



North Mala Compra Basin Drainage Improvements

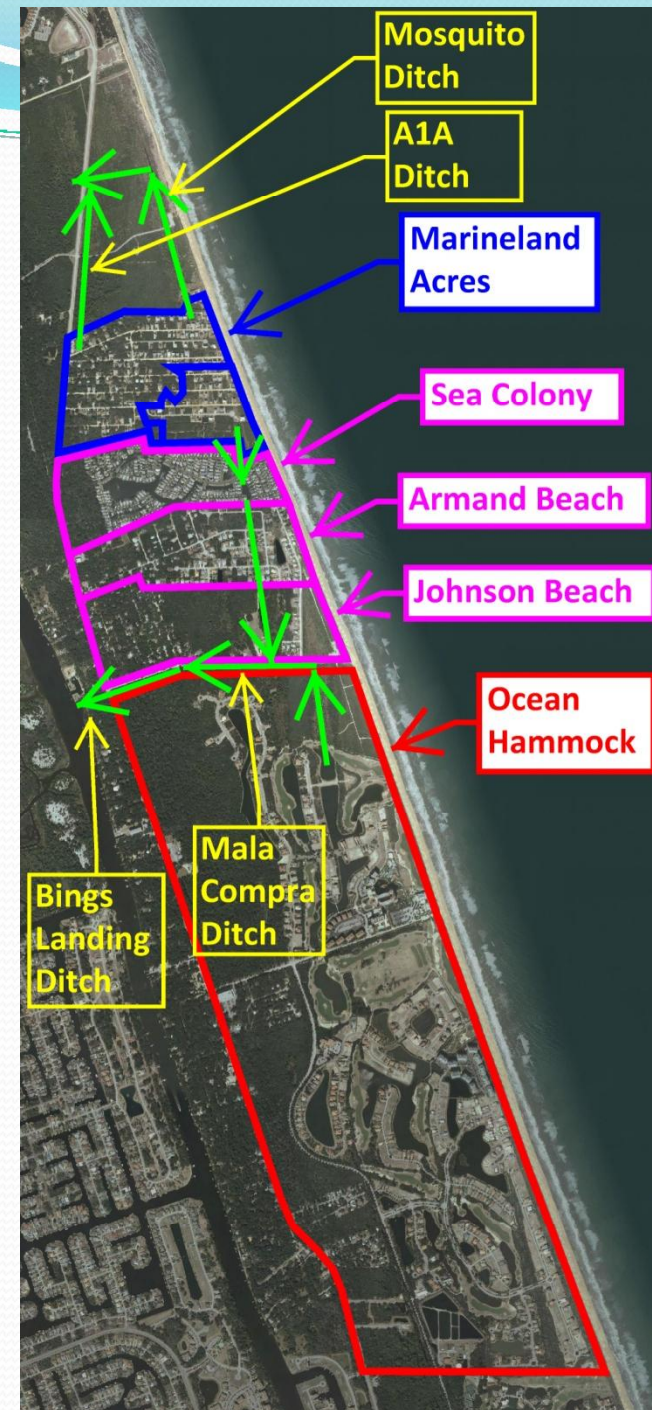
PROJECT STATUS UPDATE

NOVEMBER 19, 2014



EXISTING CONDITIONS

- Comprehensive Computer Model of Entire Drainage System (ICPR)
- All Contributory Areas
 - Marineland Acres
 - Sea Colony
 - Armand Beach
 - Johnson Beach
 - Ocean Hammock
- Both Outfalls
 - A1A & Mosquito Ditch
 - Mala Compra & Bing's Landing Ditches
- Three Storms
 - Mean Annual - 5.2"
 - 25-Year - 9.9 "
 - 100-Year - 13.0"



COMPARISON TO HISTORICAL FLOODING



- Rollins Drive

Traditional Approach - Summary

- New Outfall for Marineland Acres
- Improvements to Existing Backbone System



Traditional Approach **Bing's Landing Ditch Impacts**

- **Currently = 25'± wide**
- **Proposed = 50'± wide**

Traditional Approach **Mala Compra Ditch Impacts**

- **Currently = 30' wide**
- **Proposed = 60' wide**

INNOVATIVE SOLUTION

- Larger New Marineland Acres Outfall
- Re-route Sea Colony & Armand Beach into New Outfall
- ≈ \$2 M Less Cost
- ≈ Greatly Reduced Construction Impacts



Current Status

- **County selected Innovative Solution as Preferred Alternative**

- **SJRWMD Permit Application submitted**

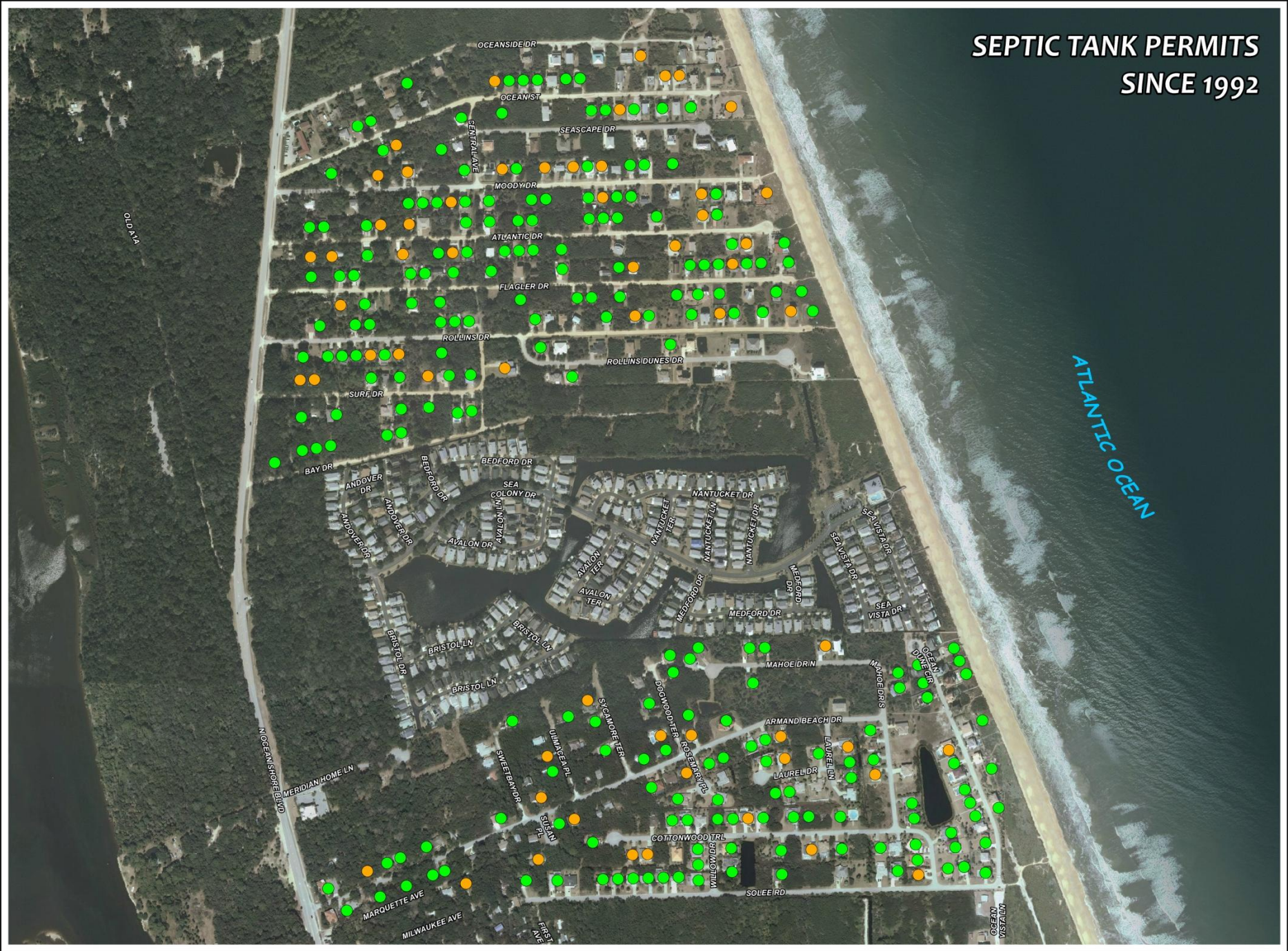
Oct 29, 2014

SEA COLONY

Two Questions:

- **What is in it for me?**
- **What about the septic tank issue?**

SEPTIC TANK PERMITS SINCE 1992



Health Department Information

Benjamin Juengst

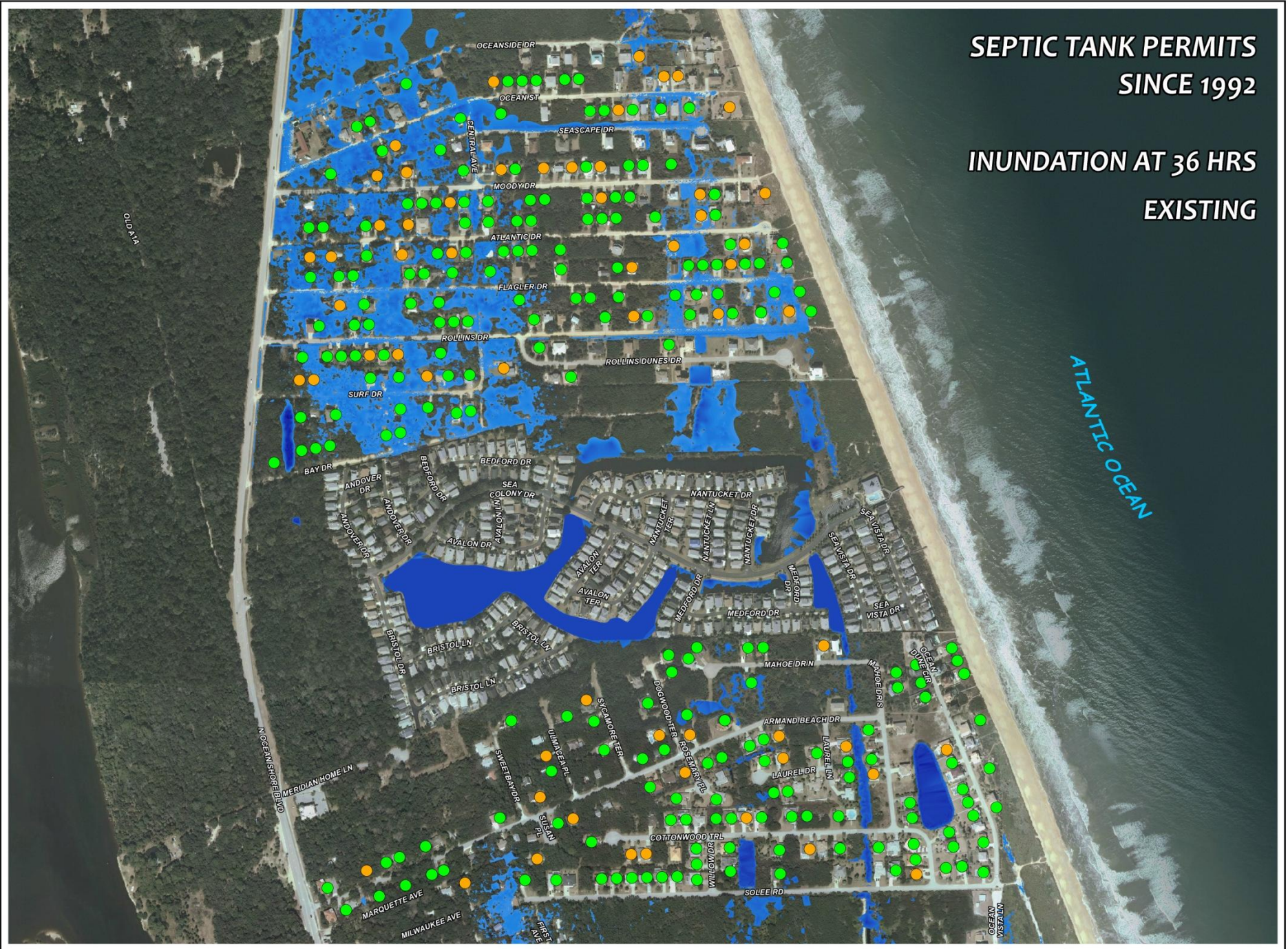
Administrator

Florida Department of Health in Flagler County

- **There are no areas of chronic (ongoing) septic tank failures.**
- **Under normal conditions (which is most of the time) the septic tanks in the area function normally.**
- **It is only under the relatively rare high groundwater conditions caused by prolonged flooding that problems arise.**
- **These problems are simply a lack of flushing ability, not aboveground leakages or sewage overflows.**
- **The Armand Beach ditch drains relatively quickly, so the problems there are short duration.**
- **The Marineland Acres area has longer duration ponding and therefore longer duration problem.**

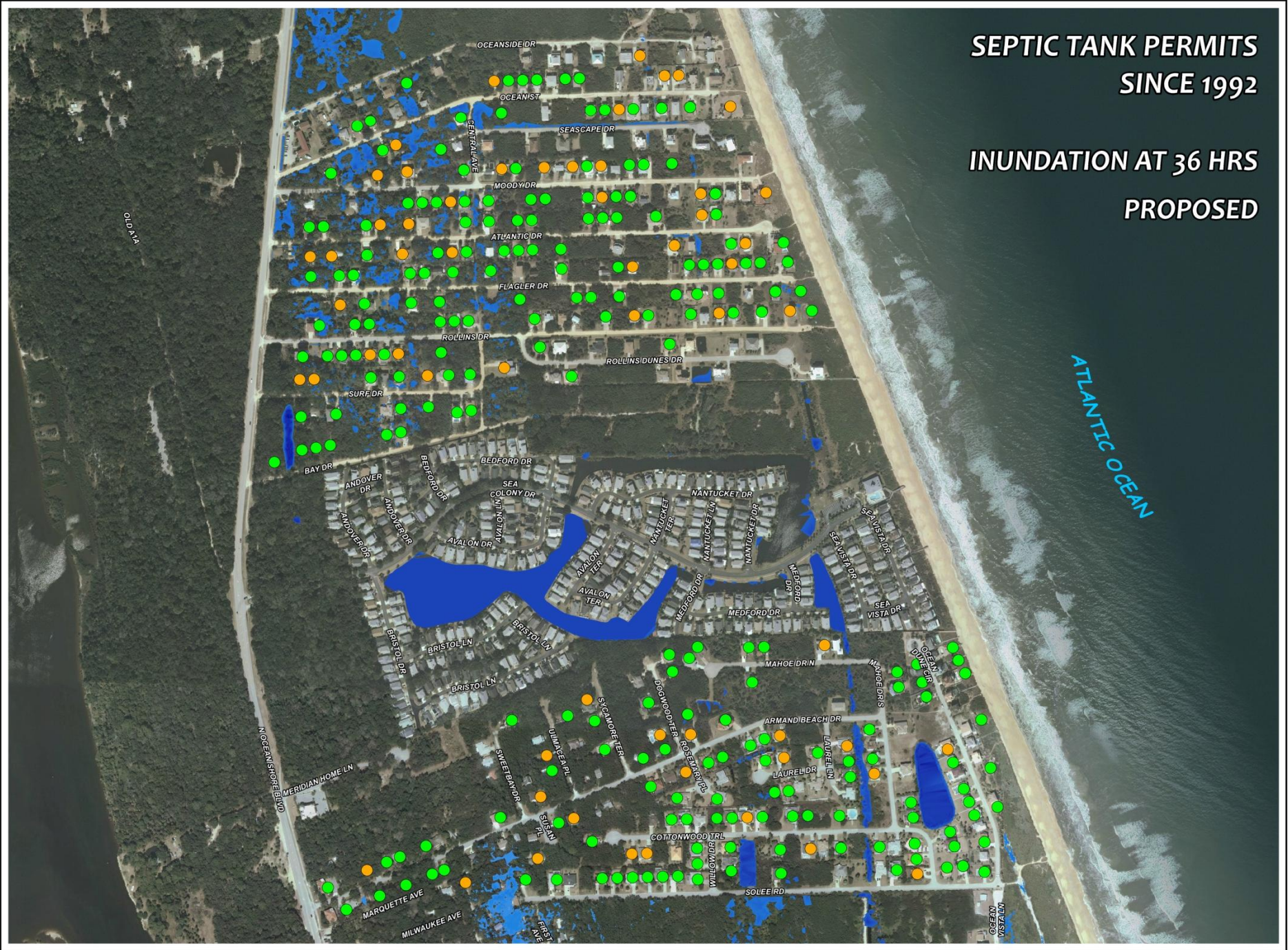
**SEPTIC TANK PERMITS
SINCE 1992**

**INUNDATION AT 36 HRS
EXISTING**



**SEPTIC TANK PERMITS
SINCE 1992**

**INUNDATION AT 36 HRS
PROPOSED**



Septic Tank Summary

SPECIFICS:

- **Armand Beach has a stormwater treatment system.**
- **Only 13± existing houses are directly adjacent to the ditch.**
- **Septic problems result from long term ponding.**
- **Backflow from Armand Beach into Sea Colony ceases 7± hours after end of storm.**

Septic Tank Summary

RESULTS:

- **The proposed improvements reduce both the depth and duration of flooding, and therefore are expected to reduce the septic tank problems .**

Sea Colony - What is in it for me?

Flood Reduction

Mean Annual Storm

- **LOWER FLOOD STAGES**

Marineland Acres

avg

7"

11"

Sea Colony Lakes

avg

7"

10"

Armand Beach Ditch

avg

8"

7"

Johnson Beach Ditch

avg

3"

6"

Mala Compra Ditch

avg

1"

5"

- **ALLOWS SYSTEM TO HANDLE LARGER STORMS**

- **INCREASED RELIABILITY OF OUTFALL**

SUMMARY

- **Eliminated construction Impacts to Bing's Landing and Mala Compra ditches**
- **\$2 Million Cost Savings over ditch widening**
- **Lower Flood Stages**
- **Reduced septic tank problems**