SOUTH FLORIDA WATER MANAGEMENT DISTRICT

MFL Reevaluation Process

Don Medellin
Coastal Ecosystems Section
South Florida Water Management District
February 15, 2018

sfwmd.gov

Minimum Flows and Minimum Water Levels (MFLs)

Chapter 373.042 Florida Statutes

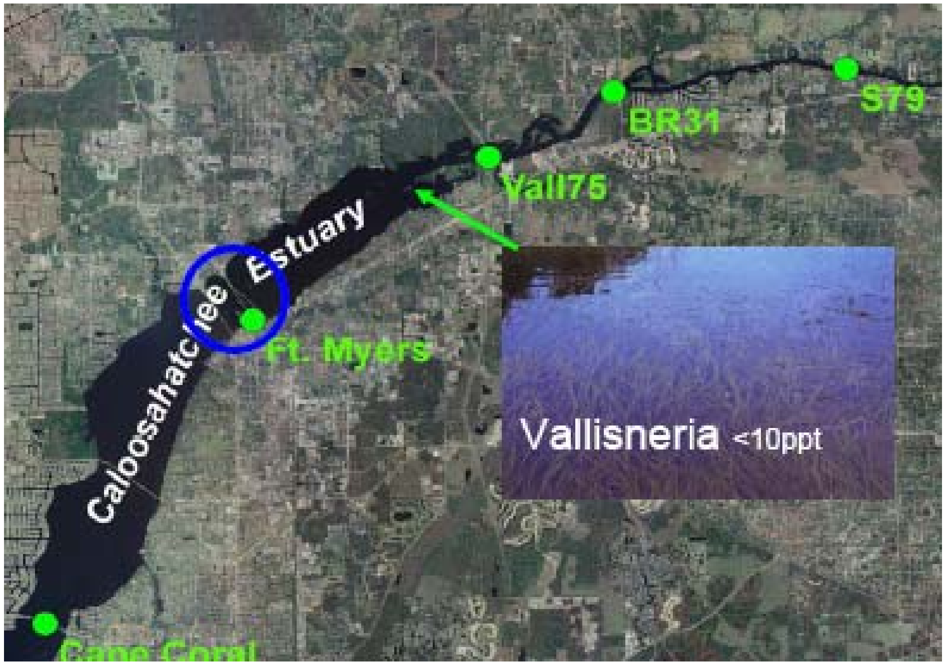
- Department or Governing Board shall establish a minimum flow or minimum water level for surface water courses, aquifers and lakes…
- MFLs identify the point at which further withdrawals will cause "significant harm" to the water resources or ecology of an area

Chapter 40E-8.021 (31), Florida Administrative Code

- **Significant Harm** – means the temporary loss of water resource functions, which result from a change in surface water or groundwater hydrology, that takes more than two years to recover but is less severe that serious harm

Existing MFL Criteria

- MFL rule initially adopted in 2001
- Based on salinity tolerance of a single ecological indicator - tape grass (*Vallisneria*)
- Mean monthly flow of 300 cfs at S-79 is necessary to prevent MFL exceedance
- MFL exceedances are based on salinity criteria
- Nov. 2010 – Governing Board approved funding and directed staff to fill data gaps, expand indicators, and update models

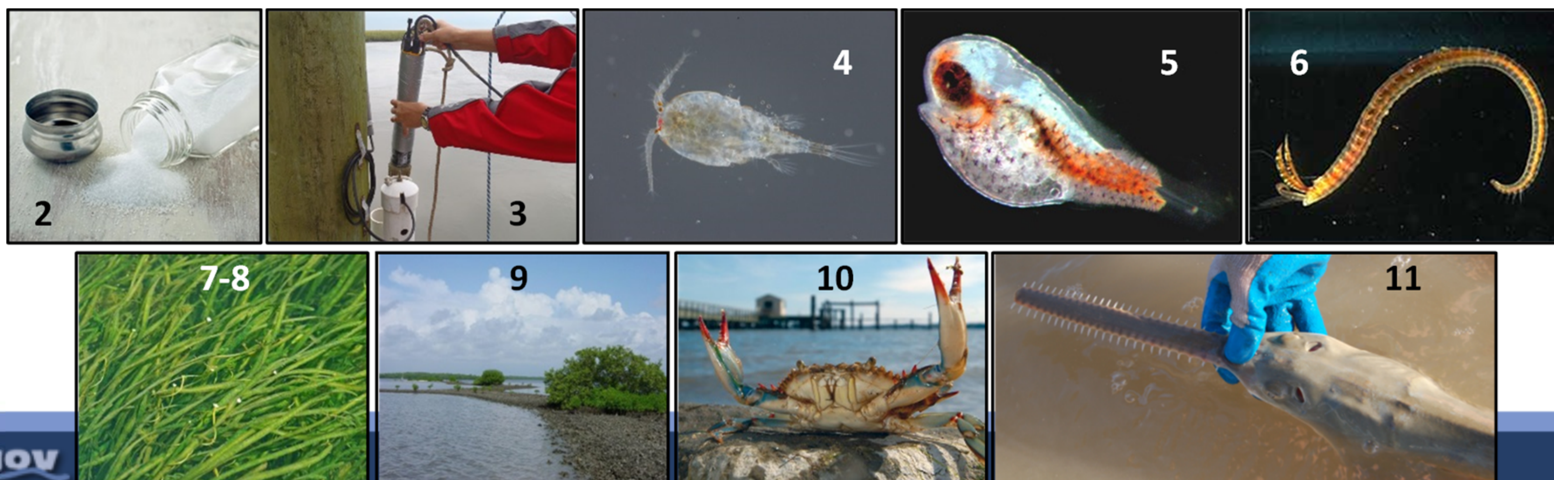


Science Overview

- 2010-2015 Collecting data for ecological indicators and flow data in the tidal basin
- Science Approach
  - Resource-based approach - multiple ecological indicators
  - Evaluates the effects of dry season freshwater inflows
- A total of 11 component studies were developed
- Caloosahatchee Science document developed

Science Overview

	Component	Method
1	Hydrodynamics	Influence of alterations on hydrodynamics
2	Inflow vs. Salinity	Monthly freshwater-salinity relationships
3	Water Quality	Relationships between inflow, salinity, and water quality
4	Zooplankton	Inflow, zooplankton and habitat compression
5	Ichthyoplankton	Relationships between ichthyoplankton and inflow
6	Benthic Fauna	Macrofauna-salinity patterns relative to inflow
7	*Vallisneria* data	Empirical relationships between tape grass, S, and inflow
8	*Vallisneria* model	Model exploration of tape grass, S, light, and inflow
9	Oyster Habitat	Salinity patterns for oyster habitat in lower CRE
10	Blue Crabs	Relationships between blue crab landings, rainfall, and inflow
11	Sawfish	Dry season inflow, hydrodynamics, and habitat extent



Science Overview

- District scientists completed a comprehensive assessment of the science for the Caloosahatchee River Estuary
- 2-Day Science Symposium was held on September 14-15, 2016
- Incorporated public comments and performed additional analyses
- Science presented to WRAC Nov. 2016
- Science summary document was finalized in March 2017

Blue Crab

Oysters

MFL Technical Support Document

- MFL criteria were reevaluated with the new science information
- Additional science evaluations were conducted to reevaluate existing MFL criteria
- Revised MFL criteria were developed from the science
- A comprehensive modeling approach was developed to evaluate the existing and revised MFL criteria
- Draft technical document developed to support MFL
  - Contains the science approach, studies, and integrated modeling

Independent Scientific Peer Review

- Dr. Buskey – University of Texas
  - Expert in Estuarine Science
- Dr. Pinckney – University of South Carolina
  - Expert in Estuarine Science and Freshwater Inflows
- Dr. Lung – University of Virginia
  - Expert in Modeling
- Dr. Shen – College of William and Mary
  - Expert in Modeling
- Dr. Pollack – Texas A & M
  - Expert in freshwater inflows, zooplankton and icthyoplankton

Peer Review Panel

Public Peer Review Session

Independent Scientific Peer Review

- Draft MFL technical document finalized - July 2017
- Reviewed by independent panel of experts
- Held public peer review session – August 2017
- Additional public comments received – 6 different entities
- Final Peer Review Report received – October 2017

Peer Review Panel

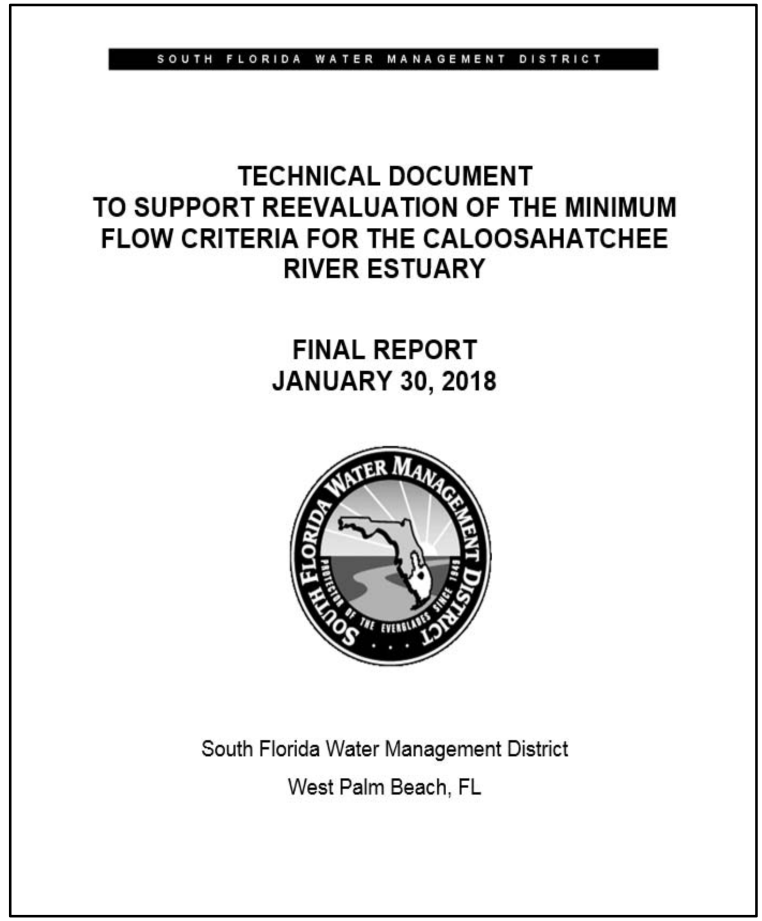
Public Peer Review Session

Public Comments Received

- City of Sanibel
- Sanibel Captiva Conservation Foundation
- Conservancy of Southwest Florida
- Southwest Florida Watershed Council, Inc.
- Calusa Waterkeeper
- Lee County
- All verbal and written comments are addressed in Appendix B of the MFL Technical Document

MFL Reevaluation Process

- MFL Reevaluation presented to WRAC November 2017
- MFL Reevaluation presented to Governing Board in December 2017
- Verbal and written comments from Peer Review Session were incorporated into MFL technical document
- MFL Technical Document was finalized January 2018



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

TECHNICAL DOCUMENT
TO SUPPORT REEVALUATION OF THE MINIMUM FLOW CRITERIA FOR THE CALOOSAHATCHEE RIVER ESTUARY

FINAL REPORT
JANUARY 30, 2018

South Florida Water Management District
West Palm Beach, FL

Questions

Peer Review Findings

Don Medellin
Coastal Ecosystems Section
South Florida Water Management District

February 15, 2018

Peer Review Findings

- Final Peer Review Report received October 27, 2017
- Final report posted on the MFL webpage since November 2, 2017
- Overall, peer review report was very positive
- Suggestions for improvement of the MFL technical document
- Recommendations for future research and monitoring

Minimum Flow Criteria for the Caloosahatchee River Estuary

Final Peer Review Report

Submitted by

Dr. Edward J. Buskey (Chair)

Dr. James Pinckney, Dr. Jennifer Beseres Pollack, Dr. Winston Lung and Dr. Jian Shen

Executive summary

The South Florida Water Management District (SFWMD) has crafted a well-executed and well-documented set of field and laboratory studies and modeling efforts to reevaluate Minimum Flow Levels (MFL) for the Caloosahatchee River Estuary (CRE). MFL criteria are designed to protect the estuary from significant harm due to insufficient freshwater inflows, and are not guidelines for restoration of estuarine functions to conditions that existed in the past. MFL criteria have three essential components: 1) to establish the magnitude of minimum freshwater inflows to the estuary below which significant harm may occur 2) to determine the duration of

Excerpts from Peer Review Panel Final Report

- "Overall, the SFWMD provided a convincing, scientifically based justification for increasing the MFL to 400 cfs for the Caloosahatchee River at S-79 lock and dam. Although not perfect, with implicit uncertainty common for ecological forecasting, their conclusions are based on the best available data and analysis of those data." – Dr. Pinckney
- "The analysis of freshwater and salinity requirements for this species (Vallisneria) are quite complete and very impressive." – Dr. Buskey
- "In general, the approach used by SFWMD to reevaluate the MFL for the CRE was scientifically sound and made use of the best available data, monitoring and modeling." – Dr. Pollack

Excerpts from Peer Review Panel Final Report

- "The SFWMD has crafted a well-executed and well-documented set of field and laboratory studies and modeling efforts to reevaluate Minimum Flow Levels (MFL) for the Caloosahatchee River Estuary." – Dr. Buskey
- "The SFWMD has used the best available science to establish the minimum flow levels to prevent significant harm, and there has been significant investment in a recovery strategy to allow increased freshwater inflows into the CRE during the dry season." – Dr. Shen

Peer Review Comments Addressed

- Use CH3D model to estimate the distribution of along-estuary salinity and water column stratification
- Evaluate potential for salinity increases with sea level rise
- Discuss along-estuary variation in tidal range
- Address historical salinity data gaps at I-75, Shell Point and Sanibel Bridge monitoring stations
- Provide a description of the C-43 Reservoir operations
- Clarify how the biological indicators were chosen
- Clarify WaSh model performance by including additional statistics for each flow monitoring location

Suggestions for Future Studies

- Consider alternative Valued Ecosystem Components (VECs)
  - Atlantic Rangia clam (*Rangia cuneate)* in the upper estuary
  - Blue crab (*Callinectes sapidus*) population dynamics
  - Develop new studies to support new VEC's
- Tape grass is a great indicator for the CRE, but it may not recover even if abiotic conditions are suitable
- Additional studies of drivers and responses required
  - Interactions between light availability and salinity effects
  - Role of seed supply and germination
  - Importance of below-ground biomass and sediments
  - Impact of herbivorous grazers (e.g. manatees & turtles)

Suggestions for Future Studies

- Monitor ecological indicators to quantify responses to the duration and frequency of reduced freshwater inflow

- Establish better understanding of water quality
  - Thoroughly explore empirical relationships among salinity, oxygen, nutrients, and suspended solids over all inflow conditions
  - Assist FDEP in their efforts to relate watershed characteristics and nutrient loading to water quality in the CRE (e.g. TMDL's)
  - Develop integrated hydrodynamic-water quality model to evaluate potential estuary responses to landscape-scale changes in water management

Questions

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

MFL Criteria Development

Christopher Buzzelli, Fawen Zheng, Peter Doering*
South Florida Water Management District

15 February 2018

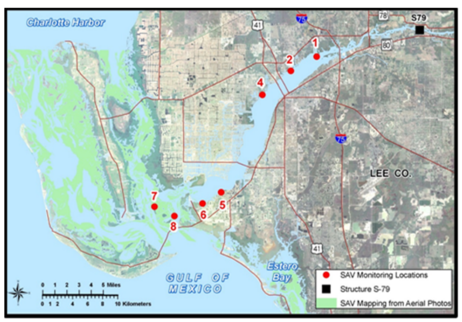
sfwmd.gov

PRESENTATION OBJECTIVES

1. To derive the **magnitude** of minimum inflow rates below which significant harm occurs (>2 years recovery time)

2. To quantify the **duration** of high salinity conditions (S ≥10) which cause significant harm to an estuarine resource

3. To determine the **return frequency** of natural environmental conditions associated with significant harm



MAGNITUDE
(All Indicators)

DURATION
(Tape Grass Survival)

FREQUENCY
(Rainfall & Blue Crabs)

CRE MFL SCIENCE SUMMARY

FINAL

Assessment of the Responses of the Caloosahatchee River Estuary to Low Freshwater Inflow in the Dry Season

March 2017

Prepared by:
Christopher Buzzelli, Peter Doering, Yongshan Wan, Teresa Coley, Detong Sun, Zhiquiang Chen, Cassondra Thomas, Don Medellin, and Toni Edwards

Coastal Ecosystems Section
South Florida Water Management District
3301 Gun Club Rd.
West Palm Beach, FL 33406

CRE MFL SCIENCE COMPONENTS

	Component	Method
1	Hydrodynamics	Influence of alterations on hydrodynamics
2	Inflow vs. Salinity	Monthly freshwater-salinity relationships
3	Water Quality	Relationships between inflow, salinity, and water quality
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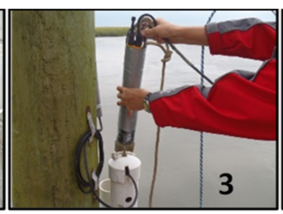
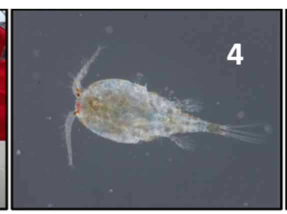
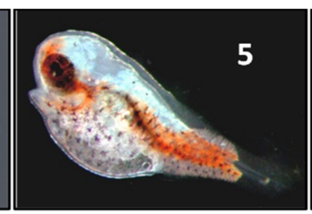
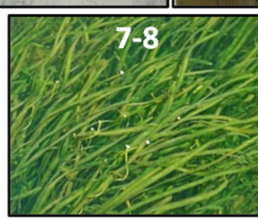
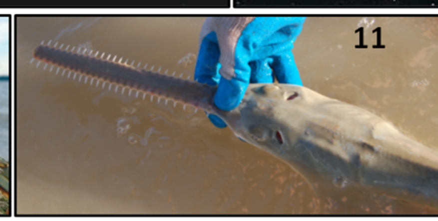


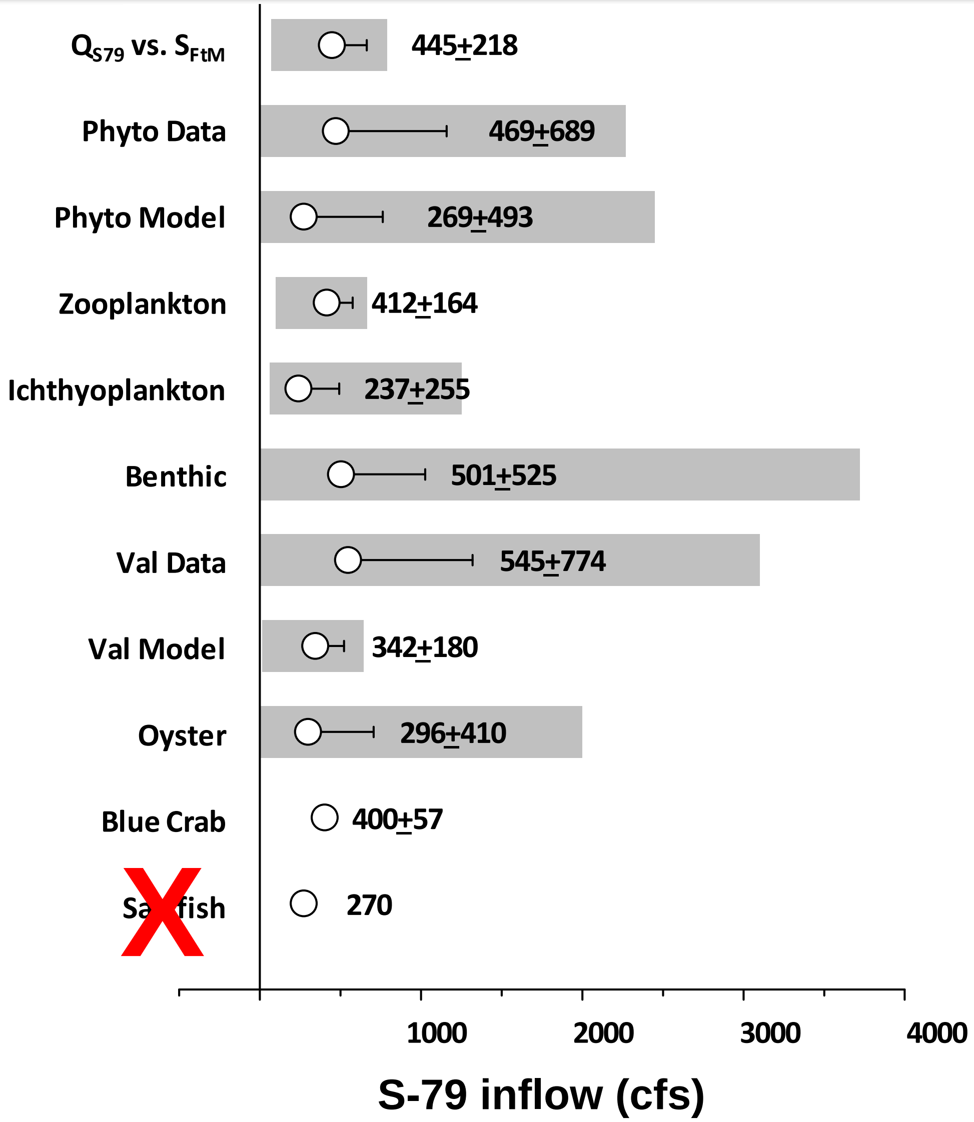








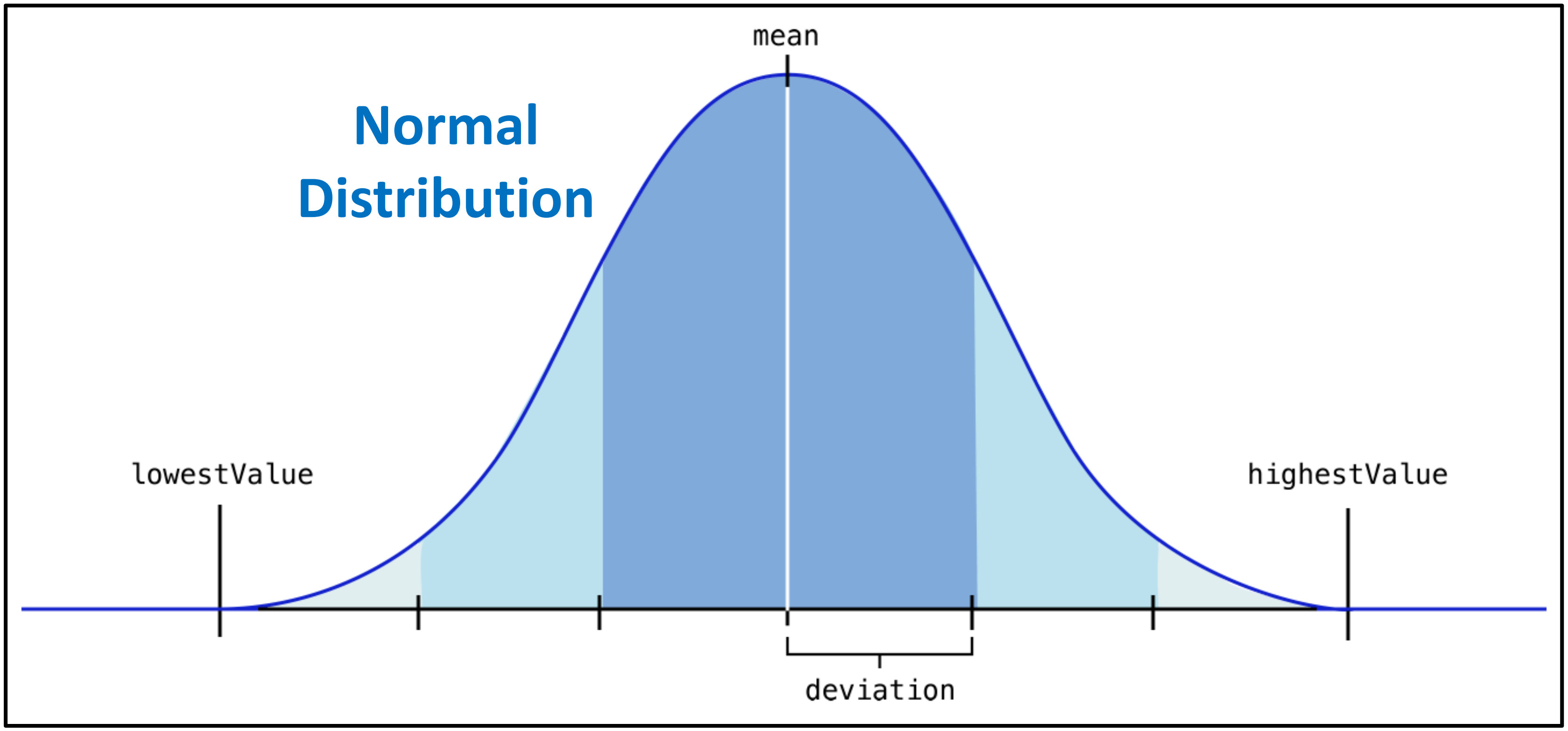
CRE MFL MAGNITUDE (Q_l)



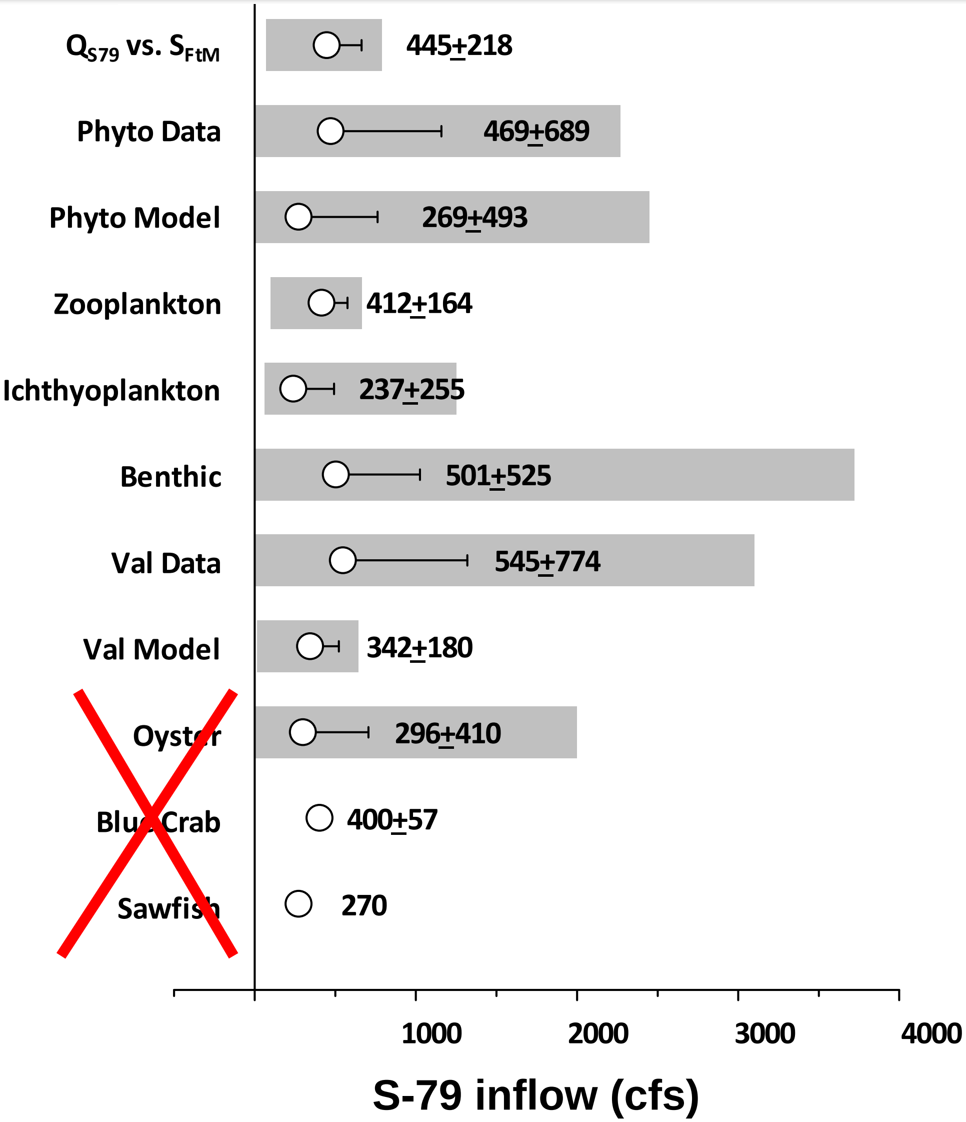
Mean:	**381 cfs**
Median:	**400 cfs**

CRE MFL MAGNITUDE (Q_l)

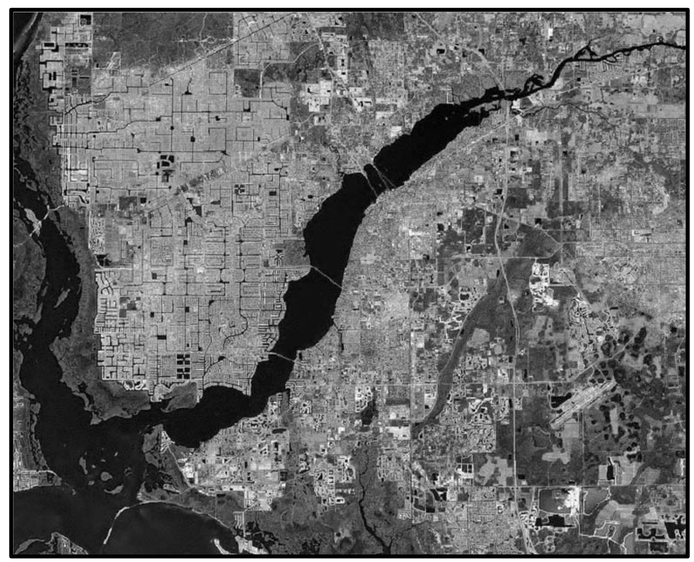
- Sawfish (n = 1), oyster (not significant), and blue crab (non-normal data) omitted
- Normal distribution using 8 remaining values of Q_l using mean and deviation (cfs)
  - Magnitude (y) predicted over range of S-79 inflow rates (x)
  - Average 8 y-values over range of x-values for composite mean magnitude



CRE MFL MAGNITUDE (Q_l)



Mean:	**381 cfs**
Median:	**400 cfs**
Combo:	**364 cfs**

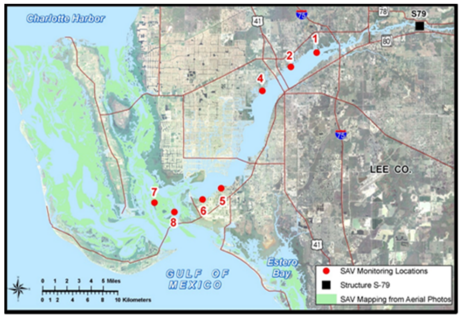


PRESENTATION OBJECTIVES

1. To derive the magnitude of minimum inflow rates below which significant harm occurs (>2 years recovery time)

2. **To quantify the duration of high salinity conditions ($S \geq 10$) which cause significant harm to an estuarine resource**

3. To determine the return frequency of natural environmental conditions associated with significant harm



MAGNITUDE
(All Indicators)

DURATION
(Tape Grass Survival)

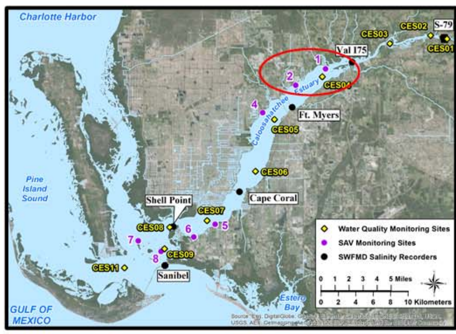
FREQUENCY
(Rainfall & Blue Crabs)

CRE MFL DURATION

Experimental Mesocosms

- Doering et al. 2001
- Exposure to S = 18 (S_{18})
- 1,5,11,20,30,50,70 days
- 1 month post-recovery
- % loss vs. # days S_{18}

Monitoring Data



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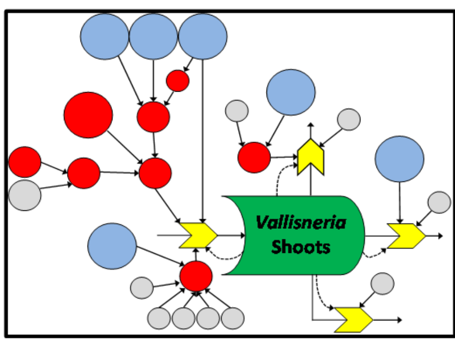
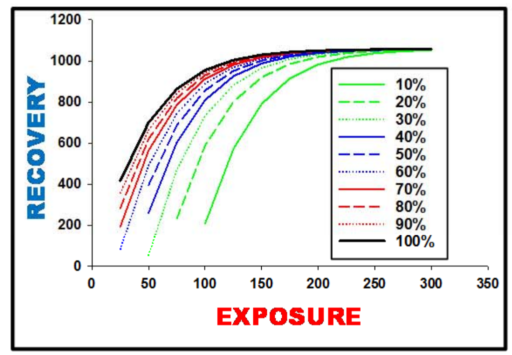
- S_{FtM} 30 d average
- 5/1992 to 5/2014
- Tape grass shoot density
- Sites 1 and 2 in CRE
- % loss vs. # days $S_{FtM} \geq 10$

Simulation Model

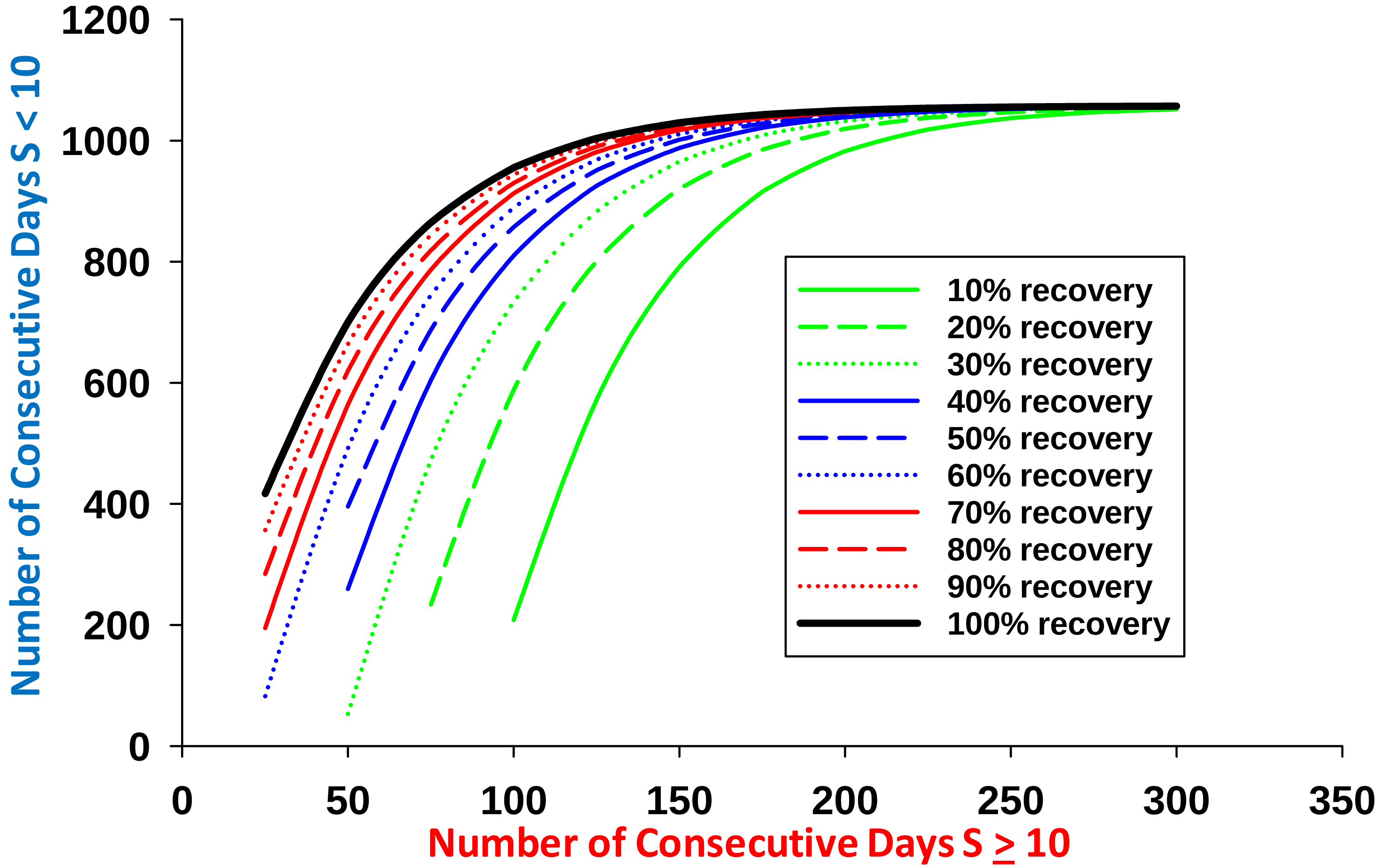


- Shoot density at Site 1
- 1/1998 to 12/2014
- T, S, I as multiple factors
- % loss vs. # days $S_{val1} \geq 10$
- % gain vs. # days $S_{val1} < 10$

Plots of high salinity EXPOSURE TIME vs. low salinity RECOVERY TIME

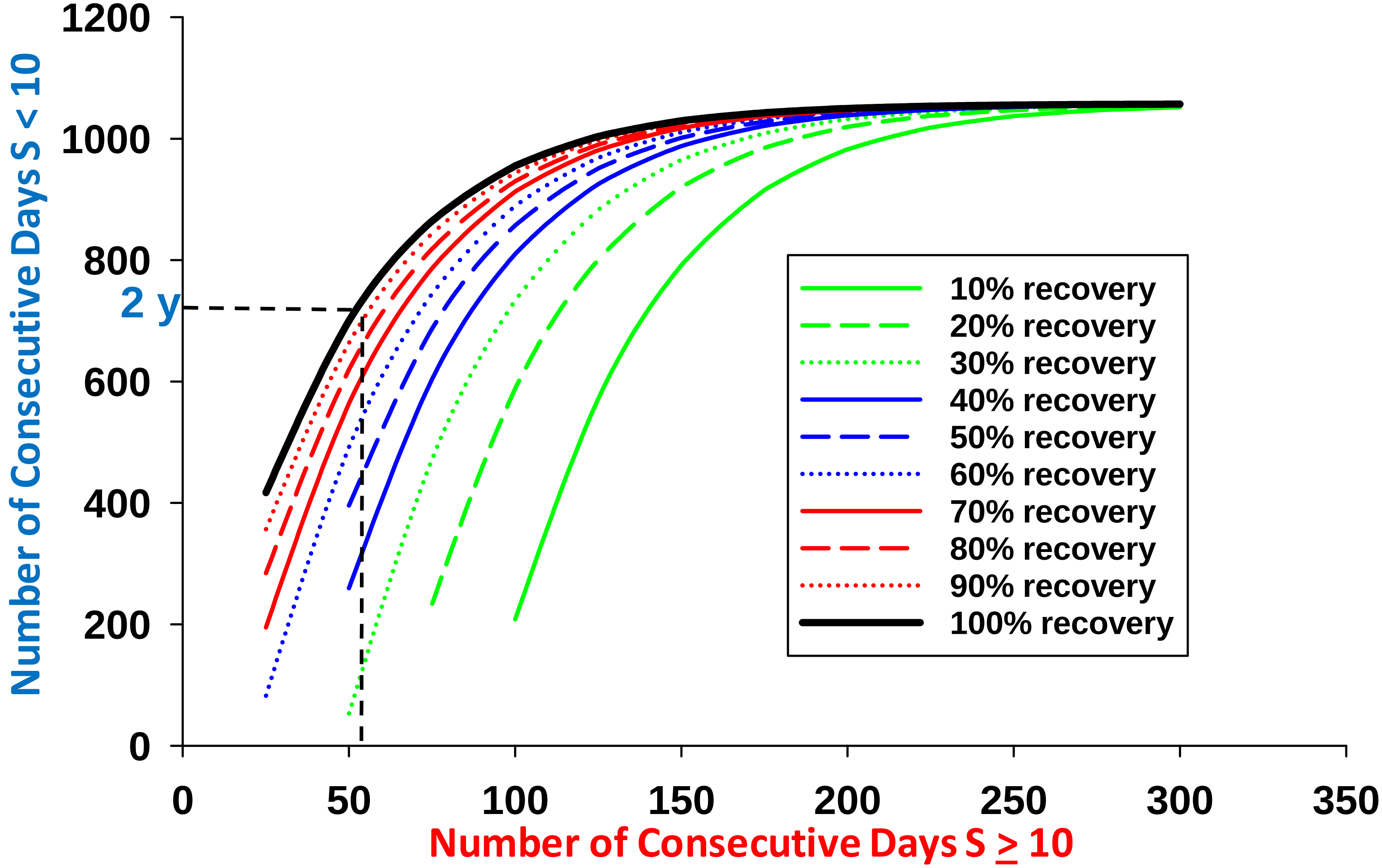


CRE MFL DURATION



CRE MFL DURATION

IF: $S_{FtM} \geq 10$ for 55 consecutive days
THEN: 730 consecutive days (2 y) of $S_{FtM} < 10$ to recover 100% of shoots



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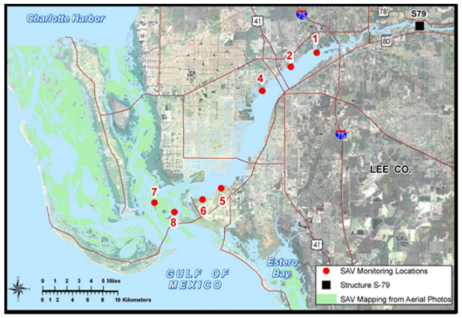


MAGNITUDE
(All Indicators)

DURATION
(Tape Grass Survival)

FREQUENCY
(Rainfall & Blue Crabs)

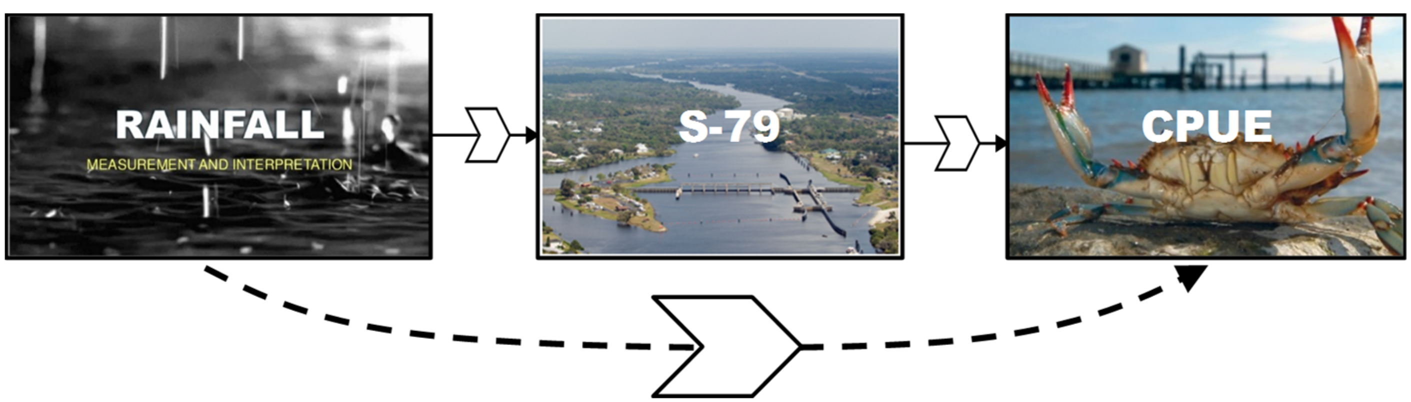
CRE MFL RETURN FREQUENCY

Return frequency

- Climatically reoccurring periodicity in minimum inflows (e.g. droughts)
- MFL not intended to drought-proof the estuary

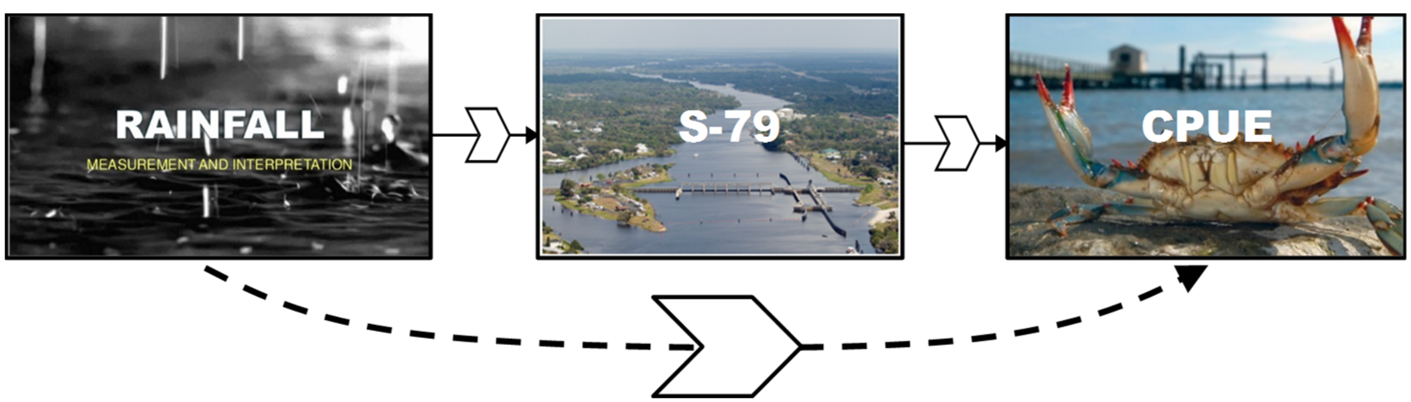
Methods

- Dry season rainfall for the Caloosahatchee sub-watersheds (WY1914–WY2016)
- Relationship between dry season rainfall and S-79 inflow (WY1967–WY2013)
- Drought frequency from rainfall matched to minimum inflow rates
- Component Study 10 (blue crab) analyses of blue crab fishery and rainfall data



CRE MFL RETURN FREQUENCY

Minimum Flow (cfs)	Rainfall* (in)	Drought Interval (yrs)
365	6.81	6.0
380	7.14	5.4
400	7.55	5.1
Blue Crab Analysis		
Monte Carlo	7.1	5.8



CRE MFL DRAFT RULE (2/2018)

- Magnitude: 30-day moving average flow of 400 cfs at S-79
- Duration: An MFL exceedance occurs during a 365-day period when the 30-day moving average flow at S-79 is below 400 cfs and the daily average salinity has exceeded 10 at the Ft. Myers salinity monitoring station (located at latitude 26° 38' 57.84" N, longitude 81° 52' 5.68" W) for more than 55 consecutive days. Salinity at the Ft. Myers salinity monitoring station shall be measured at 20% of the total river depth at mean low water.
- Return Frequency: An MFL violation occurs when an exceedance occurs more than once in a five-year period

Note: MFL exceedances are expected until the recovery strategy is completed and operational

Questions

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Recovery Strategy for the Caloosahatchee River MFL

Don Medellin, Jenifer Barnes, and Detong Sun
South Florida Water Management District

February 15, 2018

sfwmd.gov

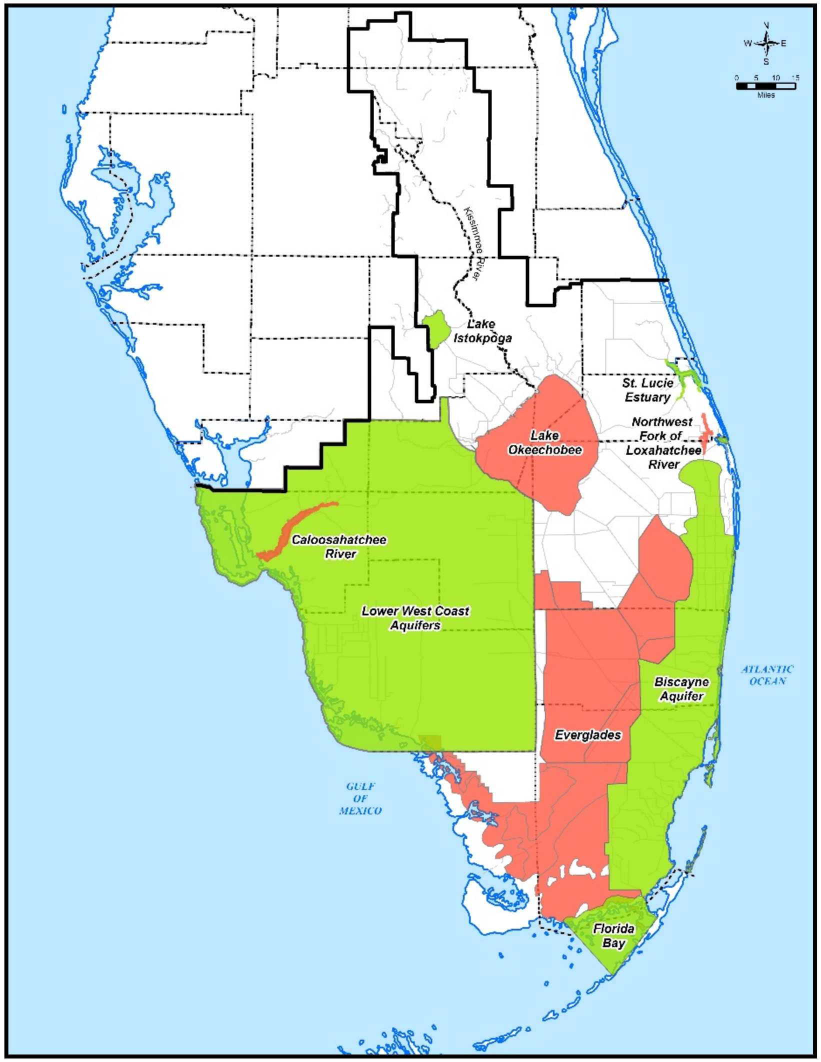
Recovery and Prevention Strategies

- Section 373.0421(2), F.S. states that if water levels or flows currently fall below the established MFL, or are projected to not meet the MFL over the next 20 years, then the water management district must develop and implement an MFL Recovery or Prevention Strategy
- The 20-year period should coincide with the regional water supply plan horizon and recovery/prevention strategies are developed and updated as part of the planning process
- The Governing Board shall expeditiously adopt a recovery or prevention strategy and achieve recovery as soon as practicable
- Strategies must include a phased-in approach or timetable

MFL Recovery and Prevention Strategies

- **Recovery Strategy** for those not meeting the MFL at the time of adoption
  - ✓Achieve recovery to the established minimum flow or level as soon as practicable
- **Prevention Strategy** for those that are meeting the MFL but not expected to meet it in 20 years
  - ✓Prevent the existing flow or level from falling below the established minimum flow or level
- Strategies updated in concert with the planning process; 20-year period coincides with regional water supply plan horizon

MFL Waterbodies within SFWMD

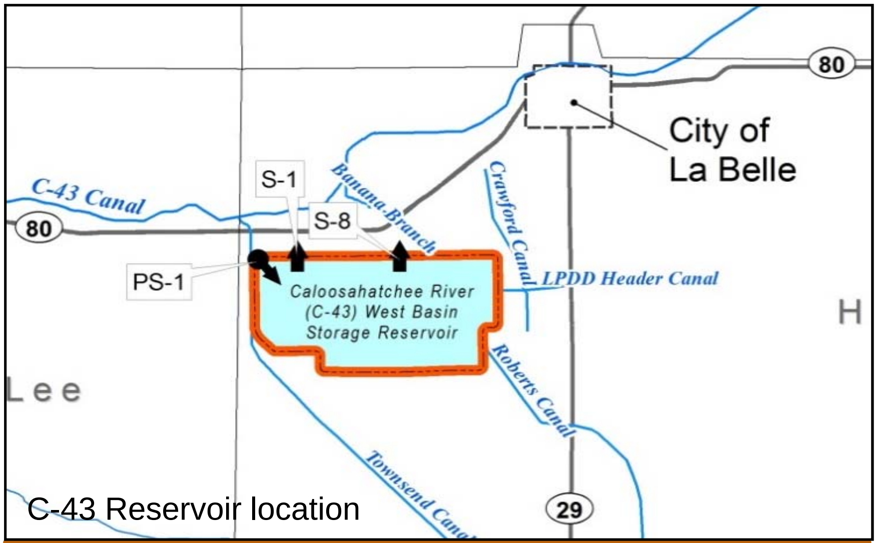


- MFL Prevention Waterbodies
  - Biscayne aquifer
  - Lower West Coast aquifers
  - St Lucie Estuary
  - Lake Istokpoga
  - Florida Bay
- MFL Recovery Waterbodies
  - Lake Okeechobee
  - Everglades
  - Caloosahatchee River
  - Northwest Fork of Loxahatchee River

Caloosahatchee MFL Recovery Strategy

1. **Caloosahatchee River (C-43) West Basin Storage Reservoir**
   - Construction started Nov. 2015
   - Expected Completion 2022
   - Costs ~ $600 Million
   - 170,000 Ac-Ft. storage
   - New water solely for environmental purposes
2. **Water Reservation Rule**
   - Adopted in 2014
   - Water protected for fish and wildlife

* Recovery strategy will meet the minimum flow with the recommended MFL criteria



C-43 Reservoir location


C-43 Reservoir construction

MFL Recovery Strategy Evaluation

- Caloosahatchee science document
  - Magnitude of flows needed for indicators
  - Return frequency
- MFL criteria development and analysis
  - Additional science on duration and return frequency
- Recommended MFL Criteria for Caloosahatchee
- Evaluation of recommended MFL criteria
  - Integrated modeling approach (five different models)
  - Used to test MFL criteria
  - Evaluate existing MFL recovery strategy

C-43 Reservoir Spreadsheet Model

- Compare the pre-reservoir flow over S-79 to the with-reservoir flow over S-79
- Modification of established operations to test effects of minimum deliveries (set zero flows to 400 cfs minimum)
- Spreadsheet shows a water budget for the reservoir and tracks reservoir inflows, releases, and storage
- Runs on a daily continuous simulation mode for 41 years (1965-2005 period of record) and produces modified S-79 flows

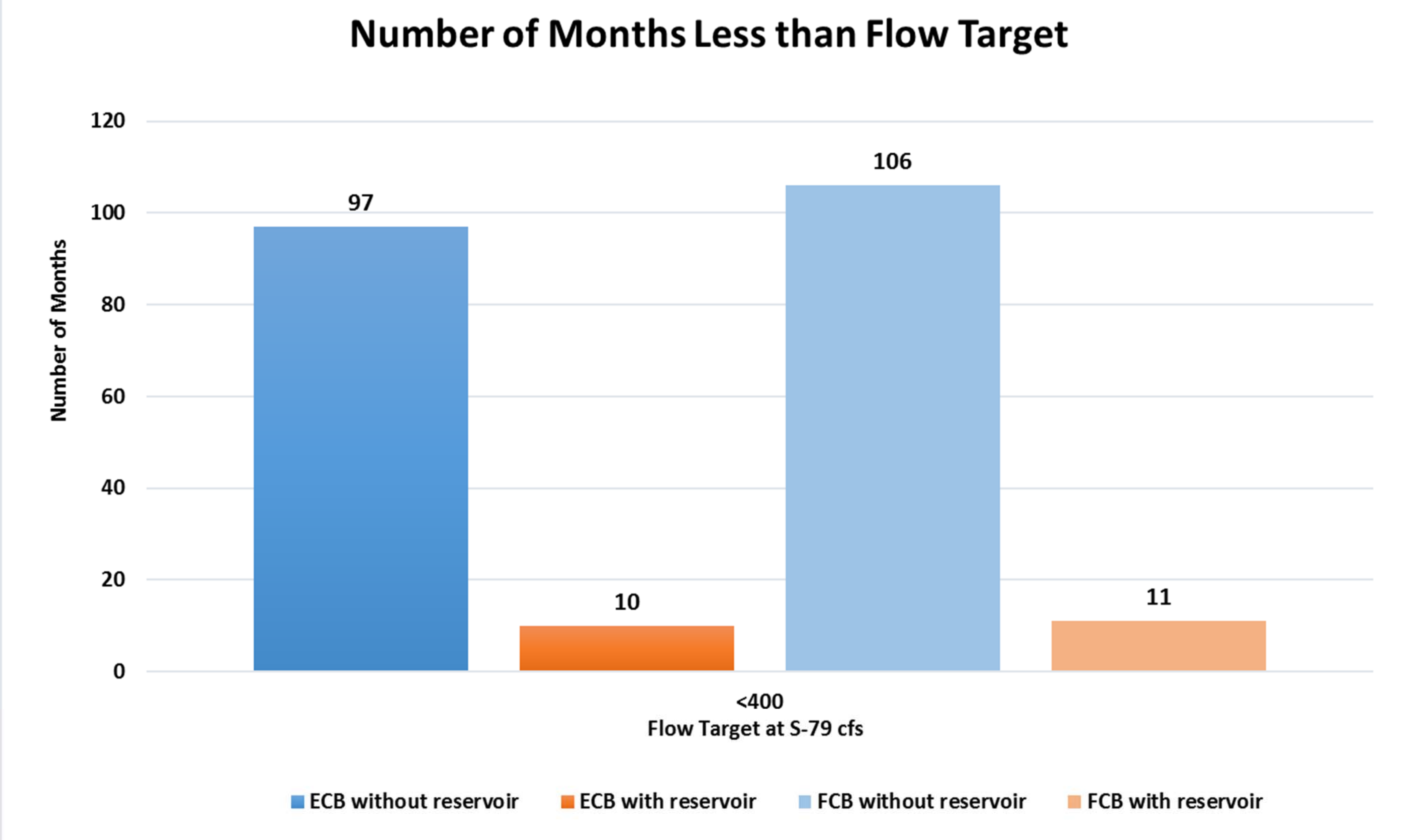
C-43 Reservoir Spreadsheet Model

Scenario	Demands	Regional Projects
Existing Condition Baseline	2012	No major projects
Existing Condition Base with Reservoir	2012	C-43 Reservoir
Future Condition Baseline	2040	Central Everglades Planning Project
Future Condition Base with Reservoir	2040	Central Everglades Planning Project and C-43 Reservoir

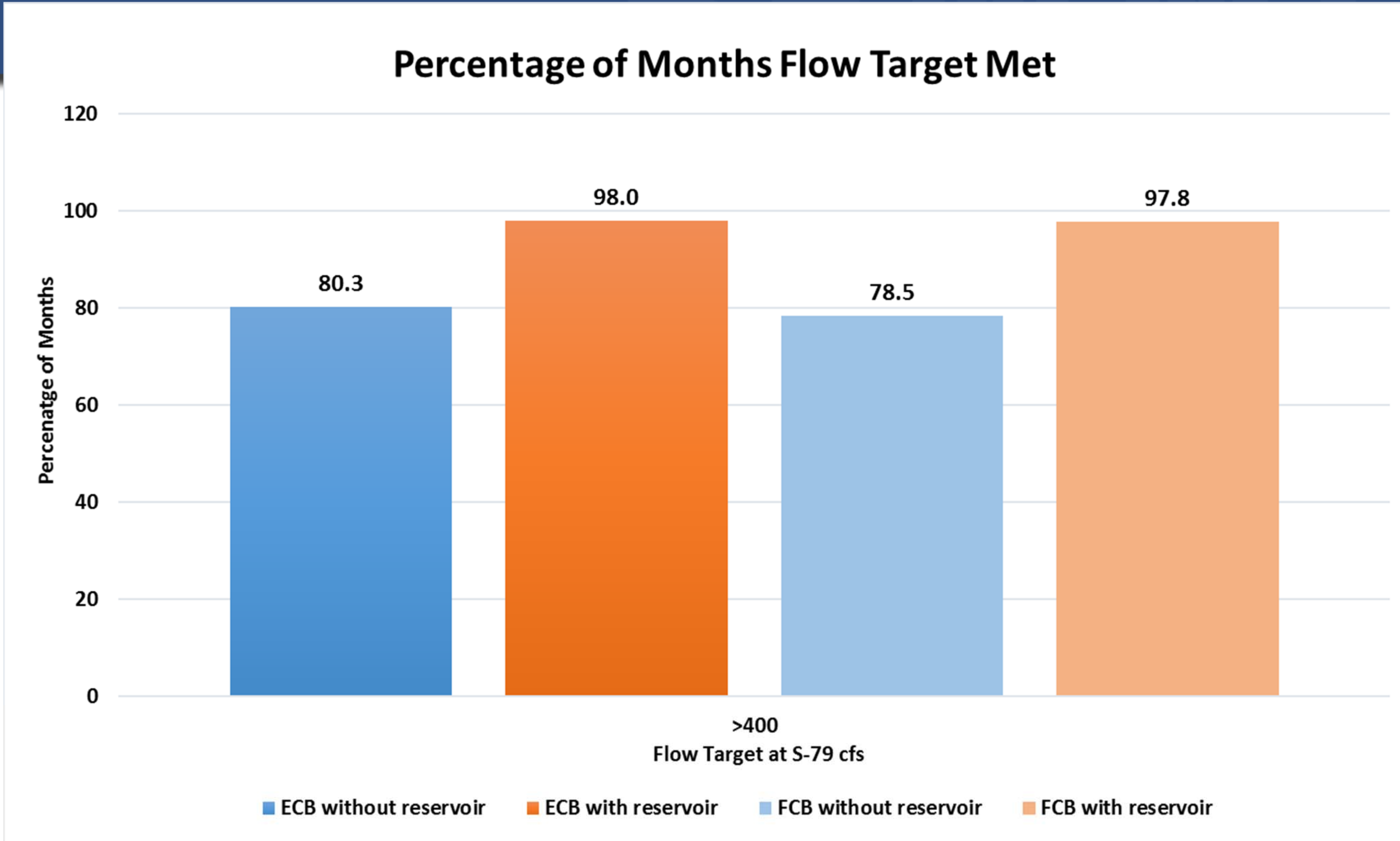
Reservoir Operations (CERP Operations with 400 cfs Minimum)

Fill (Limit 1500 cfs)			Pump			
WL In Reservoir			Wet Season - Early	Late Wet season	Dry Season - Early	late Dry season
	S-79 Flows	Code	EW	LW	ED	LD
Empty	520.01	1	0	0	0	0
Empty	650.01	2	0	200	150	150
Empty	850.01	3	0	250	250	250
Empty	1000.01	4	250	350	350	350
Empty	1200.01	5	400	500	500	500
Empty	1500.01	6	750	800	700	700
Empty	2000.01	7	850	1250	1000	1000
Empty	2800.01	8	1150	1500	1500	1500
Empty	99999	9	1500	1500	1500	1500
END	S-79 Flows	Code	EW	LW	ED	LD
Medium	520.01	1	0	0	0	0
Medium	650.01	2	0	200	0	0
Medium	850.01	3	0	250	200	0
Medium	1000.01	4	250	350	300	0
Medium	1200.01	5	400	500	450	0
Medium	1500.01	6	680	800	700	0
Medium	2000.01	7	750	1250	1000	750
Medium	2800.01	8	950	1500	1500	1000
Medium	99999	9	1500	1500	1500	1500
END	S-79 Flows	Code	EW	LW	ED	LD
Full	520.01	1	0	0	0	0
Full	650.01	2	0	0	0	0
Full	850.01	3	0	250	0	0
Full	1000.01	4	0	350	200	0
Full	1200.01	5	0	450	400	0
Full	1500.01	6	350	700	700	0
Full	2000.01	7	500	900	900	500
Full	2800.01	8	800	1200	1250	800
Full	99999	9	1500	1500	1500	1500

Release (Limit 1200 cfs)			Gravity			
WL In Reservoir			Wet Season - Early	Late Wet season	Dry Season - Early	late Dry season
	S-79 Flows	Code	EW	LW	ED	LD
Empty	200.01	1	400	400	400	400
Empty	300.01	2	100	100	100	100
Empty	400.01	3	0	0	0	0
Empty	550.01	4	0	0	0	0
Empty	800.01	5	0	0	0	0
Empty	1000.01	6	0	0	0	0
Empty	1500.01	7	0	0	0	0
Empty	2800.01	8	0	0	0	0
Empty	99999	9	0	0	0	0
END	S-79 Flows	Code	EW	LW	ED	LD
Medium	200.01	1	1050	400	400	650
Medium	300.01	2	850	225	250	550
Medium	400.01	3	650	100	50	450
Medium	550.01	4	400	0	0	450
Medium	800.01	5	250	0	0	200
Medium	1000.01	6	0	0	0	0
Medium	1500.01	7	0	0	0	0
Medium	2800.01	8	0	0	0	0
Medium	99999	9	0	0	0	0
END	S-79 Flows	Code	EW	LW	ED	LD
Full	200.01	1	1150	450	450	850
Full	300.01	2	1050	350	350	800
Full	400.01	3	850	350	350	700
Full	550.01	4	650	350	350	700
Full	800.01	5	500	0	0	500
Full	1000.01	6	350	0	0	350
Full	1500.01	7	150	0	0	150
Full	2800.01	8	0	0	0	0
Full	99999	9	0	0	0	0



Number of Months Less than Flow Target
Number of Months
120
100
80
60
40
20
0
97
10
106
11
<400
Flow Target at S-79 cfs
ECB without reservoir
ECB with reservoir
FCB without reservoir
FCB with reservoir

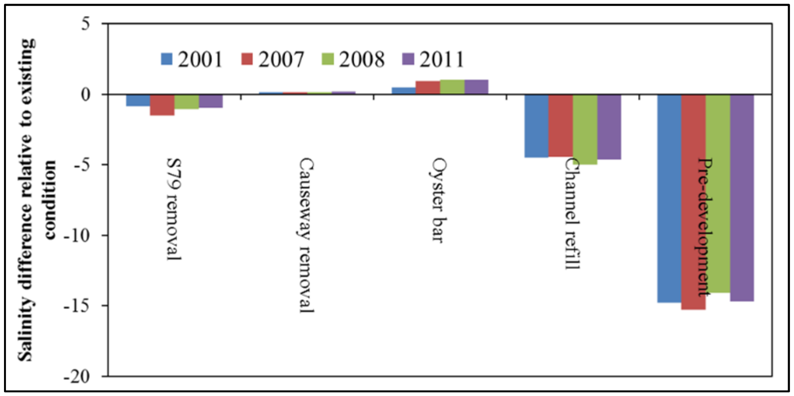

Percentage of Months Flow Target Met
120
100
80
60
40
20
0
Percenatge of Months
80.3
98.0
78.5
97.8
>400
Flow Target at S-79 cfs
ECB without reservoir
ECB with reservoir
FCB without reservoir
FCB with reservoir

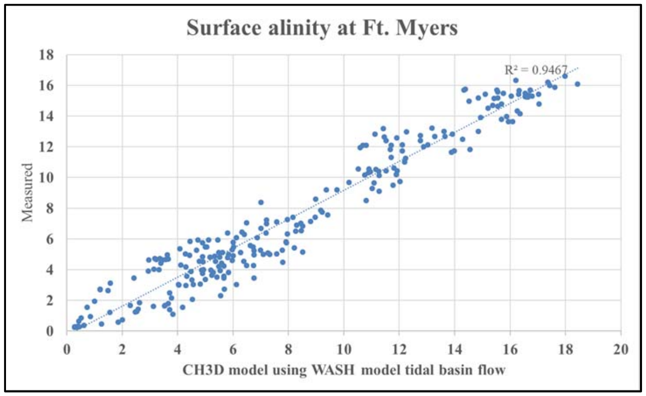
Summary of C-43 Reservoir Benefits

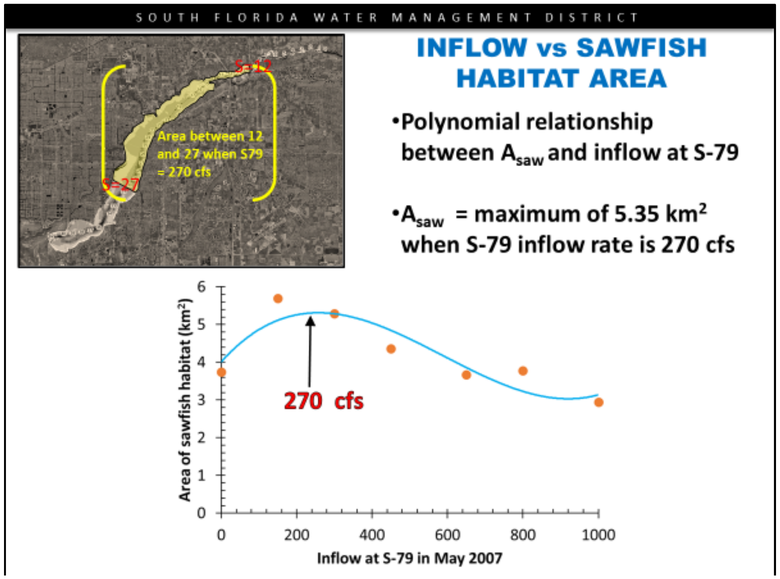
- Reduction of the number of months MFL flow not met:
  - 87 fewer months for existing conditions
  - 95 fewer months for future conditions
- Percentage of months MFL flow is met increases:
  - +17.7% for existing conditions
  - +19.3% for future conditions
- The C-43 reservoir is able to meet or exceed the MFL flow:
  - 98% of the months for existing conditions
  - 97.8% of the months for future conditions

Application of CH3D Model

- **Calibrated/verified with more than 10 years of data**
- **Applications:**
  - **Component 1: Evaluation of impact of physical alterations**
  - **Component 11: Low inflow impact on sawfish habitat area**
  - **MFL flow criteria evaluation**
  - **Sea level rise impact on salinity**







MFL Criteria Evaluation

- **Four flow scenarios**
- **Apply flow at S-79 from hydrological model**
- **Compute statistics of high salinity events at Ft. Myers**
- **Compute statistics of combined events**

Abbreviation	Flow Scenario
ECBO	Existing baseline without reservoir
ECBW	Existing condition with reservoir targeting 400 cfs
FCBO	Future baseline condition without reservoir
FCBW	Future condition with reservoir targeting 400 cfs

MFL Criteria Evaluation

Statistics of high salinity events at Ft. Myers

Scenario	Number of events	Average duration (day)	Average salinity
ECBO	23	163	19.5
ECBW	24	138	13.5
FCBO	22	162	19.6
FCBW	25	137	13.8

High salinity event: Salinity at Ft. Myers >10 for 55 or more consecutive days

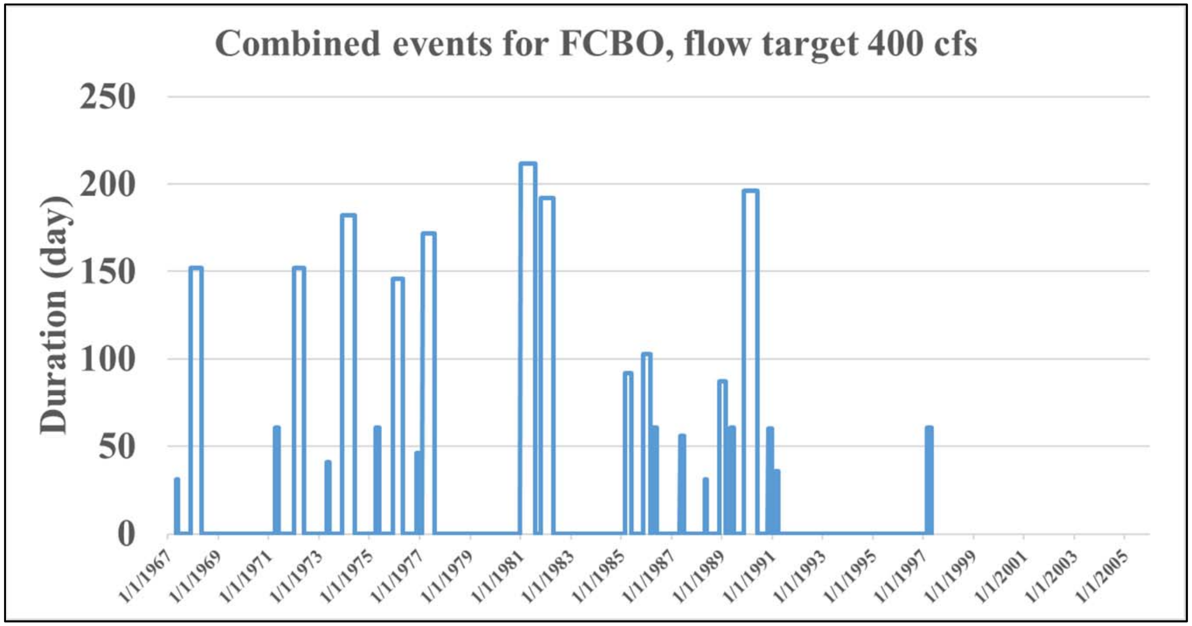
MFL Criteria Evaluation

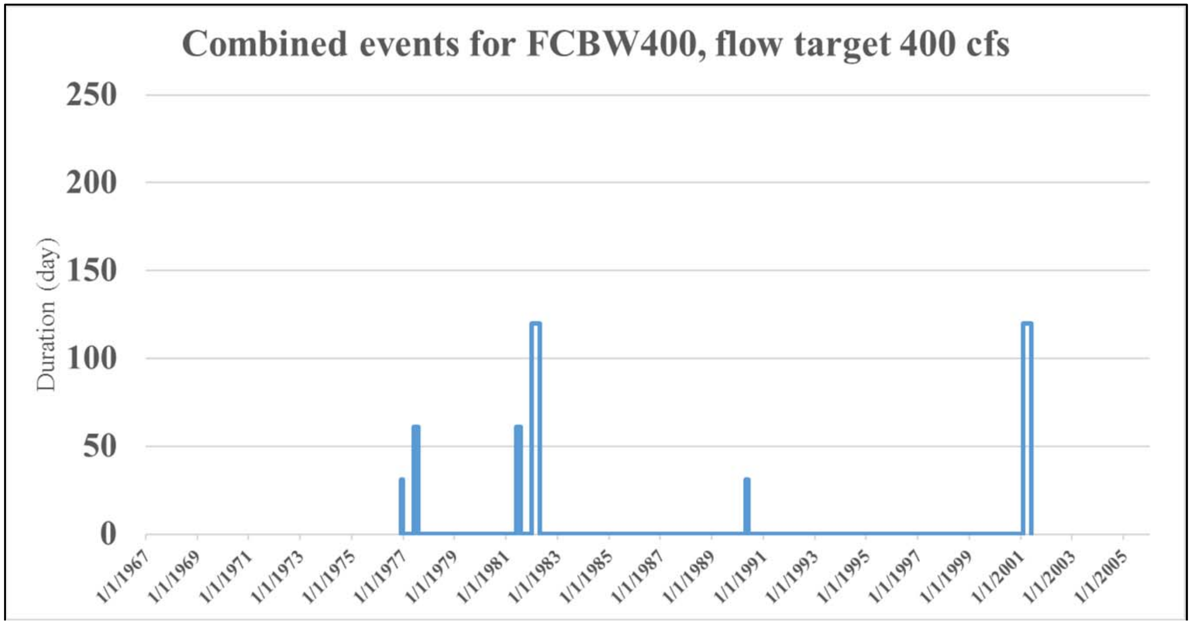
Number of combined events

Scenario	Number of combined events
ECBO	24
ECBW	5
FCBO	23
FCBW	6

Combined event: 1) Flow at S-79 < 400 cfs; and
2) Salinity at Ft. Myers >10 for 55 or more consecutive days

MFL Flow Criteria Evaluation





Revised MFL Recommendation

- Magnitude: 30-day moving average flow of 400 cfs at S-79
- Duration: An MFL exceedance occurs during a 365-day period when the 30-day moving average flow at S-79 is below 400 cfs and the daily average salinity has exceeded 10 at the Ft. Myers salinity monitoring station (located at latitude 26° 38' 57.84" N, longitude 81° 52' 5.68" W) for more than 55 consecutive days. Salinity at the Ft. Myers salinity monitoring station shall be measured at 20% of the total river depth at mean low water.
- Return Frequency: An MFL violation occurs when an exceedance occurs more than once in a five-year period

Note: MFL exceedances are expected until the recovery strategy is completed and operational

MFL Criteria – Evaluation Summary

- Modeling evaluation of MFL criteria used flows, salinity, and flows/salinity together
- Existing Condition Baseline scenario without C-43 Reservoir and a flow target of 400 cfs:
  - Flows not met 97 months (minimum flow criteria)
  - Combined flow and salinity criteria not met 24 times
  - A recovery strategy is required because the MFL criteria are not met currently
- Flow and salinity exceedances are expected to occur until the recovery strategy is completed and operational

MFL Recovery Strategy - Evaluation

- Under Future Condition Baseline model Scenarios with C-43 Reservoir and a flow target of 400 cfs:
  - Flows of 400 cfs at S-79 are met 97.8% of the months (minimum flow)
  - Average duration of high salinity events will be reduced from 162 days to 137 days at Ft. Myers and average salinity will be reduced from 19.6 to 13.8 at Ft. Myers
  - The number of combined flow and salinity exceedance events will be reduced from 23 to 6 events
- The proposed recommended MFL criteria adequately protect the resources from significant harm
- Recovery strategy will achieve recovery of the recommended MFL criteria
- Operational modifications will be used to fine-tune deliveries to the estuary to ensure the recommended MFL criteria are met

Questions

Next Steps

Don Medellin
South Florida Water Management District
February 15, 2018

Proposed Schedule

- Caloosahatchee rule development workshop – February 15, 2018
- Receive public input on draft MFL rule language by March 8, 2018
- Finalize rule language and statement of estimated regulatory cost (SERC) evaluation ~ March 30, 2018
- Request authorization to publish notice of proposed rule at April 12, 2018 Governing Board meeting
- Public hearing/rule adoption to GB at June 14, 2018
- Adopt revised MFL rule – late summer 2018

Public Input / Comment Period

- Draft MFL Rule Language and Final MFL Technical Support Document available at the MFL website:
  - https://www.sfwmd.gov/our-work/mfl

- All written comments are due in 3 weeks: **Thursday,**

  March 8, 2018
  - http://sfwmd.websitetoolbox.com/

Questions


Thank You