



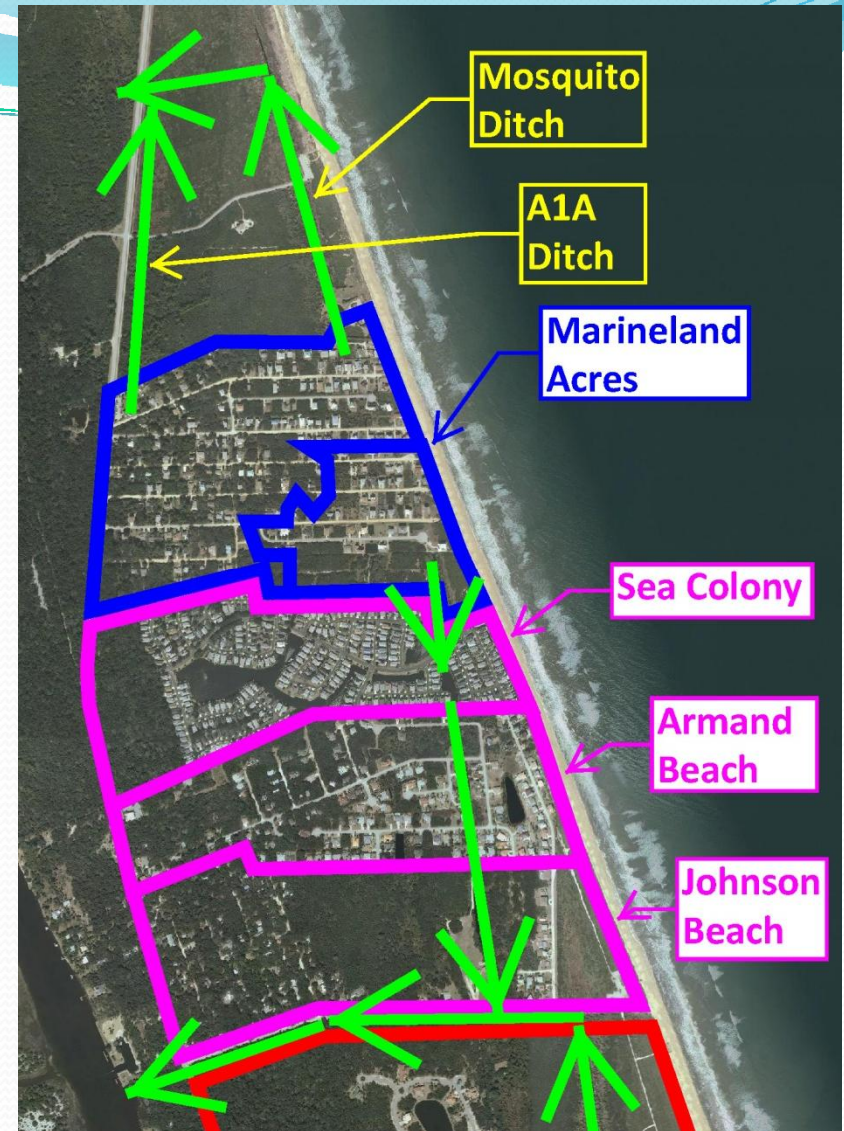
North Mala Compra Basin Drainage Improvements

**COMMISSION WORKSHOP
FEBRUARY 16, 2015**

- **DESIGN REVIEW**
- **FUNDING APPROACH**

PROBLEMS WITH EXISTING SYSTEM

- **Marineland Acres**
 - No internal collection system
 - Undersized outfall at high invert
- **Sea Colony**
 - Dependant upon downstream ditch maintenance for long term reliability
- **Armand Beach**
 - Overgrown outfall ditch
 - Undersized culverts
- **Mala Compra ditch**
 - A1A culvert invert is too high
 - Ditch inverts are too high



SUMMARY

- Area Wide Drainage Model
- 2003 → 2005 Tide Gauge Data
- Compared to Observed Flooding



Traditional Approach - Summary

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



Traditional Approach – Benefits & Impacts

BENEFITS:

- Flood Relief

MAJOR CONSTRUCTION IMPACTS

- Bing's Landing
- Mala Compra Ditch
- Armand Beach Ditch



INNOVATIVE SOLUTION

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



Comparison

BENEFITS:

- **Flood Relief**

**Traditional
Solution**



**Innovative
Solution**



COSTS & IMPACTS:

- **Major Construction Impacts:**

- **Bing's Landing**

X

- **Mala Compra Ditch**

X

- **Armand Beach Ditch**

X

- **Minor Construction Impacts**

- **Armand Beach Ditch**

X

- **Sea Colony Culvert Replacement**

X

X

- **Cost**

\$8.8 Million (2014)

(≈ \$2 M Savings) 7

Preferred Solution - Details

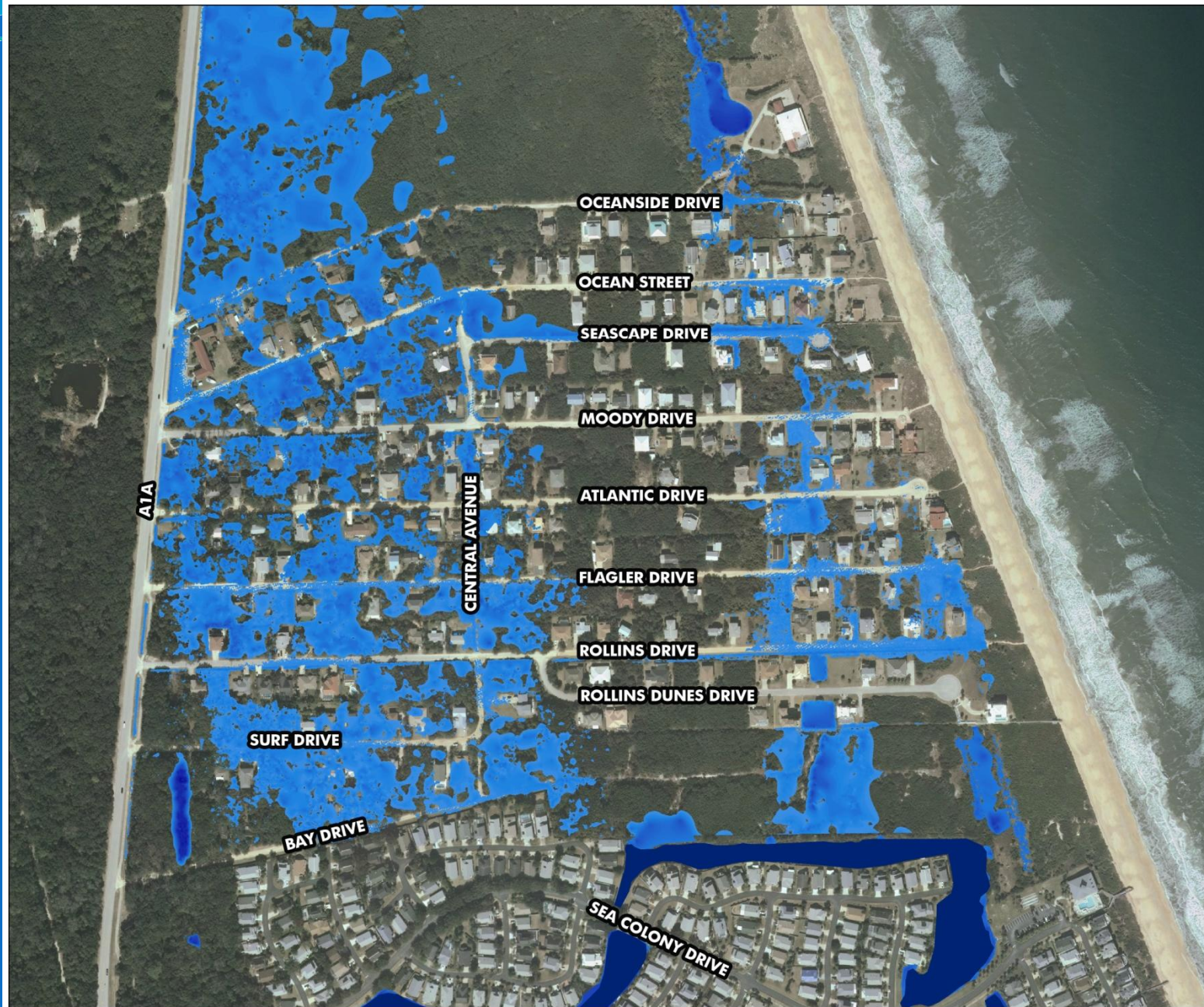
BENEFITS

- **Flood Stage**
- **Duration**

Anticipated Flood Reduction – Mean Annual

<u>AREA:</u>	<u>Peak Stage</u>	<u>@ Hour 36</u>
• Marineland Acres	avg 7"	11"
• Sea Colony Lakes	avg 7"	13"
• Armand Beach Ditch	avg 6"	5"
• Johnson Beach Ditch	avg 2"	4"
• Mala Compra Ditch	avg 1"	3"

Existing Conditions – Hour 36



Projected Conditions – Hour 36

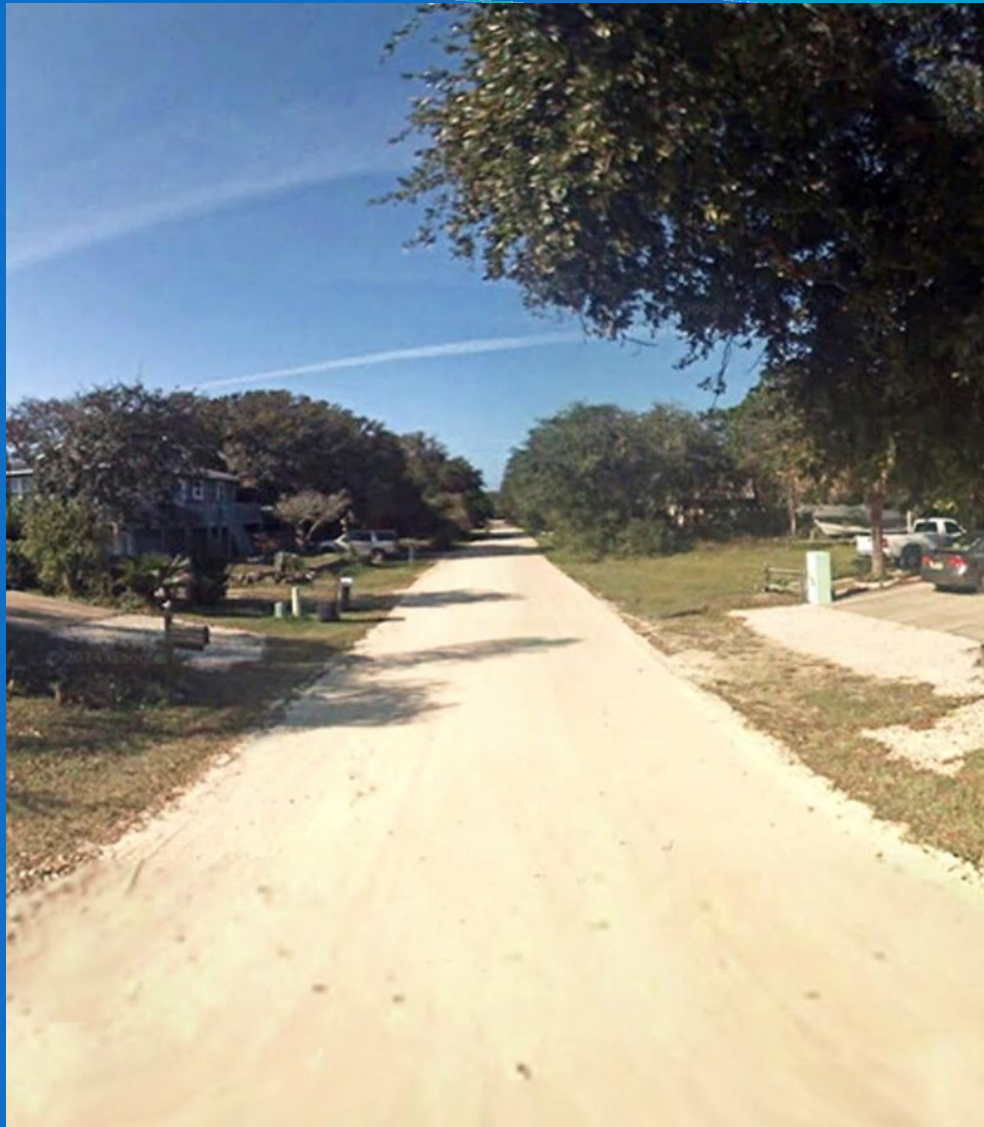


Marineland Acres Improvements

- **Vegetative Buffer around pond**
- **Sculpted Edges w/ Landscaping**
- **Roadway Collection System**



Marineland Acres - Roadways



Existing

Marineland Acres - Roadways



Proposed - Swales & Inlets

Benefits - Innovative Solution

- **MARINELAND ACRES**
 - **New Functional Outfall**
 - **Stormwater Collection System**
 - **Stormwater Quality Improvement**
 - **SEA COLONY**
 - **More Reliable Piped Outfall to ICWW**
 - **ARMAND BEACH**
 - **Additional Outfall during large storms**
 - **JOHNSON BEACH**
 - **Elimination of major construction impacts to Mala Compra ditch**
 - **OCEAN HAMMOCK**
 - **Reduced pressure on outfall**
-
- **EVERYBODY**
 - **Better drainage**
 - **Preservation of Bing's Landing & the Mala Compra Greenway**

Project Status

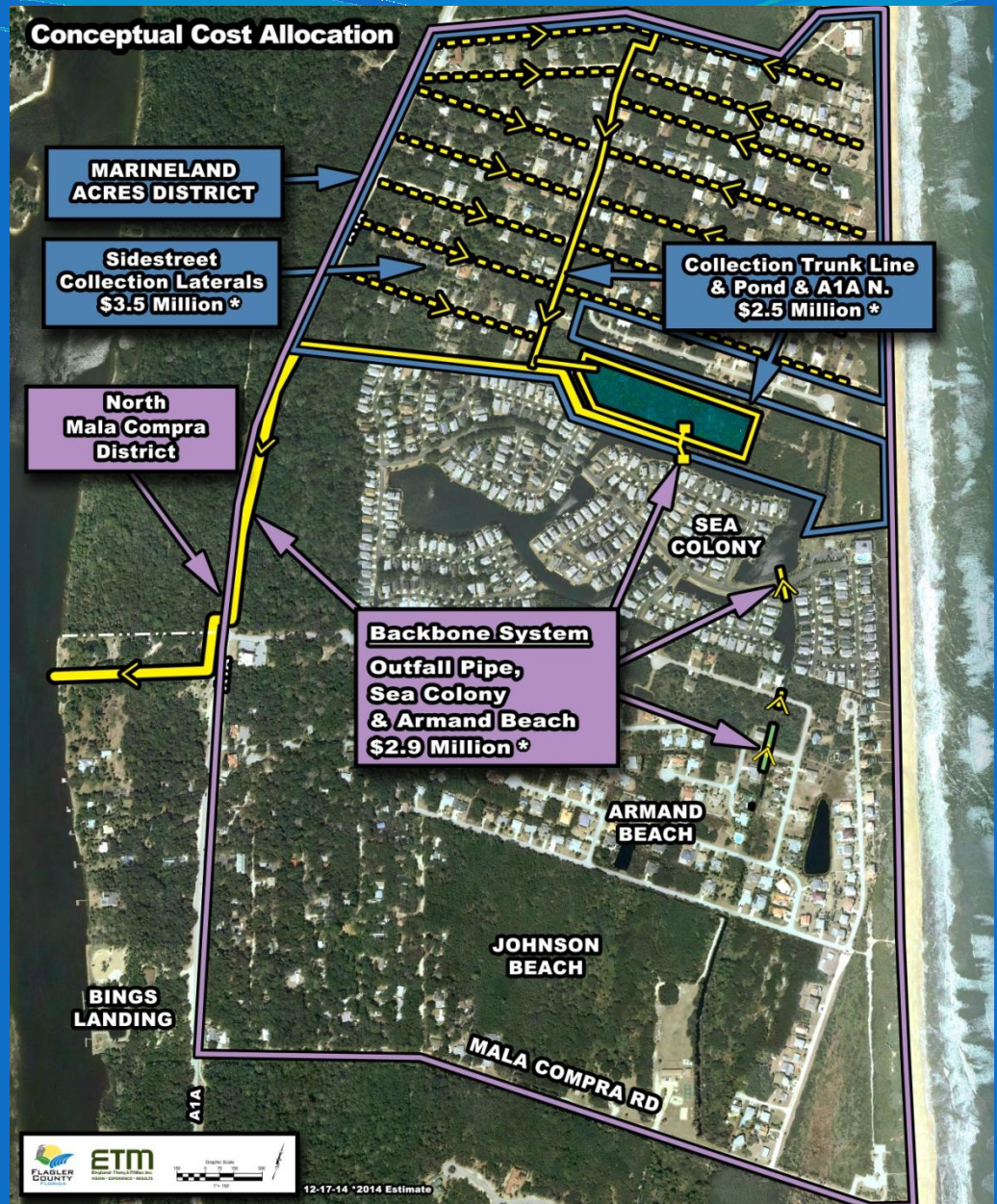
- **Previous Commission Workshop** (July 23, 2013)
 - **Two Design Alternatives**
 - **Traditional Approach**
 - **Innovative Solution** ✓
- **Current Progress**
 - **Outfall Easement Acquisition** (Nov. 2014)
 - **Public Meetings**
 - **Technical #1 - Hammock Community** (Nov. 12, 2014)
 - **Technical #2 - Sea Colony** (Nov. 19, 2014)
 - **Funding Approach** (Jan. 14, 2015)
 - **Permitting**
 - **Army Corps permit received** (Jan. 6, 2015)
 - **SJRWMD in-progress**
- **NEXT STEP:**
 - **FUNDING APPROACH**

FUNDING APPROACH

- **CONSTRUCTION COSTS & PHASING**
- **DRAINAGE DISTRICTS**
- **FUNDING APPROACH**
- **FUNDING PHASING**
- **FREQUENTLY ASKED QUESTIONS (FAQ)**

CONSTRUCTION COSTS & PHASING

- **PHASE 1: BACKBONE SYSTEM**
\$2.9 Million
 - **PHASE 2: COLLECTION TRUNK LINE & POND**
\$2.5 Million
 - **PHASE 3: SIDESTREET COLLECTION LATERALS**
\$3.5 Million
- TOTAL = \$8.8 Million ***



• 2014 Estimate

PROPOSED DISTRICTS

NORTH MALA COMPRA DISTRICT

- Overall Area
- North of Mala Compra Rd
- East of A1A
- South of Washington Oaks

MARINELAND ACRES DISTRICT

- Subarea
- North of Sea Colony



PROPOSED FUNDING

- **PHASE 1: BACKBONE SYSTEM**

Capital = Fully Funded by County*

O&M = County 50% Residents 50%

- **PHASE 2: COLLECTION TRUNK LINE & POND**

Capital = County \$1M* Residents \$1.5M

O&M = County 50% Residents 50%

- **PHASE 3: SIDESTREET COLLECTION LATERALS**

Capital = County \$3M* Residents \$0.5M

O&M = County 100%

* Assuming Grants & Local Funding

PROPOSED FUNDING

Table 5A

Estimated Annual Assessments by District

Funding Analysis

Type of Parcel	District/Phase	O & M		CONSTRUCTION		TOTAL	
		without County Contribution	with County Contribution ¹	without County Contribution	with County Contribution ²	without County Contribution	with County Contribution
DEVELOPED	N. Mala Compra District						
	Phase 1	\$60.00	\$30.00	\$221.48	\$0.00	\$281.48	\$30.00
	Marineland Acres District³						
	Phase 2 - Pond, Collection Trunkline, and N. A1A	\$157.95	\$78.97	\$729.57	\$433.53	\$887.52	\$512.50
	Phase 3 - Sidestreet Collection Laterals	\$88.72	\$0.00	\$1,022.98	\$134.85	\$1,111.70	\$134.85
	N. Mala Compra and Marineland Acres Districts Assessments Combined	\$306.67	\$108.97	\$1,974.03	\$568.38	\$2,280.69	\$677.36
VACANT	N. Mala Compra District						
	Phase 1	\$60.00	\$30.00	\$110.74	\$0.00	\$170.74	\$30.00
	Marineland Acres District³						
	Phase 2 - Pond, Collection Trunkline, and N. A1A	\$157.95	\$78.97	\$364.79	\$216.76	\$522.73	\$295.74
	Phase 3 - Sidestreet Collection Laterals	\$88.72	\$0.00	\$511.49	\$67.43	\$600.21	\$67.43
	N. Mala Compra and Marineland Acres Districts Assessments Combined	\$306.67	\$108.97	\$987.01	\$284.19	\$1,293.68	\$393.16

¹ County staff proposes to contribute 50 percent of increase in O&M costs for Phase 2; 100 percent of increase for Phase 3.

² County and outside contributions for future phases is tentative, pending commission approval and grant monies, but assumed to be \$1M for Phase 2 and \$3M for Phase 3.

³ Marineland Acres District includeS the neighborhoods of Marineland Acres, Seascape Drive, and Oceanside Drive.

FUNDING PHASING

TABLE 5B

Example of Implementation of a MSBU Assessment over Time for Developed Parcels

Funding Analysis

		Annual Assessment First 10 Years									
Developed		1	2	3	4	5	6	7	8	9	10
Phase 1 N. Mala Compra	Construction										
	O&M		\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30
Phase 2 Marineland Acres Only	Construction	\$435	\$435	\$435	\$435	\$435	\$435	\$435	\$435	\$435	\$435
	O&M				\$80	\$80	\$80	\$80	\$80	\$80	\$80
Phase 3 Marineland Acres Only	Construction					\$135	\$135	\$135	\$135	\$135	\$135
	O&M										
Marineland Acres Only	Total Fee	\$435	\$465	\$465	\$545	\$680	\$680	\$680	\$680	\$680	\$680

Assumes continuous construction of each phase, with full outside funding for construction.

FUNDING PHASING

TABLE 5C

Example of Implementation of a MSBU Assessment over Time for Vacant Parcels

Funding Analysis

		Annual Assessment First 10 Years									
Vacant		1	2	3	4	5	6	7	8	9	10
Phase 1 N. Mala Compra	Construction										
	O&M		\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30
Phase 2 Marineland Acres Only	Construction	\$220	\$220	\$220	\$220	\$220	\$220	\$220	\$220	\$220	\$220
	O&M				\$80	\$80	\$80	\$80	\$80	\$80	\$80
Phase 3 Marineland Acres Only	Construction					\$70	\$70	\$70	\$70	\$70	\$70
	O&M										
Marineland Acres Only	Combined Fee	\$220	\$250	\$250	\$330	\$400	\$400	\$400	\$400	\$400	\$400

Assumes continuous construction of each phase with full outside funding for construction.

FAQ

What happens when I build a house in the Future on my Undeveloped lot?

- **The annual assessment will increase from the undeveloped amount to the developed amount, and a latecomer fee will be assessed.**

FAQ

What is a Latecomer Fee?

The drainage system by necessity is sized (which determines construction cost) to handle the runoff from the area in its future fully developed condition.

The latecomer fee is designed to recover the differential in assessments for an undeveloped parcel for the period of time between construction of the drainage system to the time of development of the parcel.

FAQ

How is the Latecomer Fee calculated?

It is equal to the difference between the developed and undeveloped annual assessment, multiplied by the number of years between construction of the drainage system and development of the lot, limited to a maximum of 20 years (corresponding to the 20 year amortization of construction costs).

FAQ

How will the residents be billed?

By annual assessment, to be shown on annual bill from Tax Collector.

FAQ

Why are Undeveloped lots being charged?

The drainage system by necessity is sized (which determines construction cost) to handle the runoff from the area in its future fully developed condition.

Undeveloped parcels therefore receive the benefit of capacity for their development.

FAQ

Why are Developed parcels being charged twice as much as Undeveloped parcels?

Developed lots generate about twice the amount of runoff as undeveloped lots.

FAQ

Why do all parcels pay the same amount for O&M?

All parcels were deemed to benefit equally from the operation and maintenance of the system, therefore the O&M assessment is a uniform amount per parcel.

FAQ

Why are two Districts needed?

To better allocate costs equitably to benefited parcels

Possible schedule

- 2015 Complete Permitting
- 2015 -2016 Backbone Constructed
- 2017 Pond Constructed
- 2018 Trunk Line Installed
- 2019 Design (SCOP)
- 2020 Completion of Lateral
Resurfacing of Streets

FUNDING DRIVEN!!!!!!



County investment to date

- \$5.7M Purchase of Property
 - Approximately half spent on stormwater pond
- \$500K Stormwater Master Plan/Permitting
- \$100K Stormwater Outfall Easement
- FDOT Pipes under SR A1A

Potential County Future Investment

- ◎ \$2.9M Backbone Phase I
 - \$900K DRI Close-out Funds / Legislative Funding / Gas Tax Funds/ Other
- ◎ \$1.0M Phase II Buydown
- ◎ Absorbed Maintenance
 - ◎ 50%/50% Phase - I/II 100% Phase III
- ◎ County Constructing Portions
- ◎ Potential Use of Gas Tax / Local Option Sales Tax
- ◎ Grants / FEMA / FDEP / SJWMD / Legislature
- ◎ Discuss Community Redevelopment Area

Questions?

