The 2016 Water Module: Helping a River and a Lagoon

What's Happening with the Loxahatchee River?

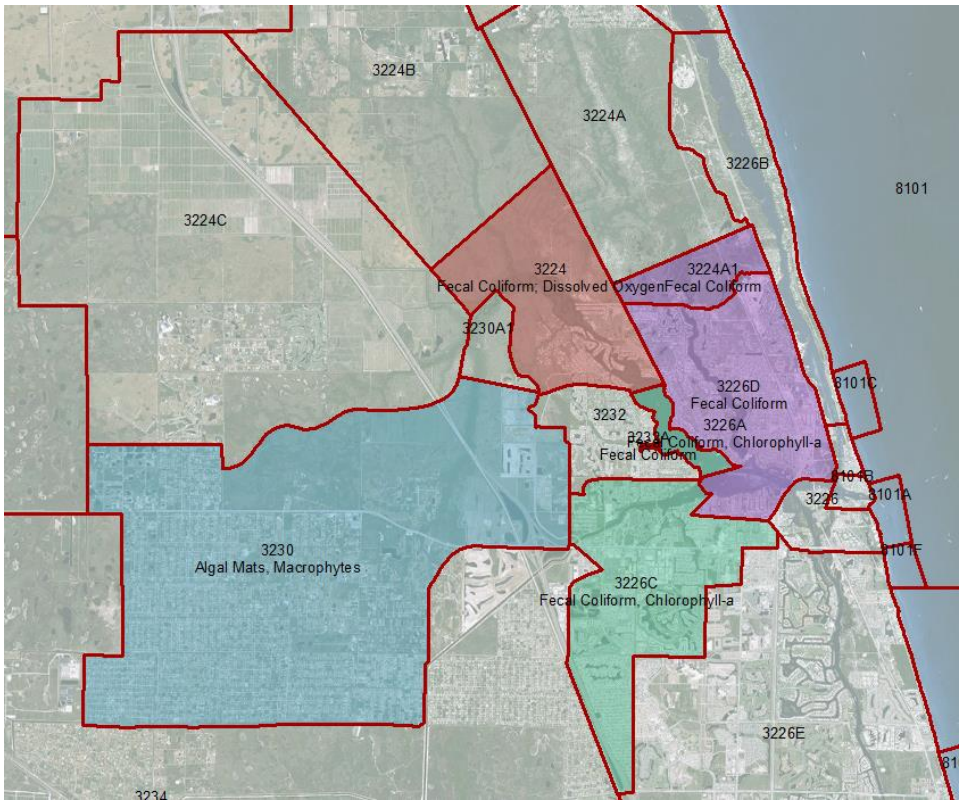
D. Albrey Arrington, Ph.D.
Loxahatchee River District
September 15, 2016 - Florida Atlantic University, Jupiter, FL

What's happening in the Lox?

- LRMCC - Reasonable Assurance Plan
- LRPI – significant turn-dirt work in watershed
- LRD Neighborhood Sewering
- LRD Environmental Monitoring
  - Data accessible online through Power BI

FDEP Determined Segments of the Loxahatchee River Are Impaired

- Next steps are to:
  - Develop Total Maximum Daily Load (TMDL)
  - Develop Basin Management Action Plan (BMAP)
  - Implement restoration projects
- **OR** local stakeholders may pursue Reasonable Assurance Plan

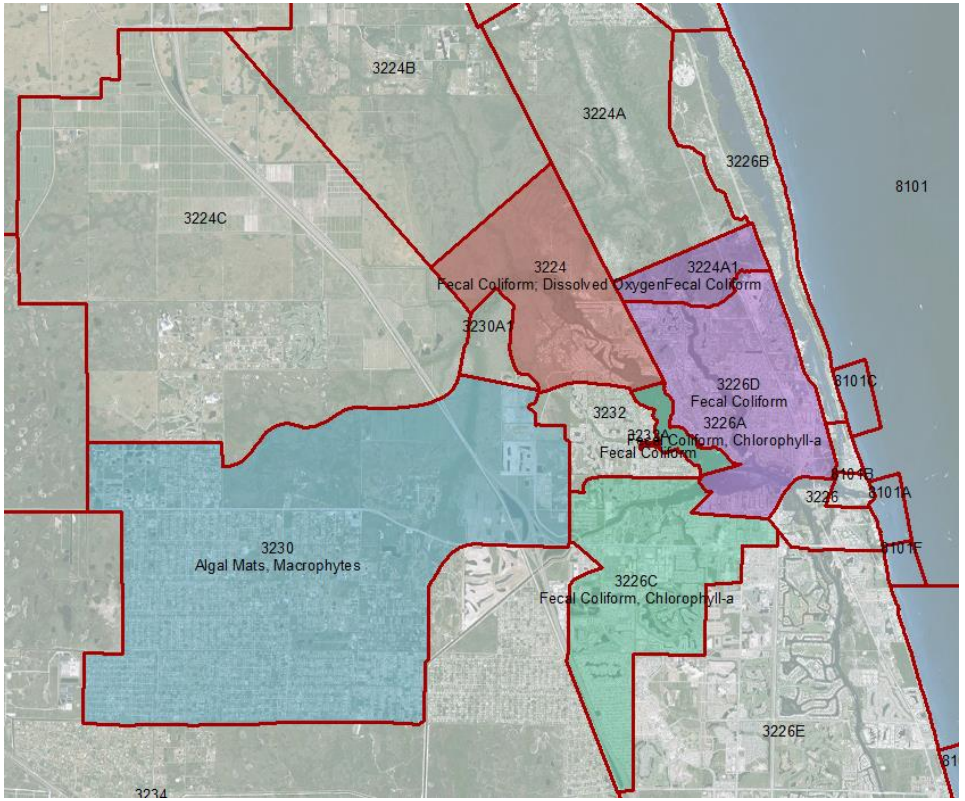


Loxahatchee River Management Coordinating Council

- Reasonable Assurance Plan (4b)
  - Provide an implementation schedule and resource commitments that there are, or will be, pollutant loading reductions that will result in the waterbody achieving water quality targets to attain and maintain the designated use.
- June 27, 2016 LRMCC took action to pursue Reasonable Assurance Plan development in coordination with DEP.

LRMCC Reasonable Assurance Plan

- Proactive effort yields faster path to restoration
- Stakeholders control their destiny (plan put forth prior to federal or state plan)
- More efficient and effective than TMDL/BMAP
- Avoid TMDL-related regulatory requirements
- Stakeholders receive credit for pollutant reductions



Loxahatchee River Preservation Initiative

A multi-agency and stakeholder based advisory group organized primarily for the purpose of soliciting, ranking and submitting to the Florida Legislature a list of local projects focused on the preservation and restoration of water quality and habitats in the Loxahatchee River and its watershed.

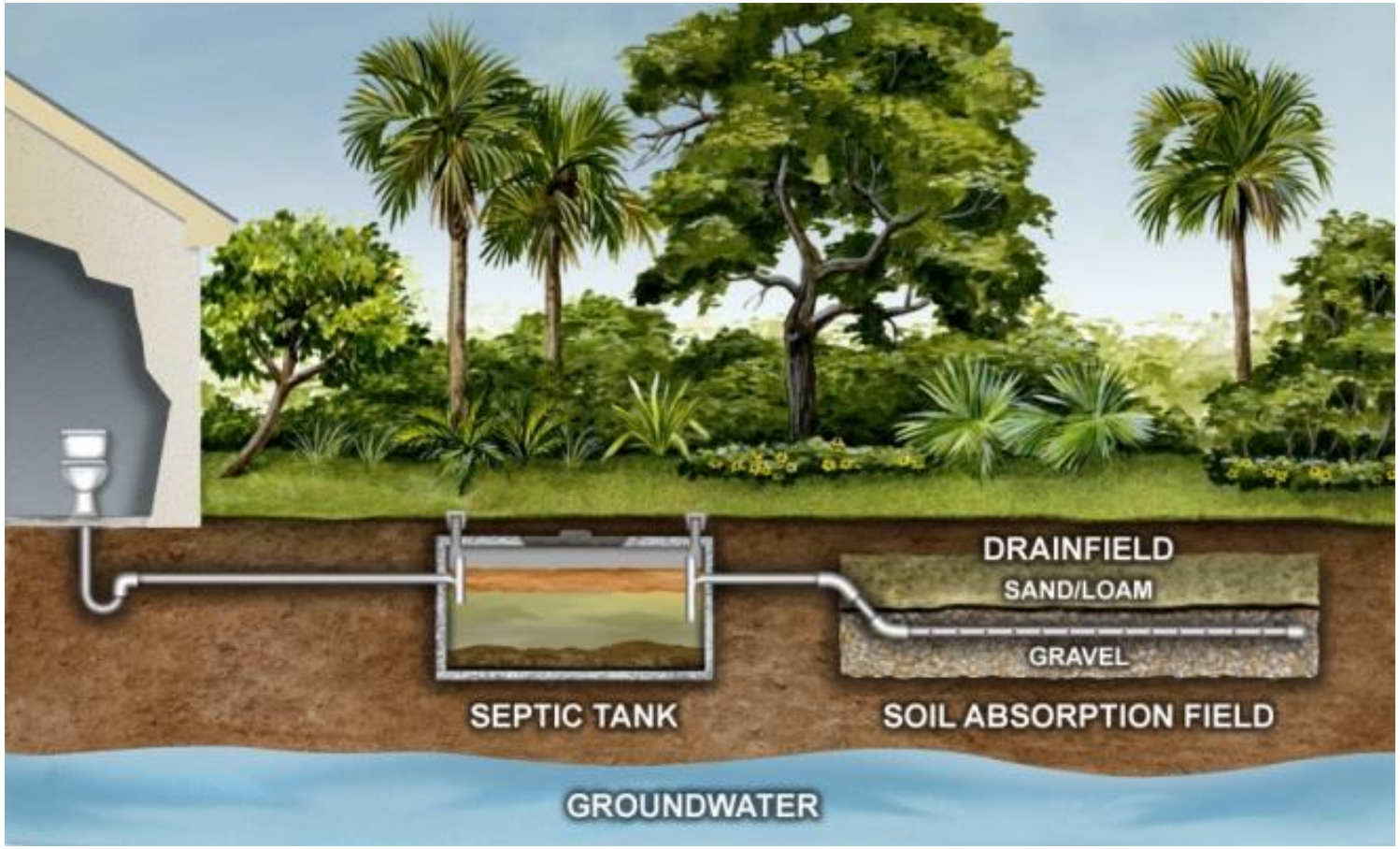
- South Florida Water Management District
- Florida Department of Environmental Regulation (Florida Park Service)
- Loxahatchee River Environmental Control District
- South Indian River Water Control District
- Palm Beach County
- Town of Jupiter
- Jupiter Inlet District
- Public at Large
- Martin County
- Village of Tequesta
- Friends of the Loxahatchee River

$43 million in regional watershed restoration projects

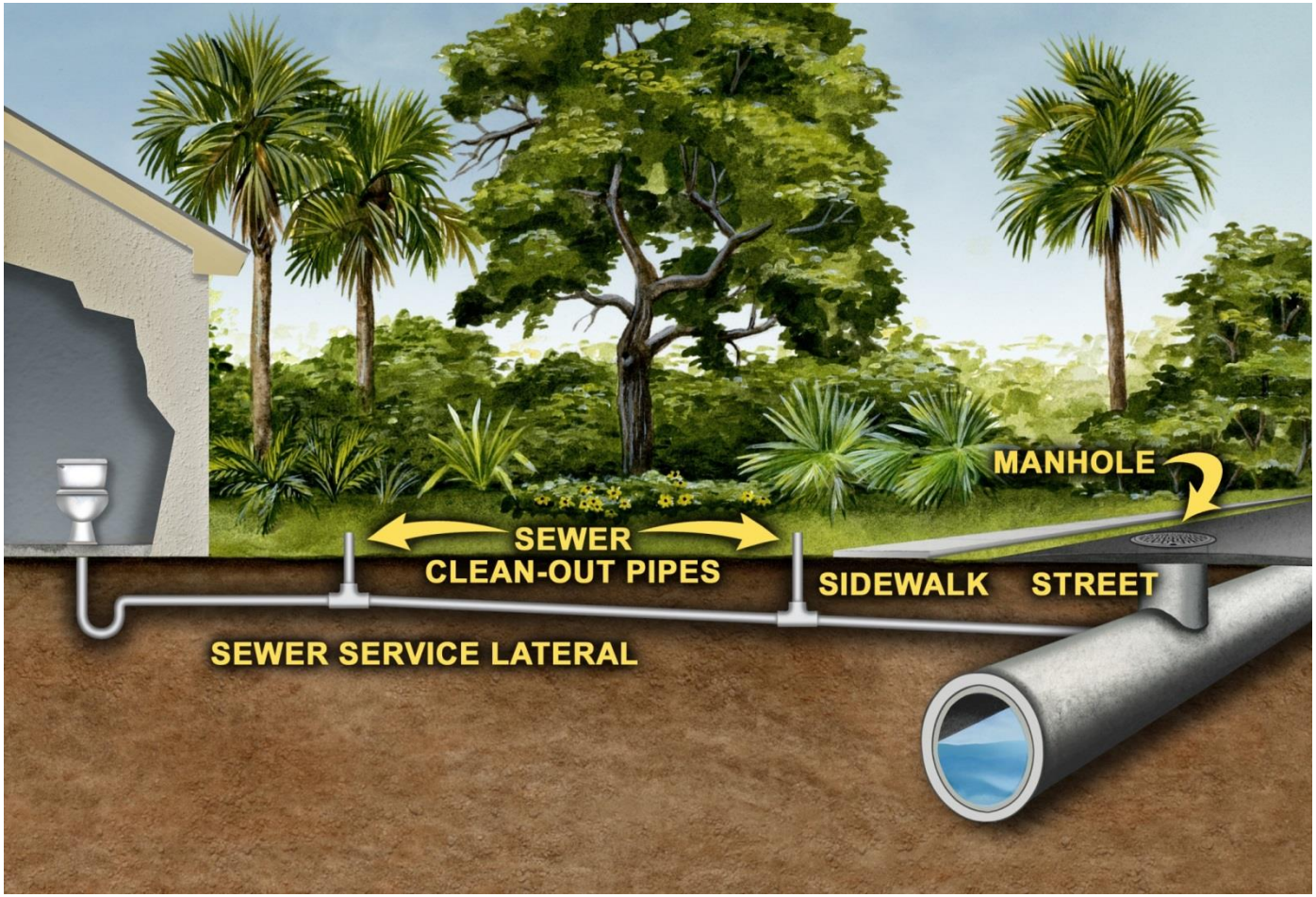
Projects Submitted for FY18 Loxahatchee River Preservation Initiative **Date: 08/22/2016**

Sponsor	Project Title	Requested Funding	Local Match	Total
Jonathan Dickinson State Park	Hydrologic Restoration Phase II FY2017-2018	$ 150,000	$ 150,000	$ 300,000
Jupiter Inlet District	Moonshine Creek Oxbow Restoration	$ 375,000	$ 375,000	$ 750,000
Loxahatchee River District	Jupiter Farms Elementary Force Main	$ 200,000	$ 200,000	$ 400,000
Loxahatchee River District	Neighborhood Sewering Phase 6	$ 498,000	$ 498,000	$ 996,000
Loxahatchee River District	Neighborhood Sewering Phase 7- Whispering Trails	$ 543,000	$ 2,000,000	$ 2,543,000
Loxahatchee River District	Loxahatchee River Water Quality Monitoring FY2018	$ 60,000	$ 60,000	$ 120,000
Martin County Ecosystem Restoration Division	Cypress Creek Weir: Construction	$ 300,000	$ 300,000	$ 600,000
Palm Beach County Environmental Resources Management	Loxahatchee Slough / Hungryland Slough Hydrological Enhancement Study	$ 158,645	$ 158,645	$ 317,290
Palm Beach County Environmental Resources Management	Pine Glades Natural Area Habitat Restoration	$ 225,000	$ 225,000	$ 450,000
South Indian River Water Control District (SIRWCD)	127th Drive North Drainage Improvement	$ 72,320	$ 72,320	$ 144,640
South Indian River Water Control District (SIRWCD)	Exotic Vegetation Removal of Drainage Outfalls	$ 34,050	$ 34,050	$ 68,100
The Institute For Regional Conservation (IRC)	Comprehensive Bio-Assessment of Invertebrates for the Loxahatchee River Floodplain	$ 64,000	$ 64,000	$ 128,000
Town of Jupiter	Elsa and Paulina Roads Infrastructure Improvements	$ 70,000	$ 636,245	$ 706,245
Town of Jupiter	Jupiter Inlet Village Water Quality Improvements	$ 624,731	$ 624,731	$ 1,249,462
Town of Jupiter	Seminole Avenue Stormwater Basin Improvements	$ 473,680	$ 473,680	$ 947,360
Town of Jupiter	Urban Stormwater Management System Rehabilitation Phase VIII – Yacht Club Estates	$ 200,000	$ 220,000	$ 420,000
Totals		**$ 4,048,426**	**$ 6,091,671**	**$ 10,140,097**

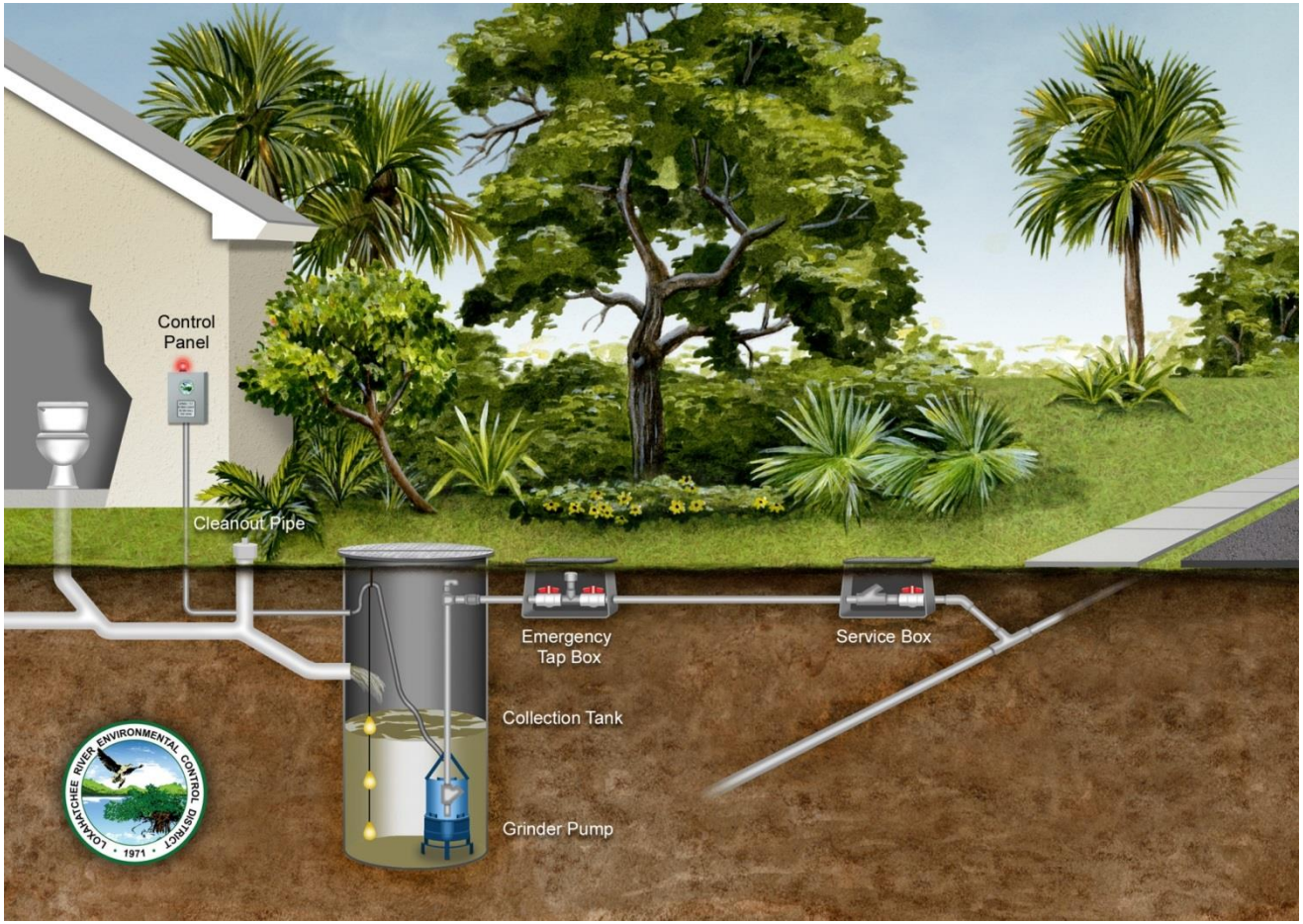
LRD Neighborhood Sewering
Septic System



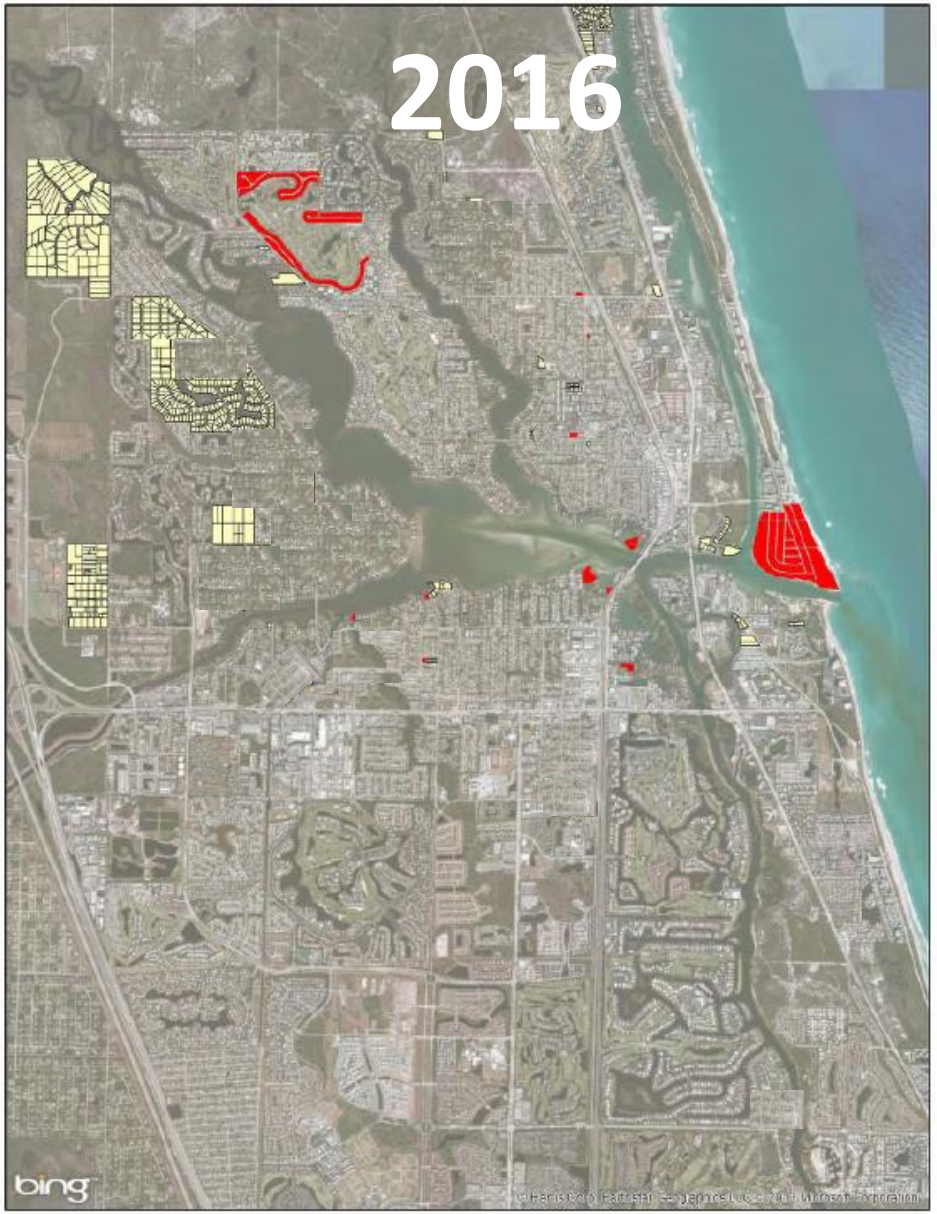
LRD Neighborhood Sewering
Gravity Sewer



LRD Neighborhood Sewering
Low Pressure Sewer



LRD Neighborhood Sewering



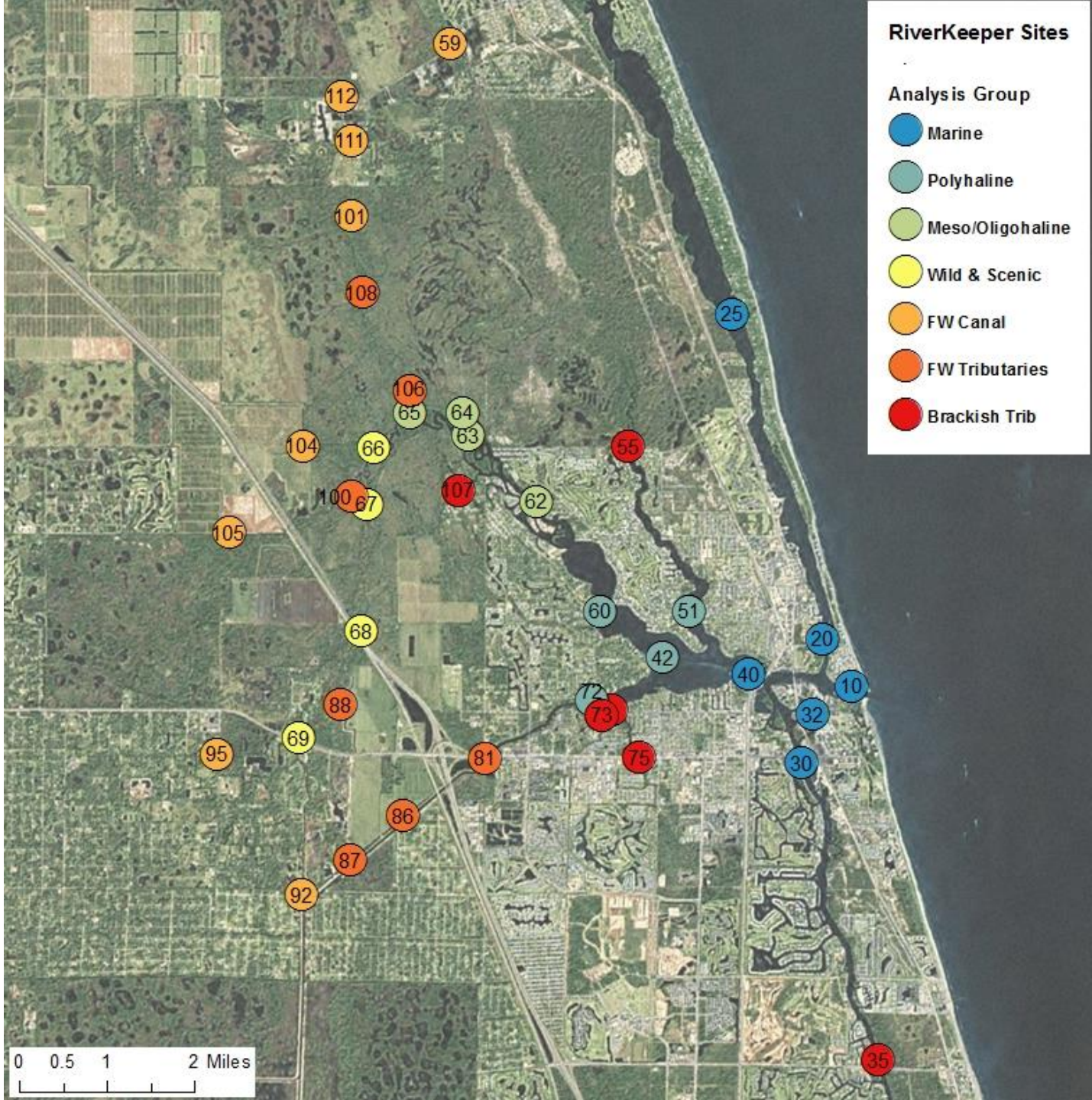
LRD Environmental Monitoring

- Riverkeeper Water Quality
- Continuous salinity monitoring
- Seagrass abundance & mapping
- Oyster settlement & mapping

Project RiverKeeper

- 40+ Sites
- Monthly /

  Bi-Monthly
- 30+ years of data from some sites
- Comprehensive dataset since 1991
- 30 Parameters Analyzed
  - Total Nitrogen
  - Total Phosphorus
  - Chl *a*
  - Fecal coliform and Enterococcus bacteria



LRD Environmental Monitoring

- Online data access using Microsoft Power BI
  - www.loxahatcheeriver.org
  - https://app.powerbi.com/view?r=eyJrIjoiMmFlZTZlMWMtNGJkOS00YWI4LWJkNDctNzM5ZTQ4MWYwN2M3IiwidCI6IjAxNjM3MjBiLTYyN2EtNGViNS04Njg3LTAwODQwZTRjYWFjYyIsImMiOjF9