

Farms drainage and Rainfall detention

Why?

Farms drainage and Rainfall detention

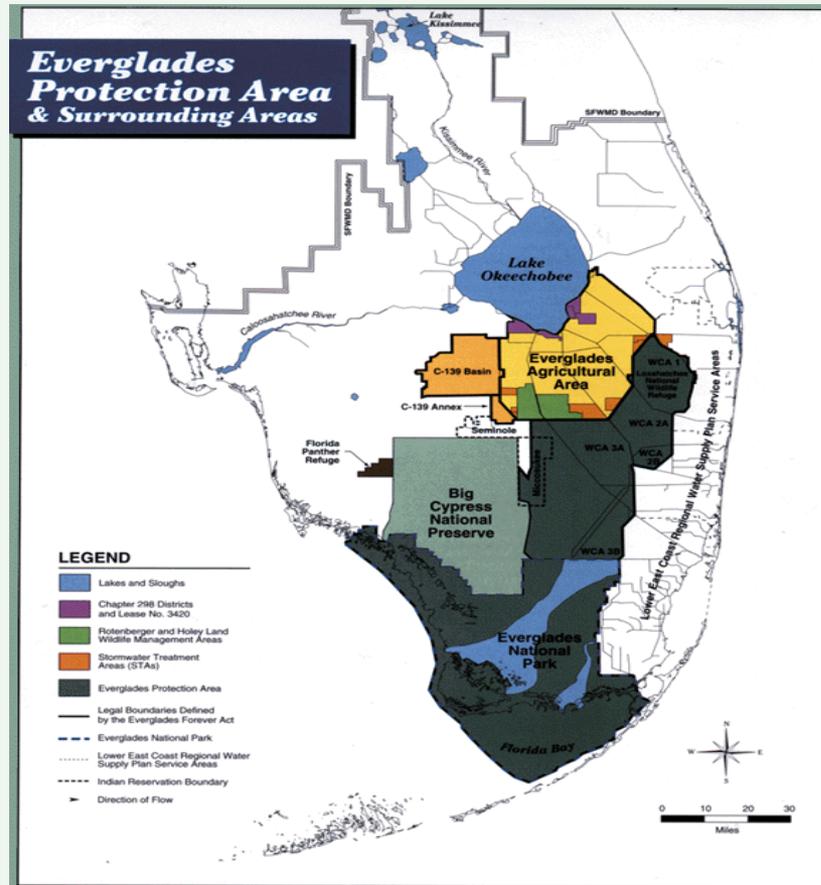


The congress approved the clean water act (CWA) in 1972

A total maximum daily load (TMDL) of pollutants must be established to ensure that water quality standards



Farms drainage and Rainfall detention



The collective implementation of **Best Management Practices (BMP)** in the **Everglades Agricultural Area (EAA)** began in 1995

Farms drainage and Rainfall detention

“When”?

Farms drainage and Rainfall detention



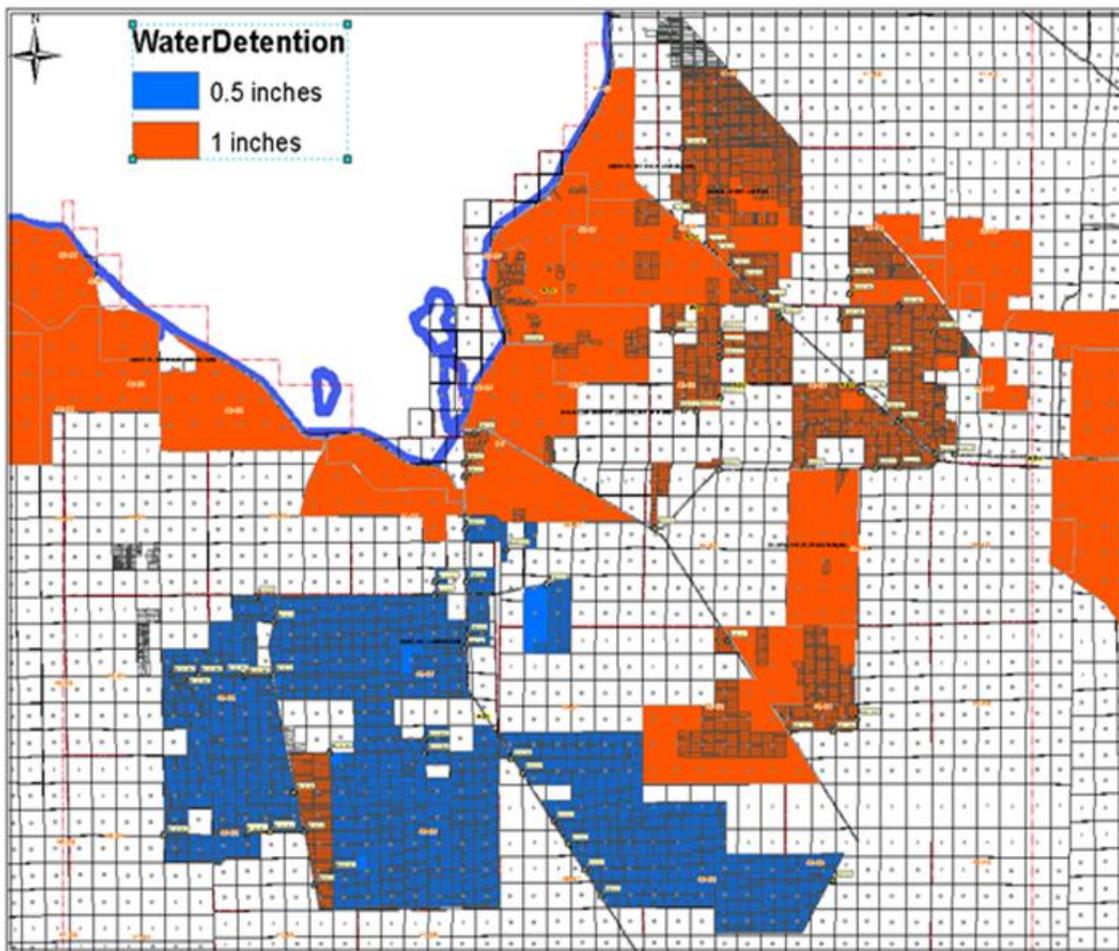
When can we start pumping?

Farms drainage and Rainfall detention



- ✓ **1 Inch** (Most farms)
- ✓ **1/2 Inch** (Some farms)

Farms drainage and Rainfall detention



- ✓ 1 Inch (Most farms)
- ✓ 1/2 Inch (Some farms)

Farms drainage and Rainfall detention



✓ **Named storm approaching**

Farms drainage and Rainfall detention



✓ Start elevation reached

Farms drainage and Rainfall detention



✓ Land Prep

Farms drainage and Rainfall detention



✓ Planting

Farms drainage and Rainfall detention



✓ Harvest

Farms drainage and Rainfall detention

“How”?

Farms drainage and Rainfall detention



How to pump?

Farms drainage and Rainfall detention

How to pump?

1. Implementing a pumping protocol



Farms drainage and Rainfall detention

How to pump?

2. Monitoring the flow of water



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How to pump?

3. Monitoring the quality of water



Farms drainage and Rainfall detention

How to pump?

4. Filing data (PumpLogs)

SUGAR FARMS CO-OP PUMP OPERATIONS LOG
WATER QUALITY

STRUCTURE ID: 80142N		TOWNSHIP 44		ACTIVITY:		CONSENT CODE:	
ELECTRIC METER: 80142N		RANGE: 18		1-DRAINAGE		A-CASE	
PUMP NUMBER: 80142N		SECTION: 18		2-PLANTING		B-ENGINE	
				3-LAND PREP		C-BOLE	
				4-BLOOD WASHING			
				5-SUPPORT			
				6-RUN			
				7-DRAINAGE REACHED			

MONTH: May YEAR: 2016 CONTROL/ELEVATION START: 7.0 STOP: 4.5

DATE	TIME	RPM	START		STOP		RAINFALL	COMMENTS		
			GAUGE INSIDE	GAUGE OUTSIDE	GAUGE INSIDE	GAUGE OUTSIDE				
	1 5:28am	N/A	6.5	8.5				Ø		
	2 6:26am	N/A	6.6	8.5				Ø		
	3 7:24am	N/A	6.6	8.8				Ø		
	4 8:35am	N/A	6.3	8.4				Ø		
	5 9:55am	N/A	6.5	8.8				Ø.95		
	6 10:55am	N/A	6.1	8.7				Ø		
	7 11:22am	N/A	6.2	9.0				Ø		
	8 12:28pm	N/A	6.5	9.0				Ø		
	9 1:15pm	N/A	6.5	8.5				Ø		
	10 2:10pm	N/A	6.8	8.2				Ø		
	11 3:10pm	N/A	6.4	8.1				Ø		
	12 4:15pm	N/A	6.4	8.1				Ø		
	13 5:15pm	N/A	6.6	8.2				Ø		
	14 6:10pm	N/A	6.3	8.4				Ø		
	15 7:24pm	N/A	6.6	8.5				Ø		
	16 8:24pm	N/A	6.3	8.6				Ø		
	17 9:35pm	N/A	6.5	9.1				Ø		
	18 10:30am	1350	6.6	9.0	10:58am	1350	6.6	9.0	1.55	6A
	19 11:30am	1500	6.9	9.0	12:50pm	1500	6.0	10.8	1.50	6A
	20 1:35pm	N/A	5.6	8.8					0	
	21 2:11pm	1500	7.3	9.9					2.70	6A
	22 3:10pm	1500	6.7	10.0					Ø	6A
	23 4:10pm	N/A	6.5	9.8	4:15pm	1500	5.1	9.9	2.00	6A
	24 5:24pm	N/A	9.0	9.6					Ø	
	25 6:10pm	N/A	8.6	9.0					Ø	
	26 7:10pm	N/A	8.4	8.3					Ø	
	27 8:10pm	N/A	8.5	8.7					Ø	
	28 9:20pm	N/A	8.5	8.6					Ø	
	29 10:15pm	N/A	8.3	8.5					Ø	
	30 11:15pm	N/A	8.3	8.5					Ø	
	31 12:15pm	N/A	8.3	8.4					Ø	

TOTAL: _____

Mannette - E

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Important



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When We MUST stop?



Farms drainage and Rainfall detention

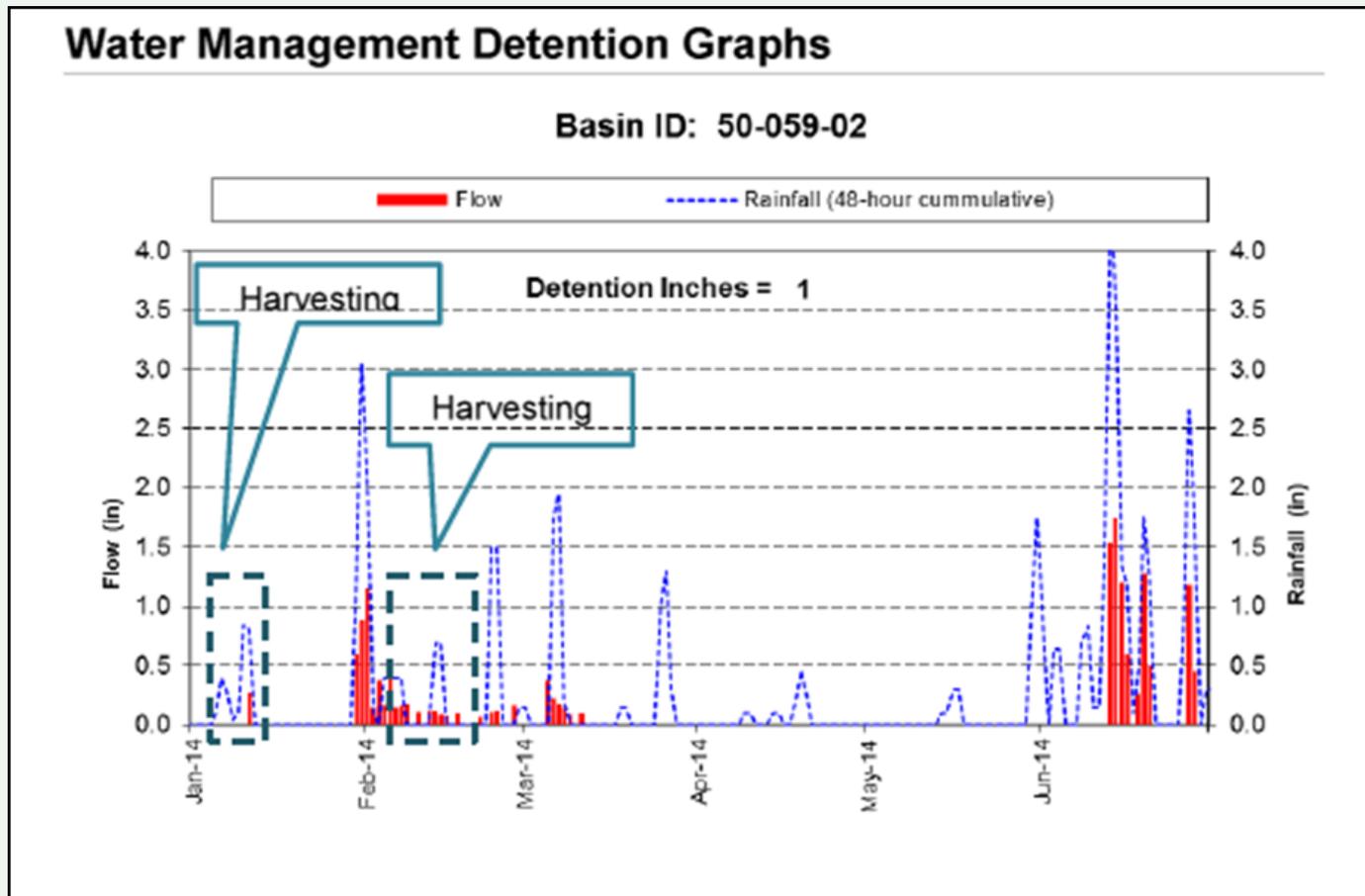
When We MUST stop?

**All pumping stations have a
“Stop Elevation”**

**Pumping should stop
once the “Stop Elevation” has been
reached**

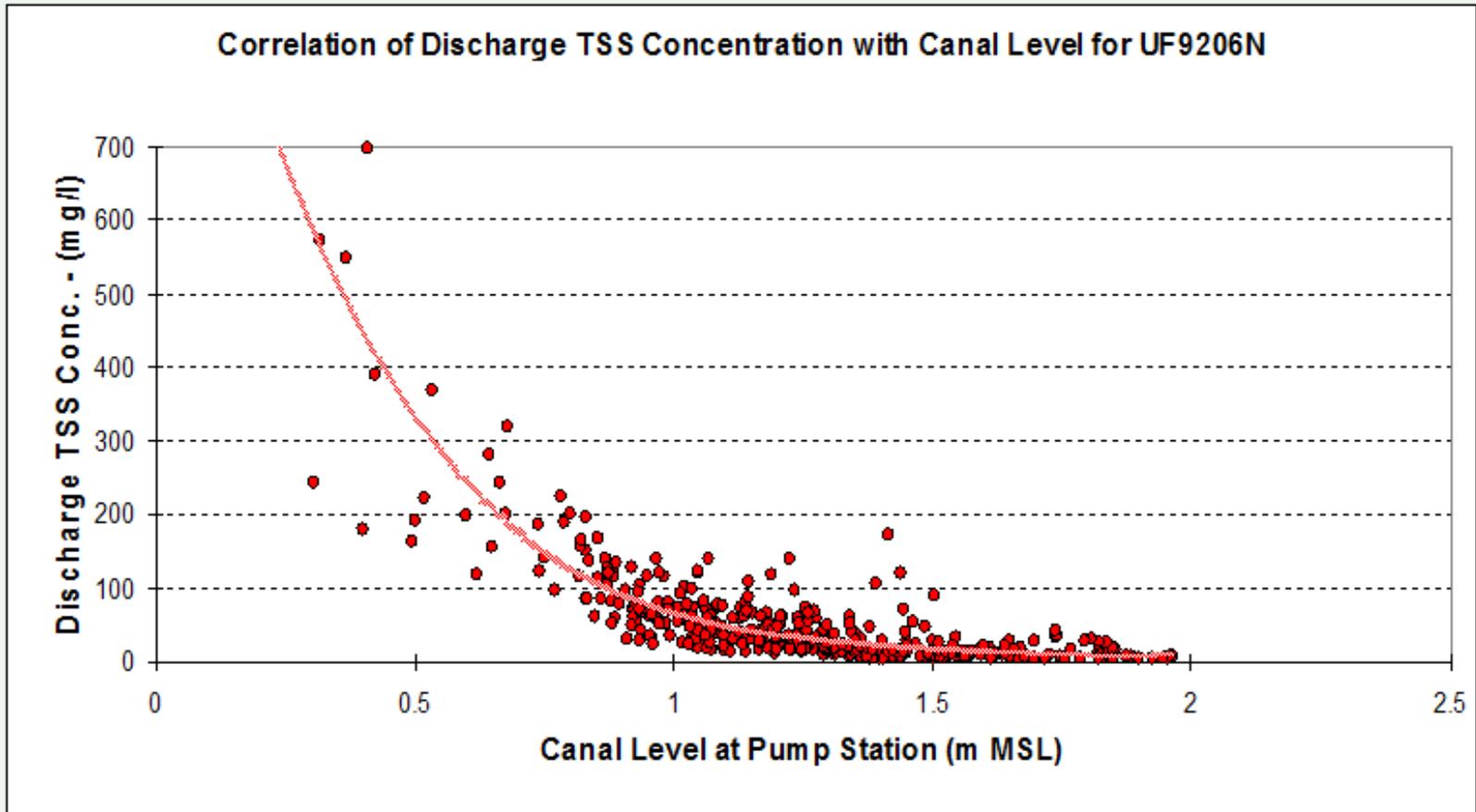
Farms drainage and Rainfall detention

How does the South Florida Water Management District evaluate our pumping?



Farms drainage and Rainfall detention

Why is it important **not** to pump beyond the “**Stop Elevation**” ?



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Why is it important **not to pump beyond the
“Stop Elevation” ?**



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Let's practice what we have learned.

Farms drainage and Rainfall detention

Condition 1

It still does not rain but we have a lot of seepage.

Can we pump?

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Condition 1

It still does not rain but we have a lot of seepage.

No

Unless we reach the “Start Elevation”

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Condition 2

I have pumped for 24 hours after 2 inches of rain.

Can I keep pumping?

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Condition 2

I have pumped for 24 hours after 2 inches of rain.

Yes

As long as the level is above the “stop elevation”.

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Condition 3

It rained 1 inch this morning

Can we pump?

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Condition 3

It rained 1 inch this morning

Yes

We can pump after 1 inch of rain

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Condition 4

It rains 1 inch in 72 hrs.

Can we pump?

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Condition 4

It rains 1 inch in 72 hrs.

No

Unless we reach the “Start Elevation”

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Condition 5

There is a storm warning for WPB

Can we pump?

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Condition 5

There is a storm warning for WPB

Yes

As long as it is a **named storm**

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GRACIAS!

