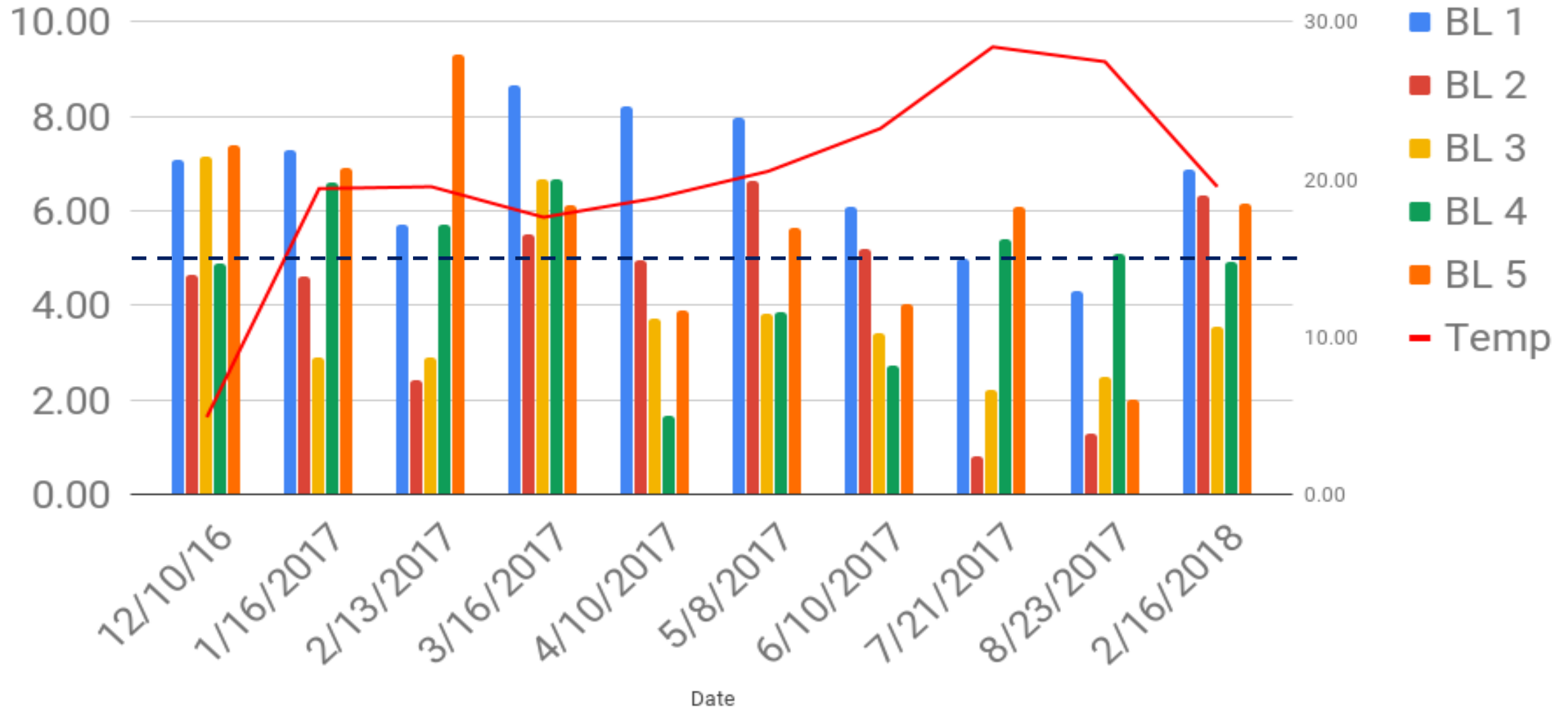


Home Inspection Results Over Time



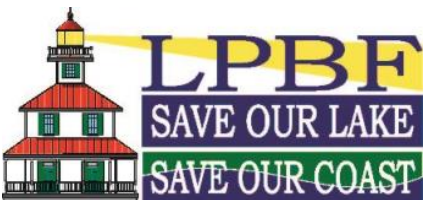
■ NA ■ Vacant ■ Pass ■ Septic ■ Fail

D.O. vs Time



Discussion

- This project supplements point source pollution tracking and reduction programs
- Goal was water quality not punishment
- Plan to monitor the area through December
- Plan on follow-up interviews with homeowners to inform further projects.



Acknowledgements

- LPBF - Andrea Calvin PhD, Will Pestoff, Brady Skaggs PhD, Ronny Carter, Justin Sumner
- St. Tammany - Elizabeth deEtte Smythe, Angela Gagliano
- SELU - Chris Schulz
- EPA Region 6

