

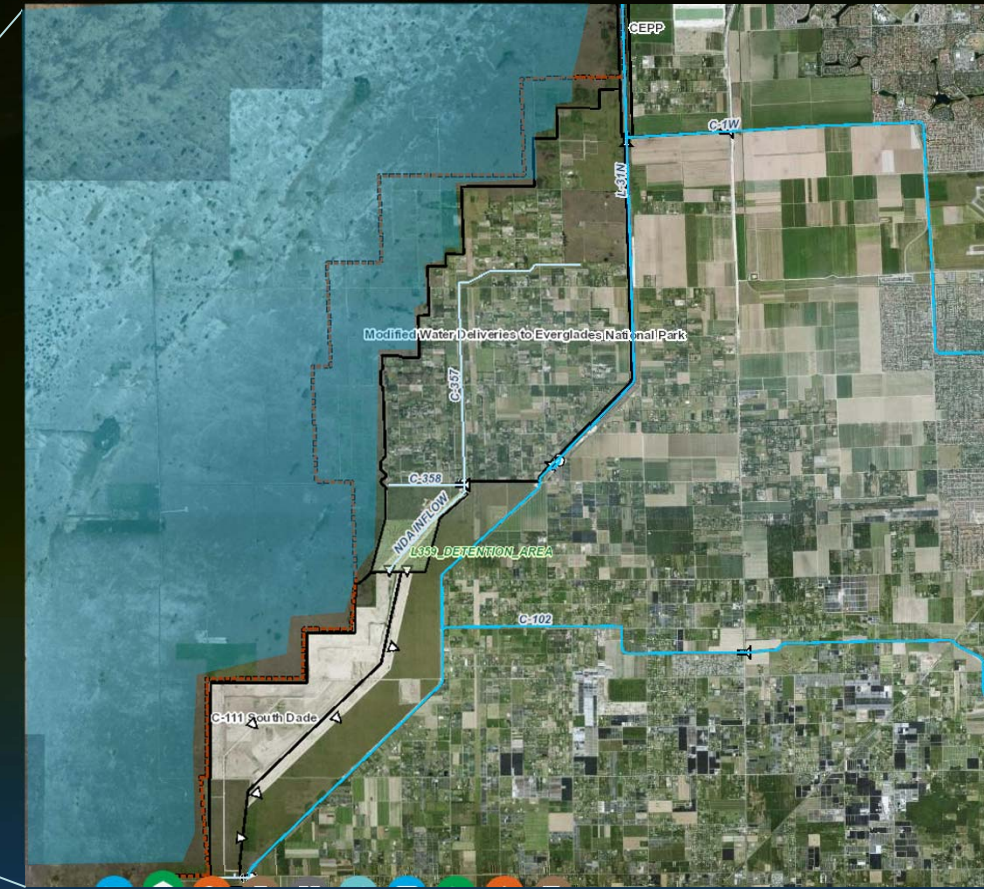
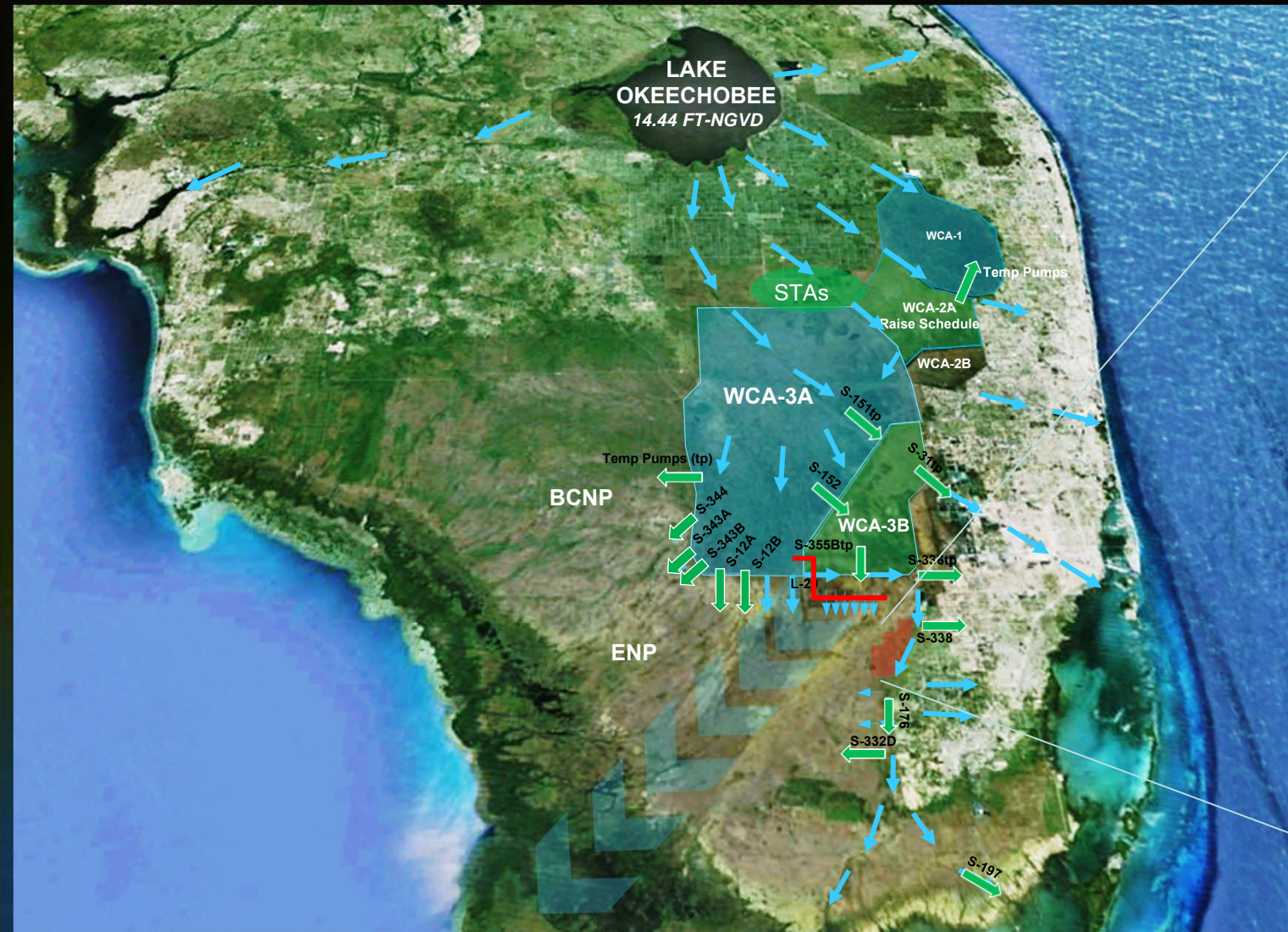
Expedited Action to Address High Water Conditions in WCA3-A and 8.5 SMA (Las Palmas Community)



Jennifer Reynolds

South Florida Water Management District
Governing Board Meeting
Feb 11, 2021

Operations During High Water



High Water Conditions WCA 3A

Tree Island in WCA 3A



Tree Island in WCA 3A



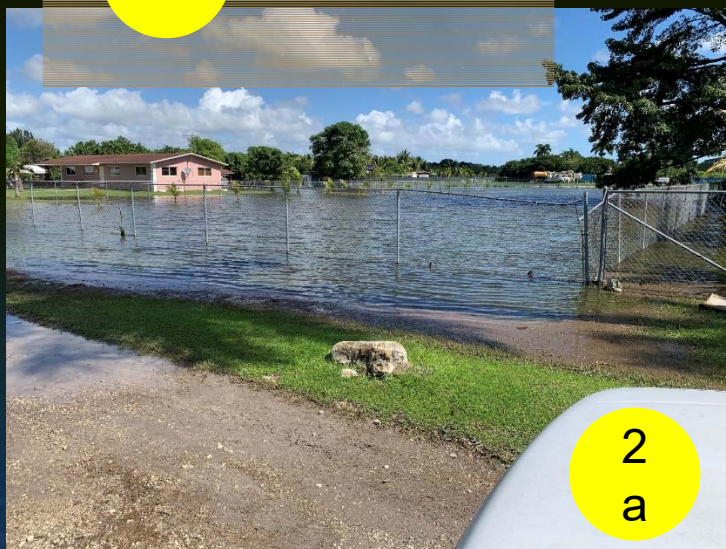
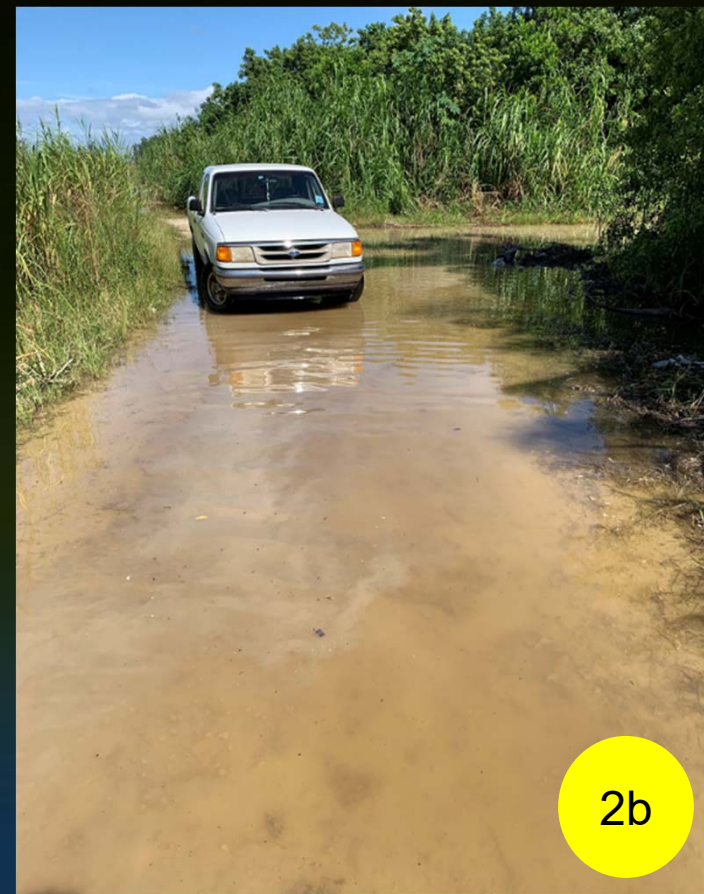
Photos taken
December
2020

Photos Courtesy of the Miccosukee Tribe of Indians of Florida

Recent 8.5 SMA Conditions



Photos taken 10/23/2020



Tamiami Trail Bridges



Options To Remove the Constraint

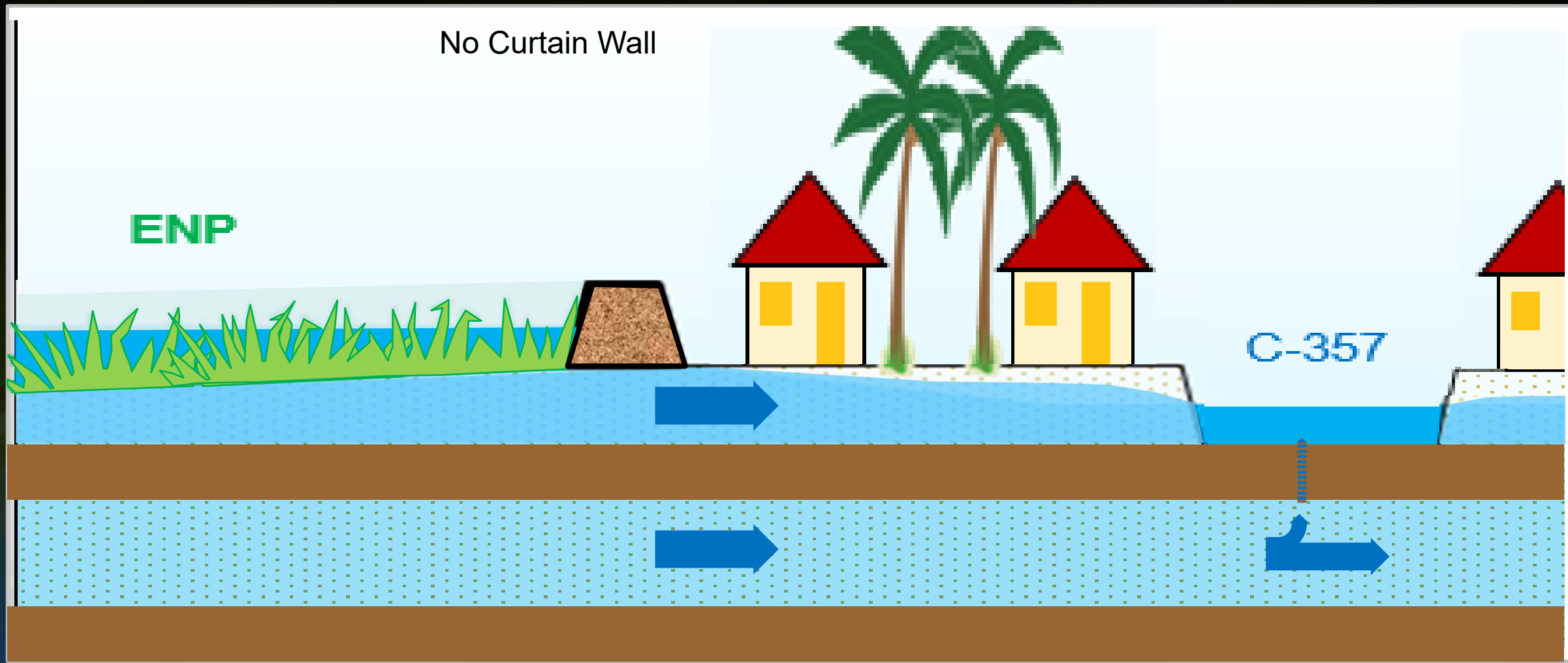
- Structural:
 - Seepage Collection Canal
 - Curtain wall
 - Combination of both
- Nonstructural:
 - Acquisition
- How well will these work in the future
 - How do structural and non-structural fare as Tamiami Trail Next Steps and CERP restoration goals are achieved



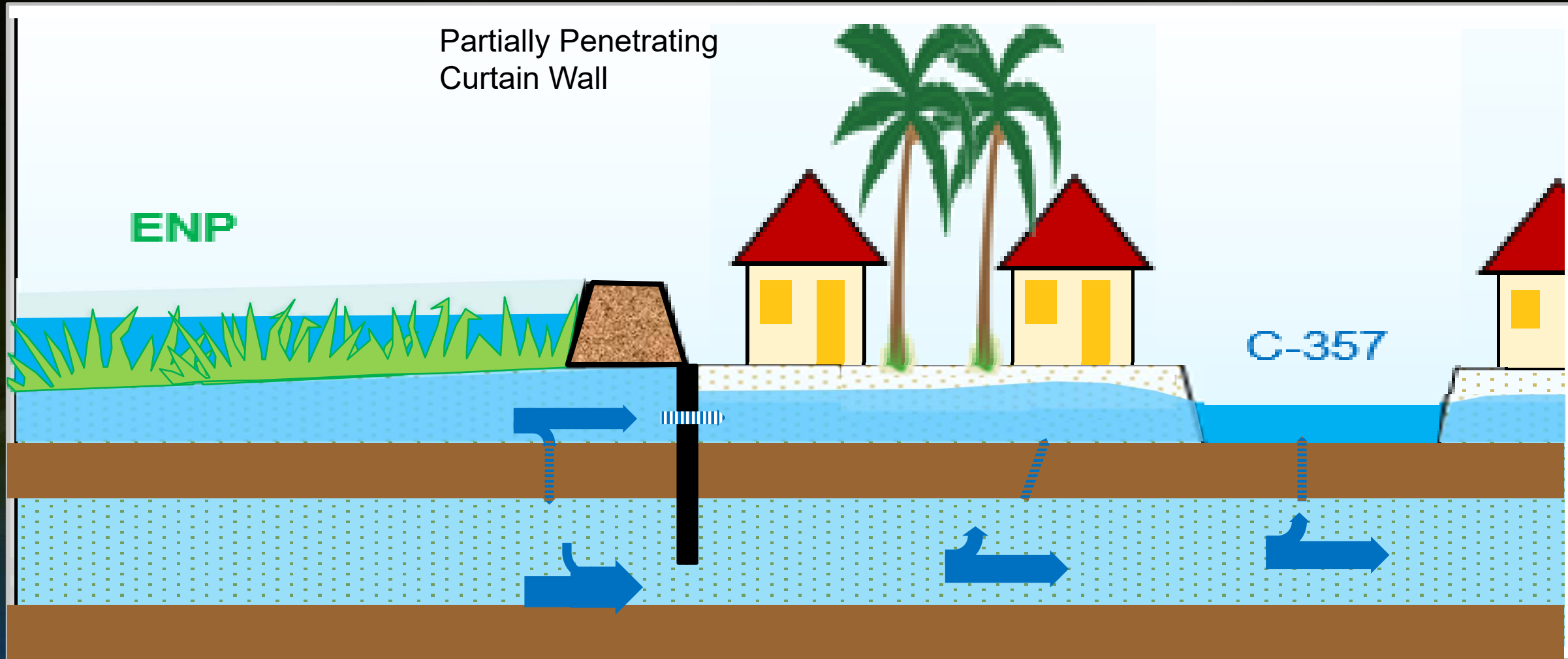


Current Conditions

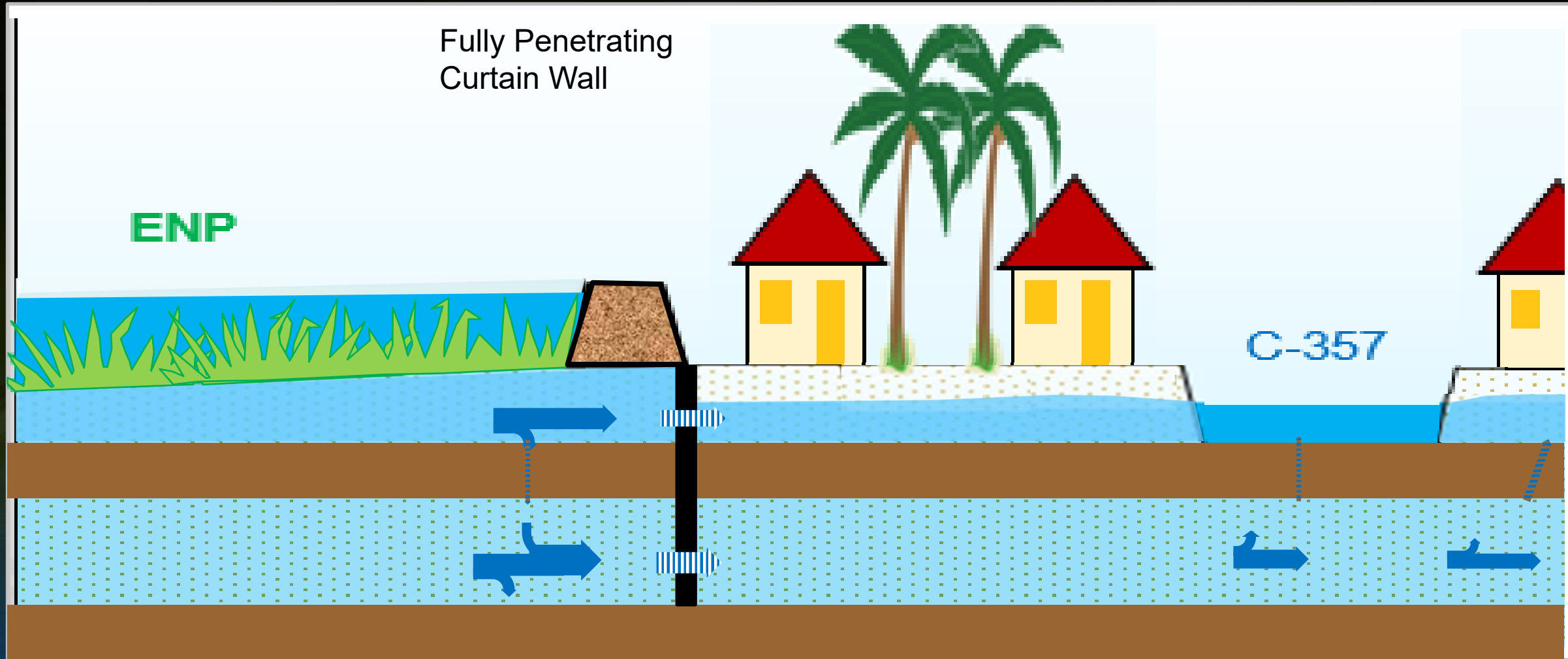
Effect of Curtain Wall Depth



Effect of Curtain Wall Depth

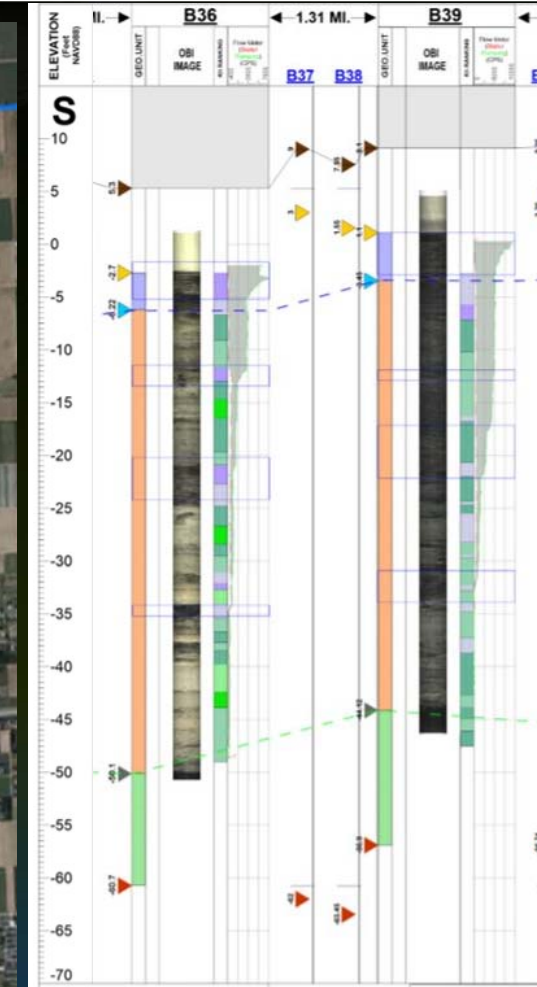


Effect of Curtain Wall Depth



Location and Depth of Curtain Wall

- Alignment – 2.3 Miles
- Borings along the alignment to describe the underground conditions
- Detailed focus model –USGS MODFLOW
- Partially penetrating (45 – 50 feet deep)
- Fully penetrating (60 – 65 feet deep)



Seepage Reduction

Performance of fully penetrating and partially penetrating curtain wall (wet conditions represented by 2017 rainfall)

Current Condition	Simulated Seepage during Wet Month (Oct 2017) (ac-ft/day)		Simulated Conditions at LPG-2	
	Wall Transect (B+C+D)	Edges Transect (A+E)	Avg Stage October 2017 Ft NGVD	Days with water above ground * Days/year
Without Curtain Wall	400	296	7.26	152
Partially Penetrating Wall	225	305	6.77	142
Fully Penetrating Wall	36	344	4.38	5

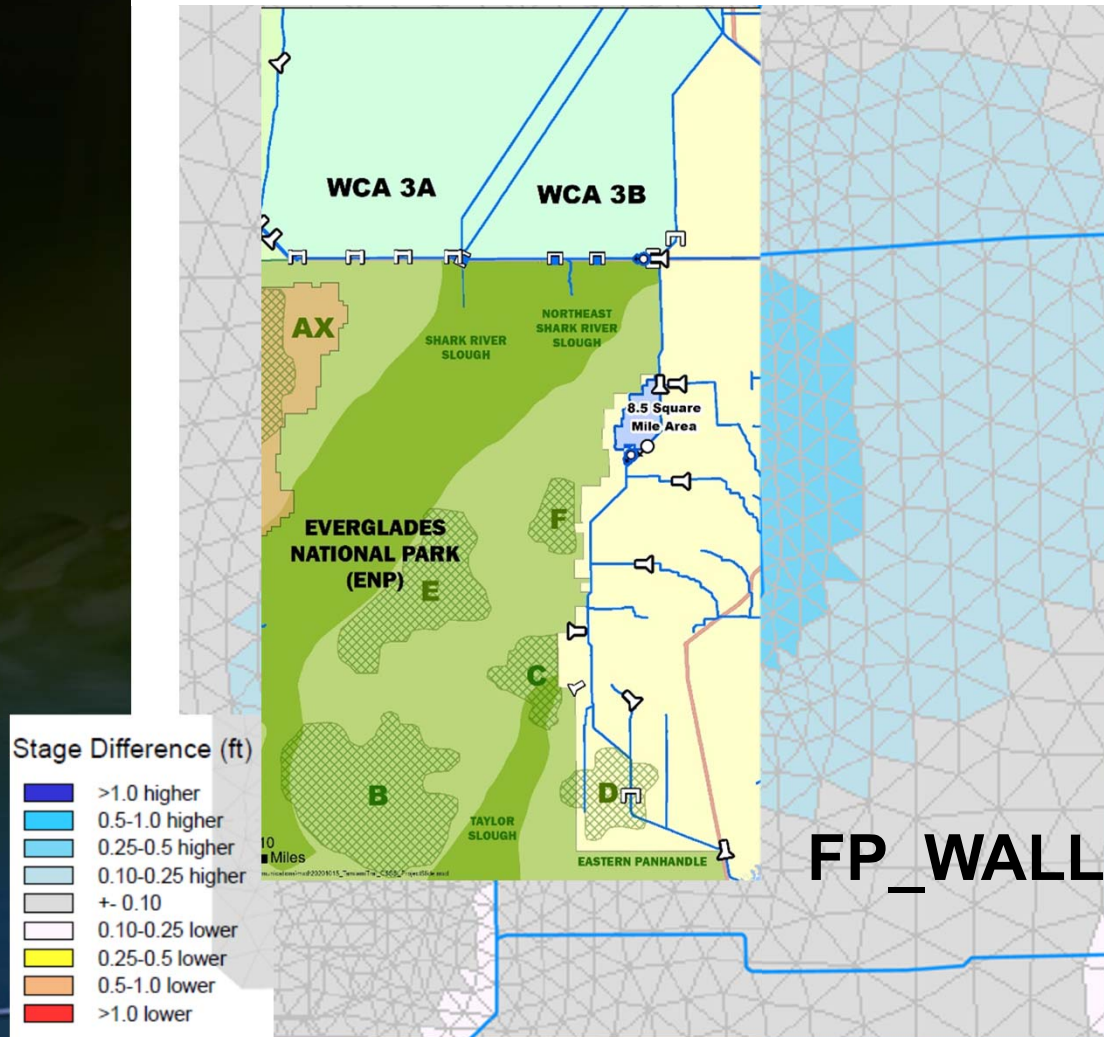


* Based on simulated wet year conditions at cell representing LPG2 Well

Red numbers = increase in seepage into 8.5 SMA
 Green numbers = reduction in seepage into 8.5 SMA

Wet Wet-Season Difference Map With Wall Compared to No Wall (CBASE)

Wet October Stage Difference
October 2005

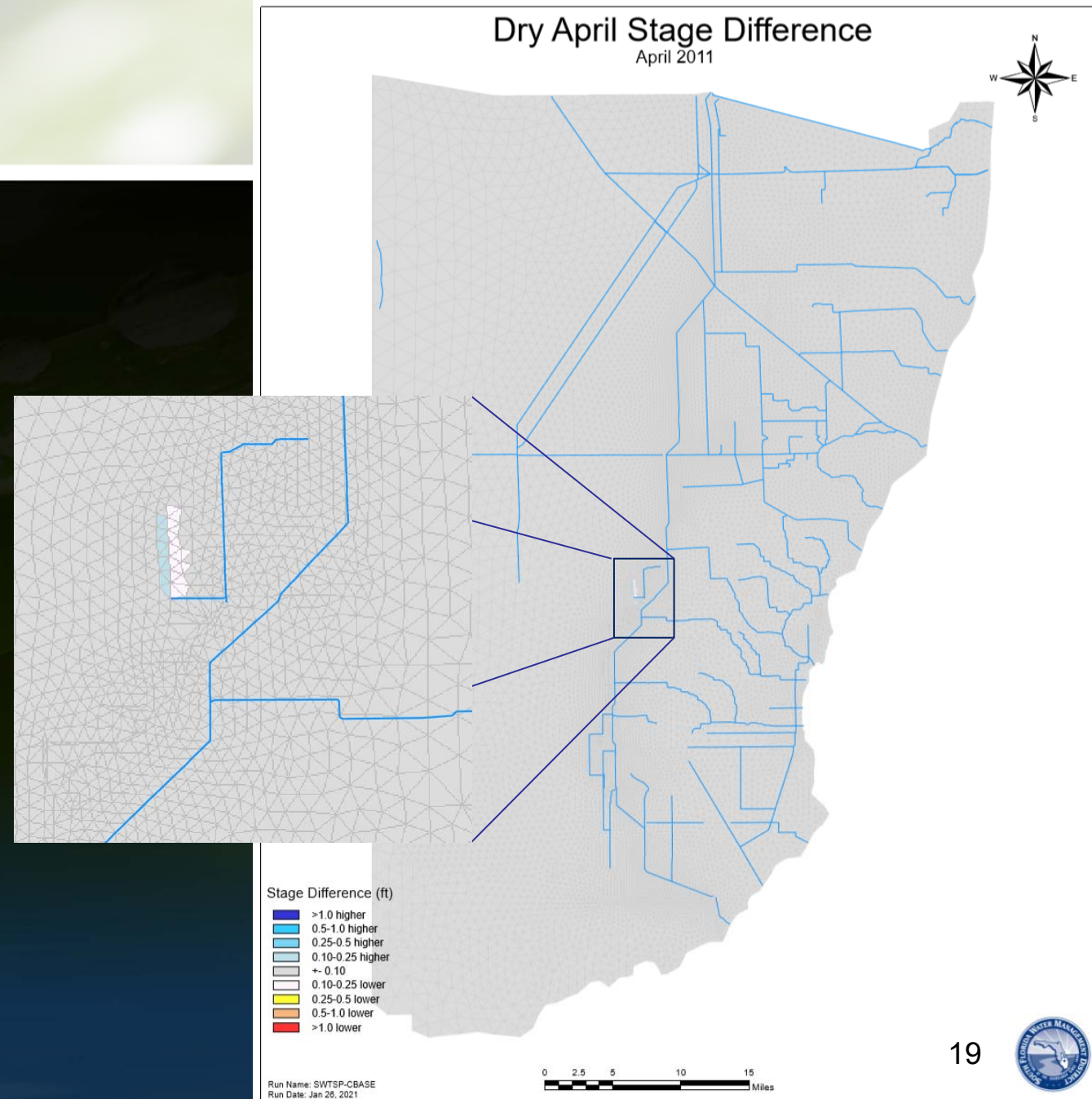


Regional effect of fully penetrating curtain wall

The addition of the east/west segment to the southern extent of the curtain wall improves effectiveness of C-358 and reduces northwards seepage from the detention area

Dry Dry-Season

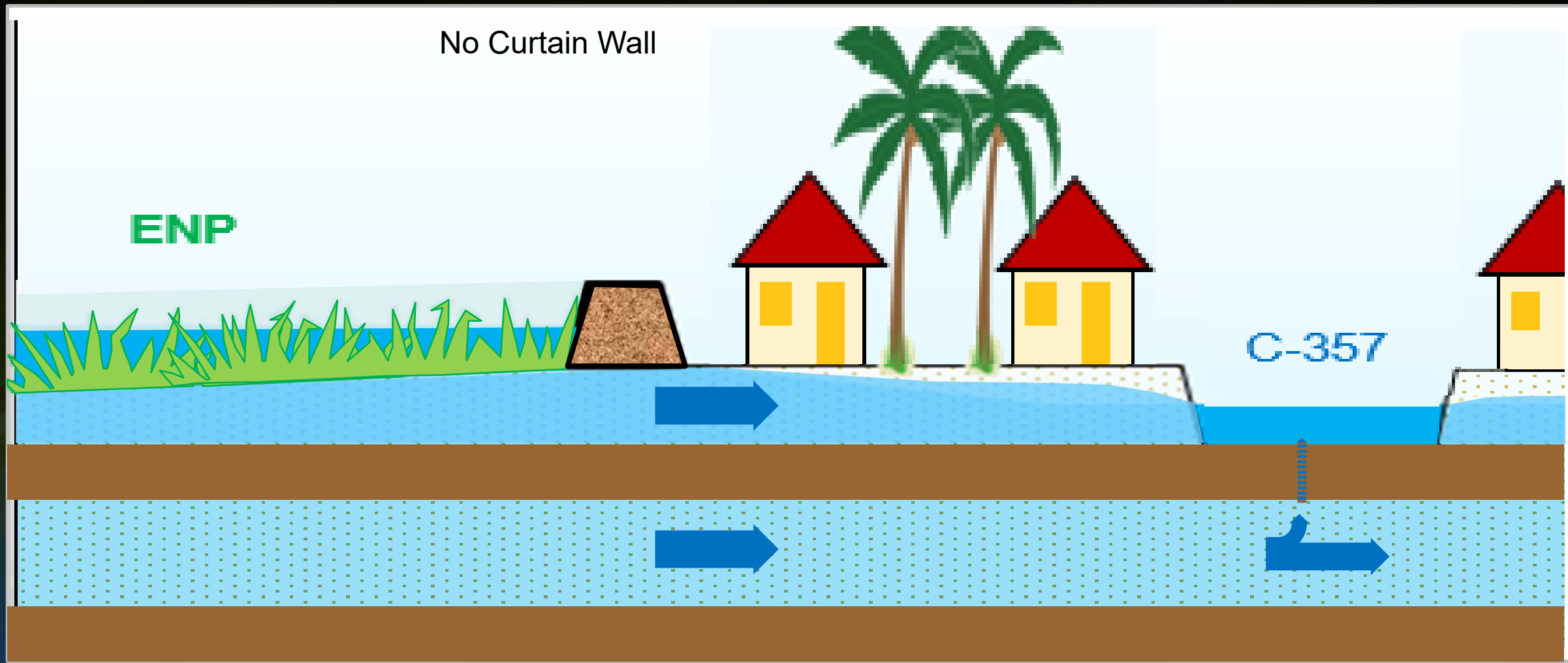
- The curtain wall has very minor regional effect during dry, dry season (drought conditions)
- Effect is limited to the immediate vicinity of the wall



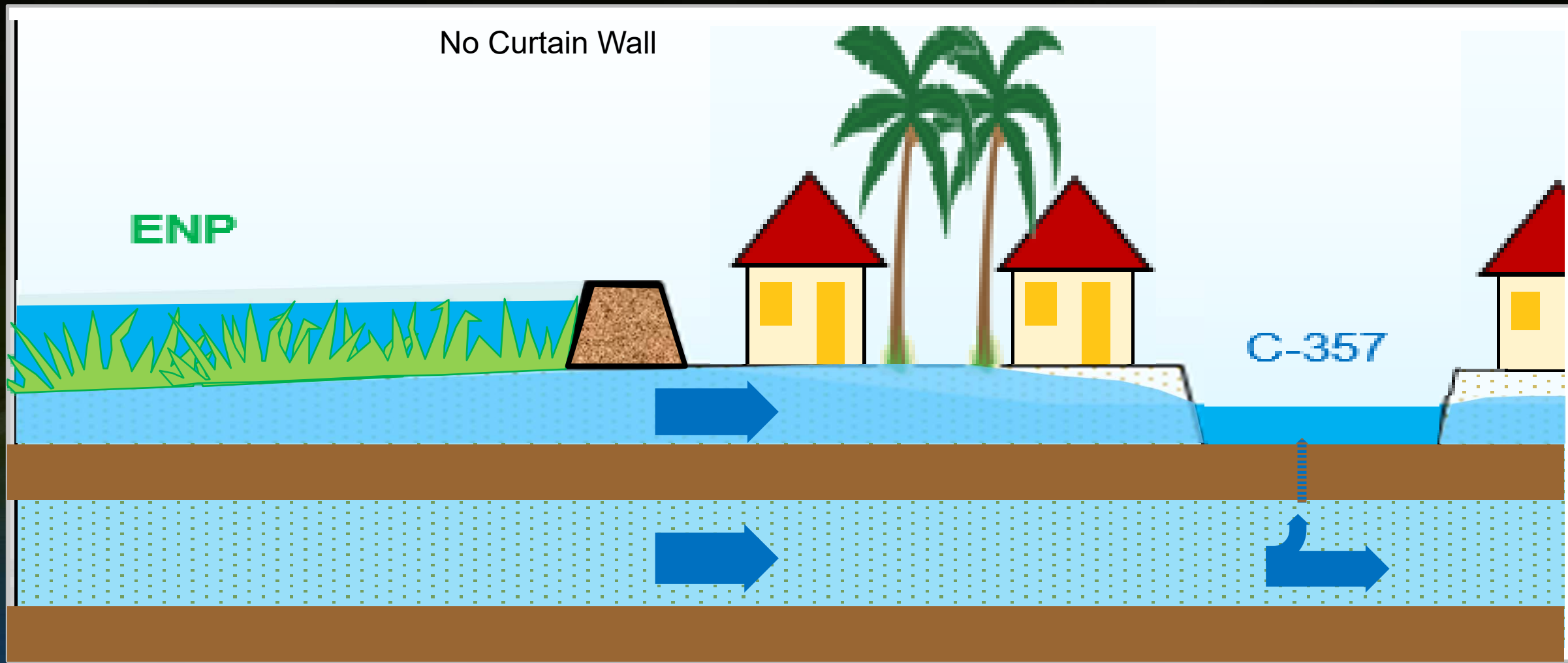


**Future Conditions
(CEPP Type Stages in NESRS)**

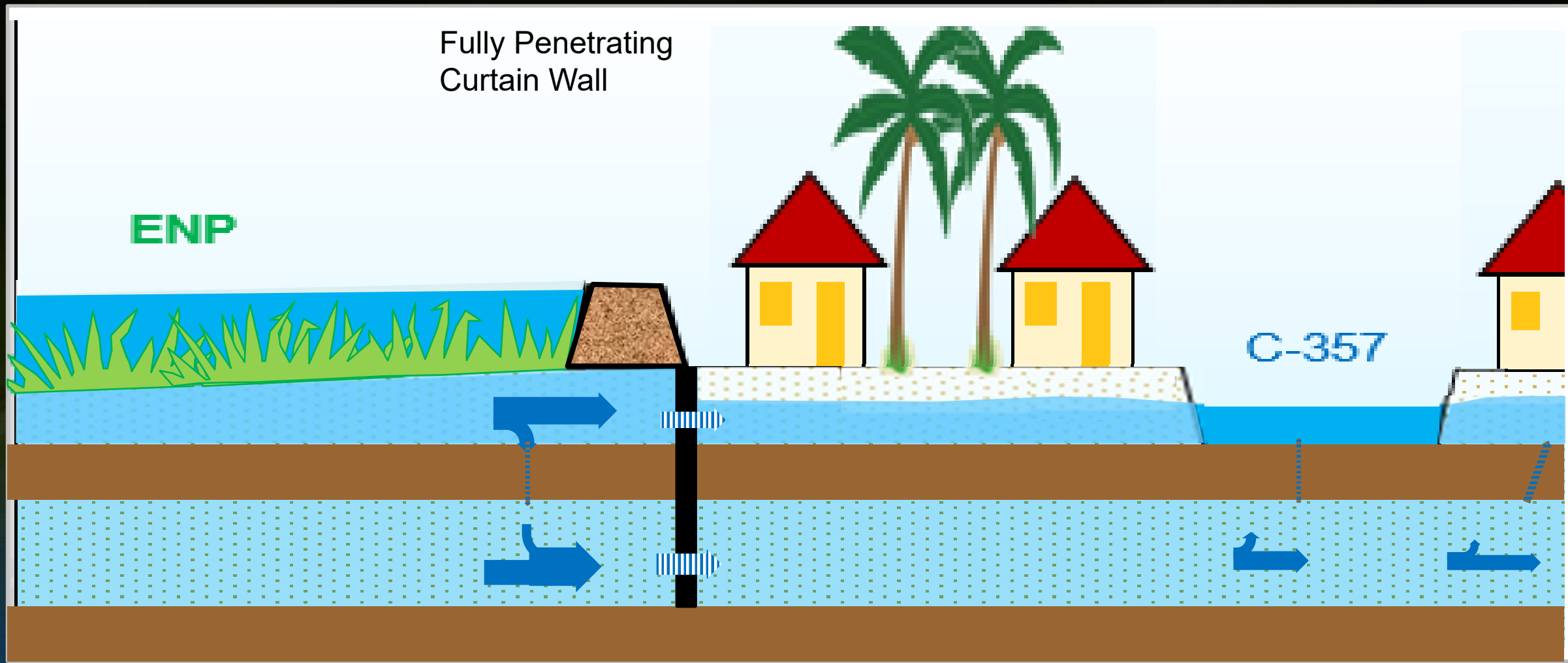
Current Conditions – No Curtain Wall



Future Conditions – No Curtain Wall



Future Conditions – With Curtain Wall



Seepage Reduction

Performance of fully penetrating and partially penetrating curtain wall (wet conditions represented by 2017 rainfall)

Future Condition (Higher water level in NESRS equivalent to CEPP simulated stages)	Simulated Seepage during Wet Month (Oct 2017) (ac-ft/day)		Simulated Conditions at LPG-2	
	Wall Transect (B+C+D)	Edges Transect (A+E)	Avg Stage October 2017 Ft NGVD	Days with water above ground * Days/year
Without Curtain Wall	863	408	8.10	246
Partially Penetrating Wall	299	440	7.33	243
Fully Penetrating Wall	44	484	4.85	44
Current Without Curtain Wall	400	296	7.26	152

* Based on simulated wet year conditions at cell representing LPG2 Well

Red numbers = increase in seepage into 8.5 SMA

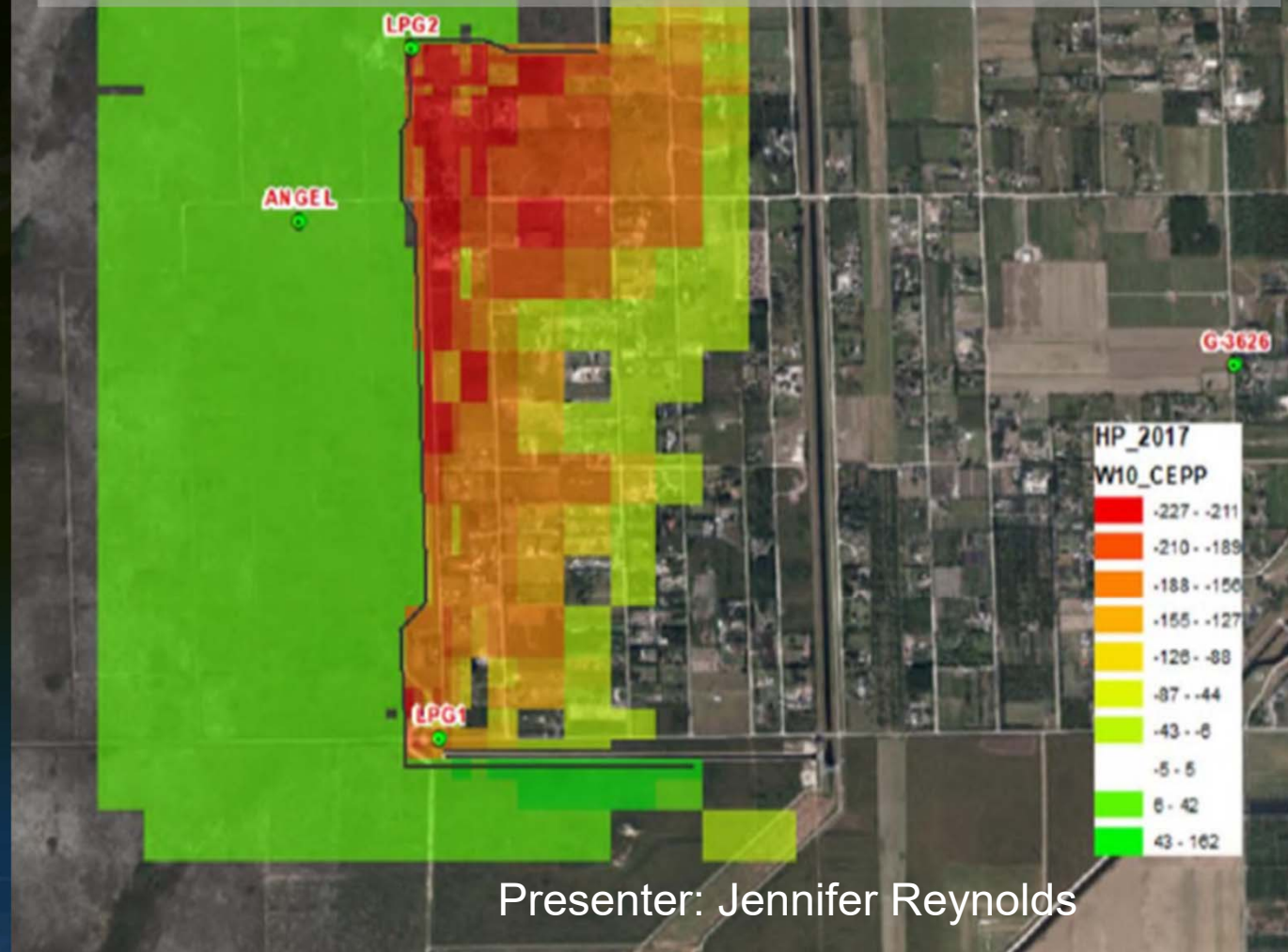
Green numbers = reduction in seepage into 8.5 SMA



Simulated Future Condition

- ✓ Curtain wall (2.3 miles) meets both current and future needs
- ✓ Keeps restoration flows inside the ENP
- Impacted areas expand as restoration progresses
- More aggressive operations plus other remedies would be required under future conditions in the absence of the curtain wall.

Simulated Change in Extent and Duration of Water Above Ground

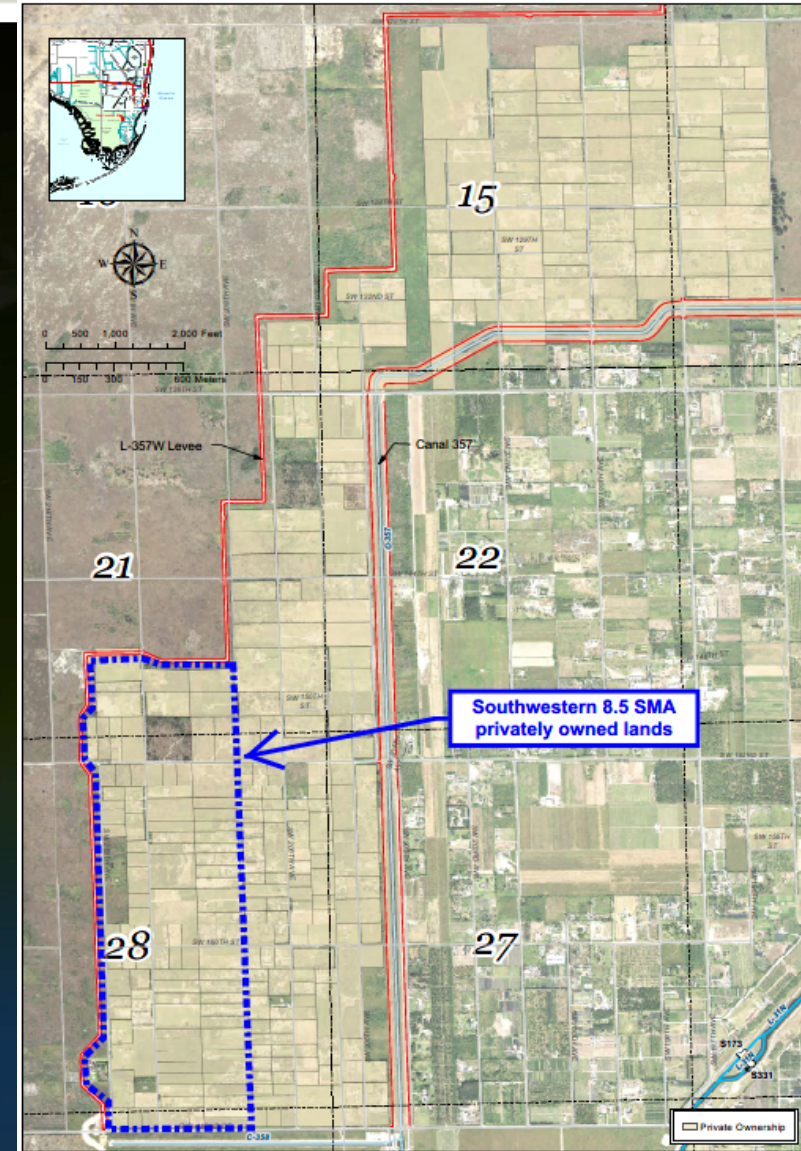




Real Estate Update

Acquisition as discussed

- Willing Seller program
- 119 properties shown including 18 homes
- Purchase values will likely be in the range of \$25,000,000
- Board requested additional information



Outreach

- Identified 119 target properties
- Obtained owner contact information
- Sent a letter to the owner of each parcel (English and Spanish)
- Follow-up calls are currently being conducted to determine the level of interest



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

January 7, 2021

[Redacted]

Subject: We Are Interested in Purchasing Property in South Florida

Dear [Redacted]

I would like to introduce myself as the Regional Representative for the South Florida Water Management District ("District"). We are a regional government agency responsible for managing the water resources in South Florida.

We are interested in purchasing properties in parts of the Las Palmas Community. If you are receiving this letter, the District may make you an offer to purchase your property at market value.

[Redacted]

If you are interested in selling your property at the address above, please contact us at [Redacted] or via email at Real.Estate@sfwmd.gov. The District will hire an independent appraiser to determine the fair market value of your property.

If you have any questions or concerns, please feel free to contact me at 305-513-3420 ext. 7249 or by email at avilaboy@sfwmd.gov.

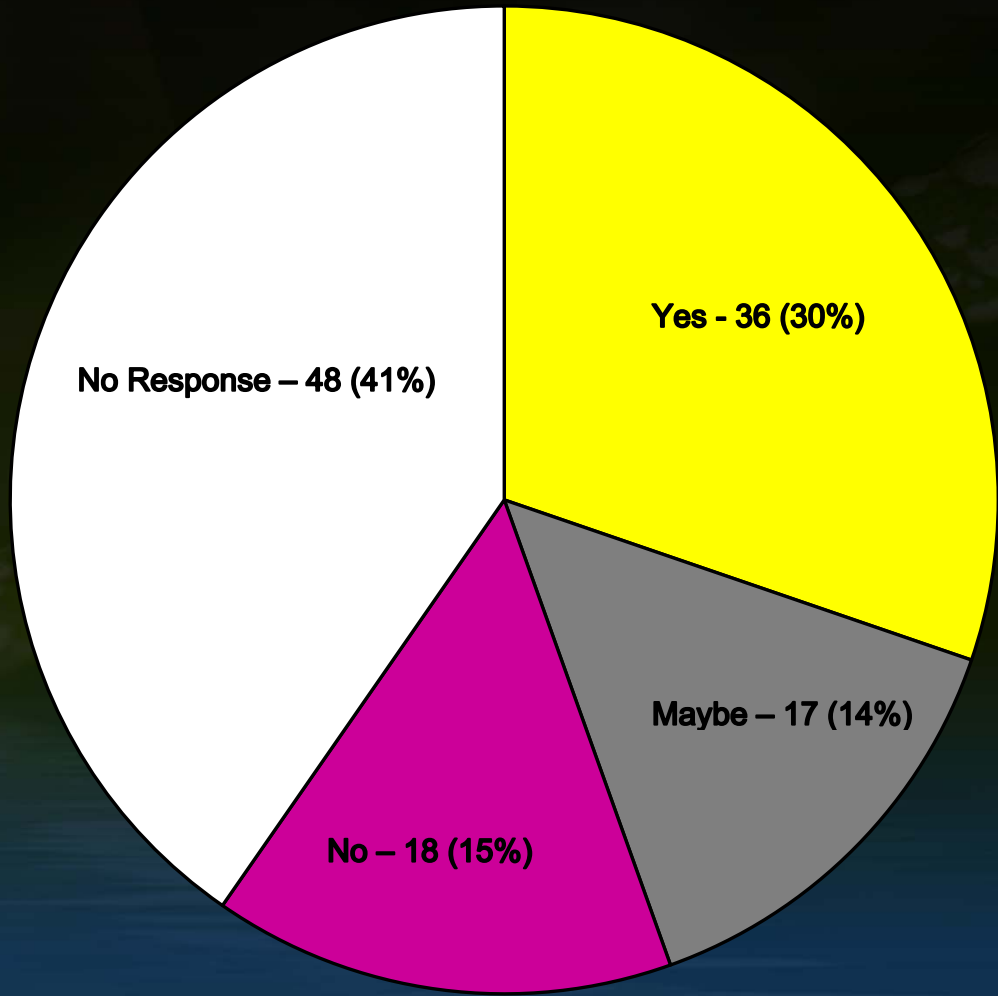
Thank you,

A handwritten signature in black ink, appearing to read "Armando Vilaboy".

Armando Vilaboy
Regional Representative
South Florida Water Management District

3301 Gun Club Road, West Palm Beach, Florida 33416 • (561) 686-8800 • 1-800-432-2045 • www.sfwmd.gov

Responses



- Have spoken with 59% of the property owners
- 30% indicated an interest in selling
- Will continue outreach

Summary of Curtain Wall Performance

1. A fully penetrating curtain wall (2.3 miles) will meet both current and future seepage management needs at the 8.5 SMA
2. The acquisition target window will expand as restoration progresses
3. Continuation of the curtain wall project to address areas outside the 8.5SMA will be required as higher stages are achieved in Everglades National Park
4. More aggressive operation plus other remedies will be required under future conditions in the absence of the curtain wall.

Next Steps

Curtain Wall

- Award contract at March GB
- Secure permits
- Construct the wall

Acquisition

- Continue outreach