



WELCOME

Caloosahatchee Minimum Flow and Level Rule Development Workshop

May 31, 2019

Caloosahatchee Estuary in Fort Myers



Minimum Flow and Levels Reevaluation Process

Don Medellin, Principal Scientist,
Coastal Ecosystem Section
May 31, 2019

Workshop Objectives

- Engage with stakeholders
- Discuss potential supplemental statistical or mathematical approaches
- Using data from the MFL Reevaluation

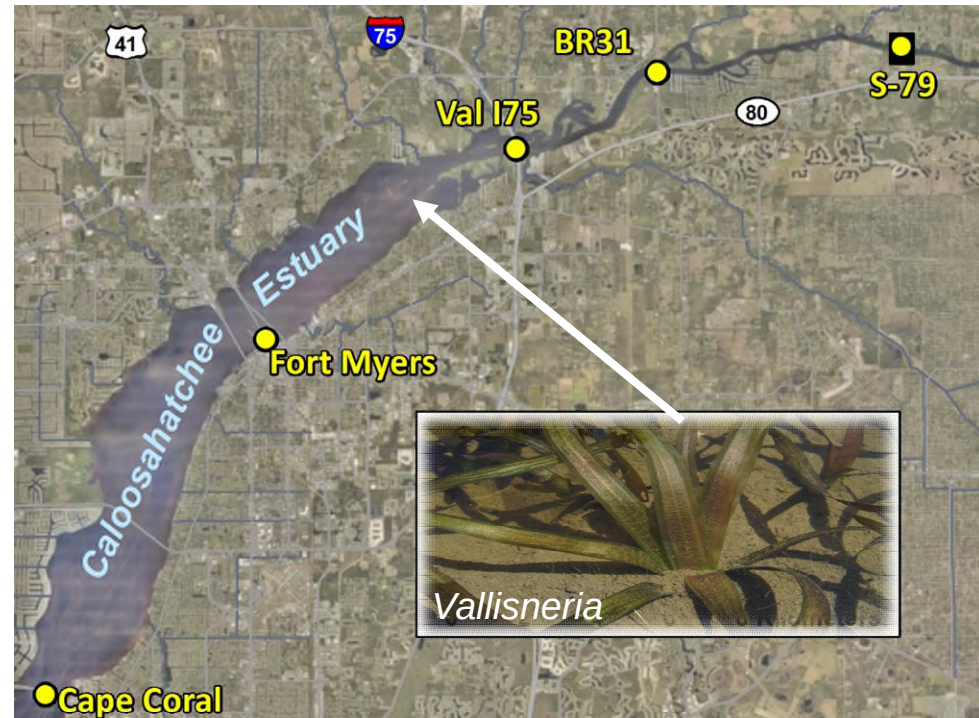


Water Resource Protection Conceptual Model

	Water Resource Protection Tools	Water Resource Protection Standards	Observed Change or Impacts
	RESTORATIVE FLOWS		
Water Levels/Flow Decreasing	Permittable Water Reservation of Water	NO HARM	Normal Permitted Operations Environmental Restoration
	Phase I Water Shortage Phase II Water Shortage	HARM	Temporary loss of water resource functions taking 1 to 2 years to recover
	MINIMUM FLOWS & MINIMUM WATER LEVELS		
Drought Severity Increasing	Phase III Water Shortage	SIGNIFICANT HARM	Water resource functions require multiple years to recover (> 2 year)
	Phase IV Water Shortage	SERIOUS HARM	Permanent or irreversible loss of water resource functions

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
- MFL exceedances are based on salinity criteria
- 2000 peer review recommendation: MFL should be set on a suite of additional indicators within the upper and lower estuary



MFL Reevaluation Process

- September 2018 - Rule Adoption Hearing
- Rule Challenge - 7 Entities
- October 29-30, 2018 - Administrative Hearing
- April 2019 - Governing Board directed staff to further engage with stakeholders



MFL Reevaluation Process

- Maintain established science foundation
- Consider supplementary statistical and mathematical approaches
 - Use data from January 30, 2018 MFL technical document
- Seek and evaluate public input on other approaches within this framework
- Hold additional public workshop and hearing

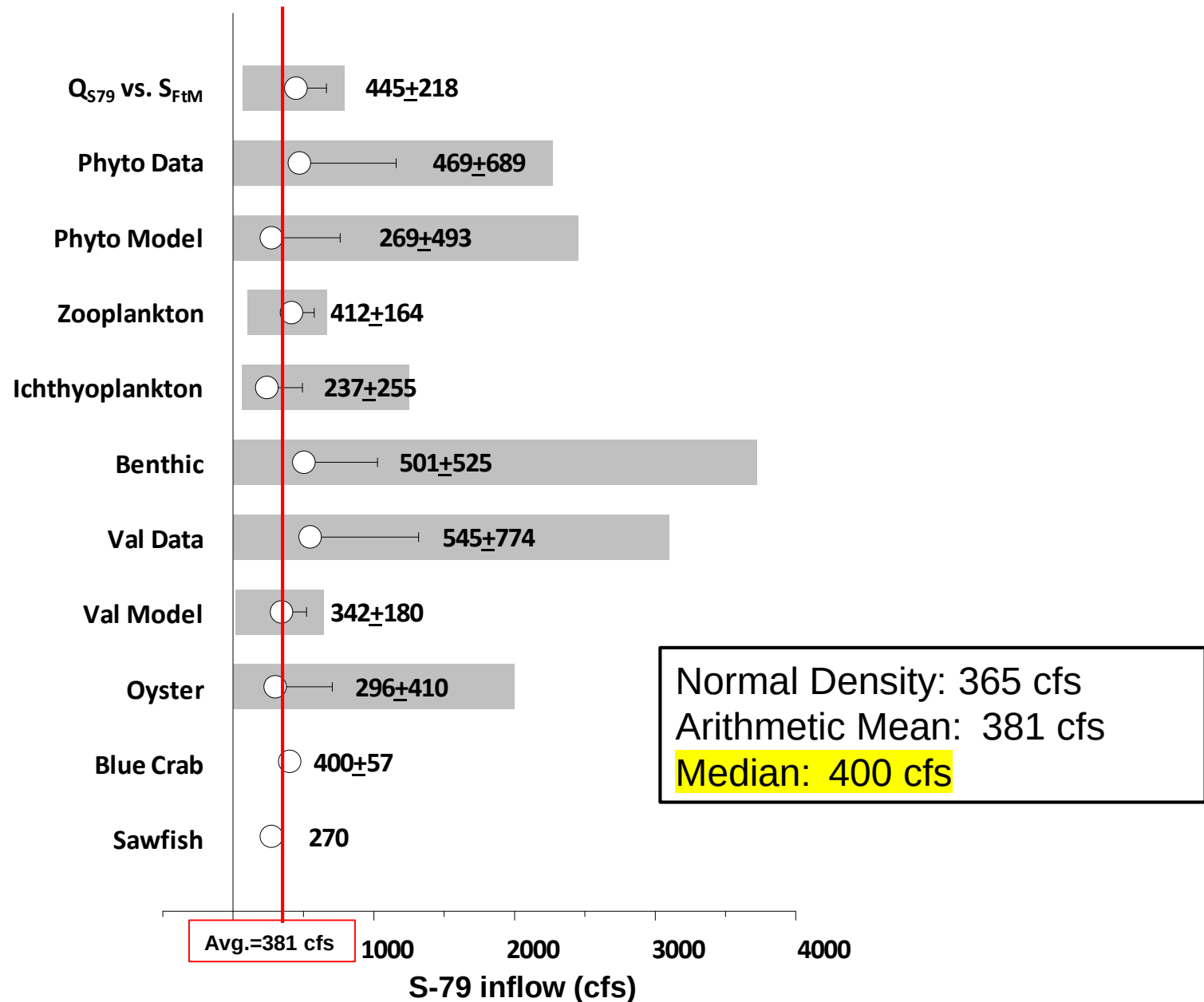


Caloosahatchee Estuary in Fort Myers

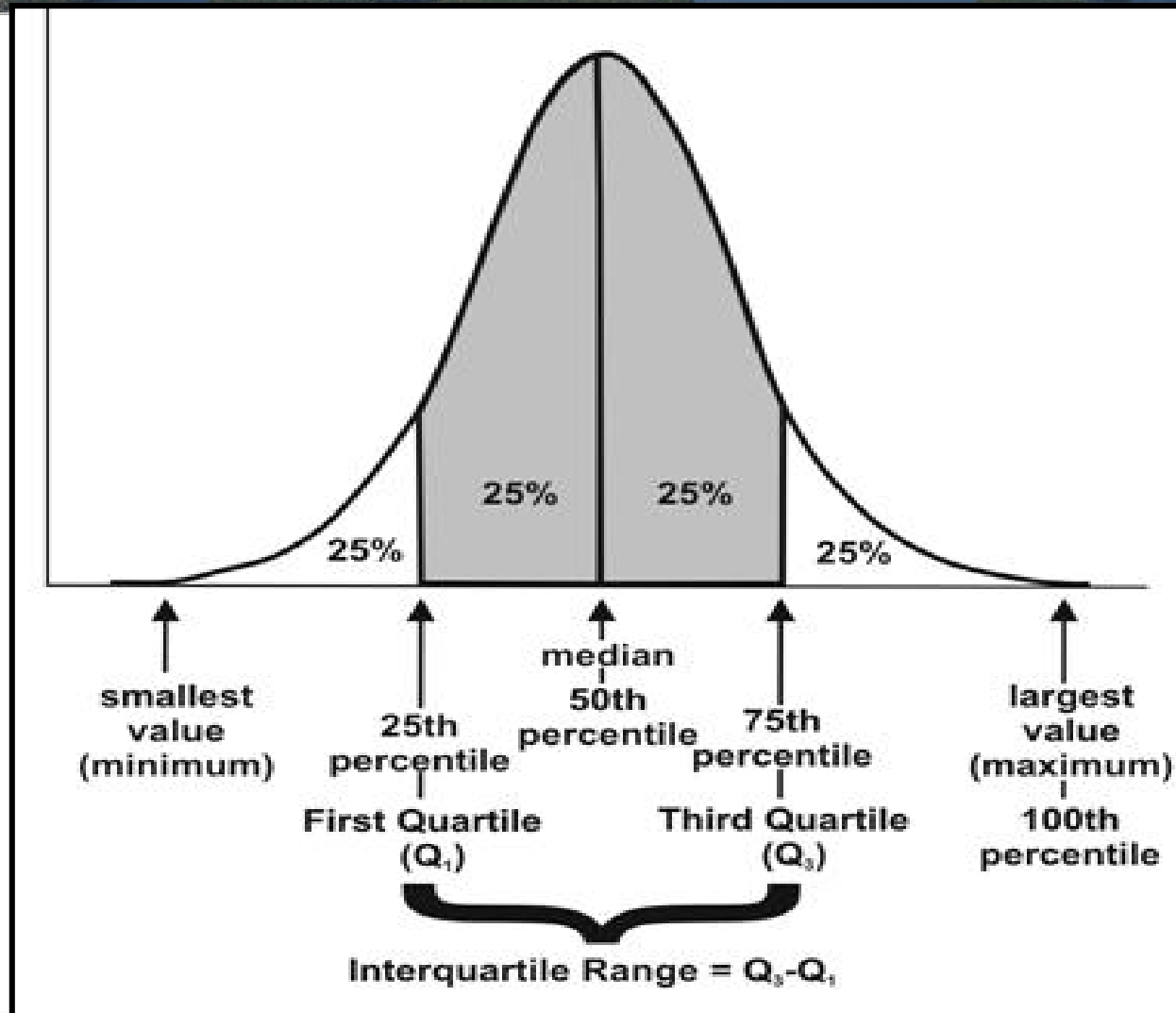
Possible Statistical Approaches Caloosahatchee MFL

Cassandra Armstrong, Ph.D
Section Administrator
May 31, 2019

Original Approach



Interquartile Range Approach



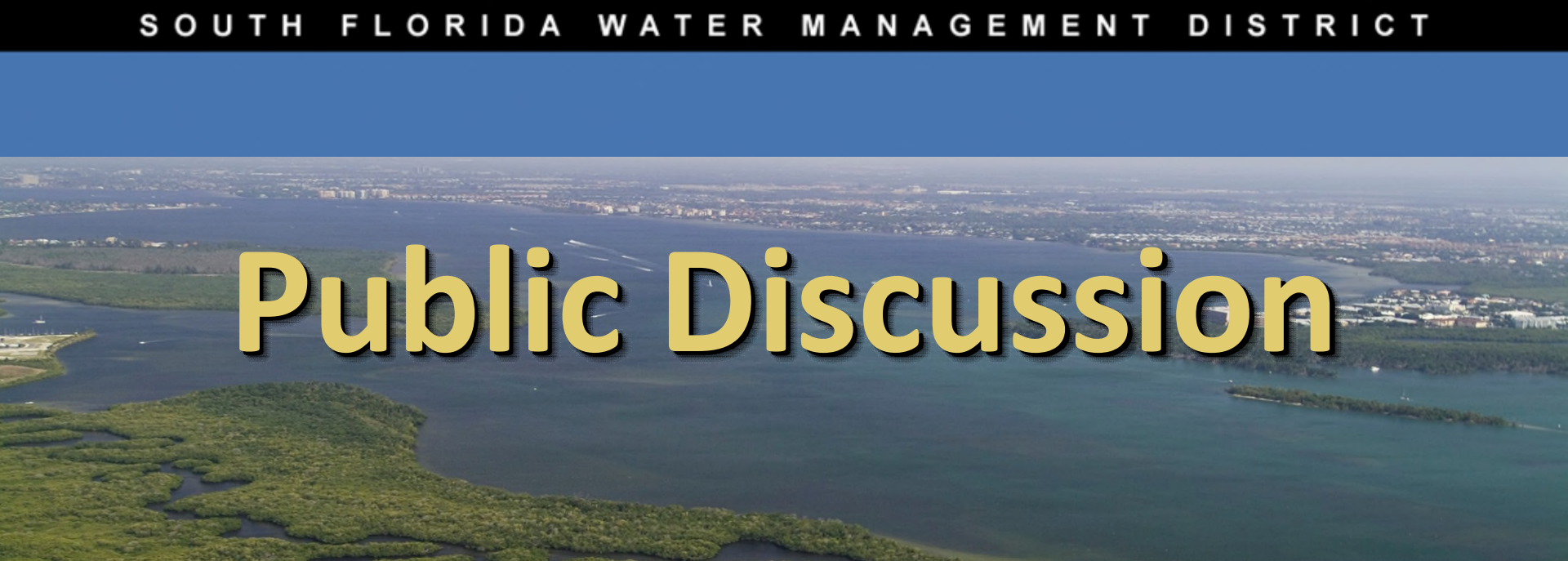
Tidal Basin Flow Approach

- Based on the WaSh model, calibrated and verified with 39 period-of-record data, account for relative % contribution of tidal basin flow under given flow at S-79
- A flow-based change that considers normal dry season conditions

Recovery of Caloosahatchee River MFL

- All options will be evaluated to determine the impact on recovery strategy (C-43 Reservoir performance) to comply with subsection 373.0421 (2), Florida Statutes
 - “To achieve recovery of the MFL...”





Public Discussion

Caloosahatchee Minimum Flow and Level Rule Development Workshop

May 31, 2019

Next Steps

- June 12, 2019 – All Written Public Comments Due
 - Approaches within framework of the original data contained in the January 30, 2018 MFL Technical Document
 - Include all data, metadata, statistical approaches, regressions, analyses, conclusions, etc.
 - Submit all comments to: Don Medellin at dmedelli@sfwmd.gov
- June 20, 2019 - Next Public Workshop
 - Results of additional approaches/evaluations will be presented at next workshop
- July 11, 2019 – Public Rule Adoption Hearing



Questions

Caloosahatchee MFL Draft Rule Criteria

Proposed revision to Caloosahatchee MFL rule based on “Best Available Information”, including scientific studies, modeling and peer review conducted over the past 6 years

- **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 30-day moving average salinity exceeds 10 at the Ft. Myers salinity monitoring station
- **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