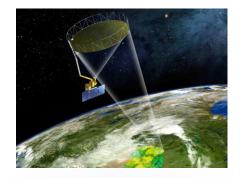
Integrating NASA Earth Systems Data into Decision-Making Tools of Member Utilities of the Florida Water and Climate Alliance

C. Martinez, UF; T. Asefa, Tampa Bay Water, T. Irani, UF; J. Judge, UF; V. Misra, FSU; K. Morris, Peace River







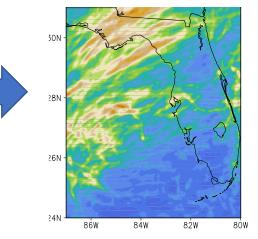
UF FLORIDA





www.FloridaWCA.org

Regional Seasonal Climate Forecasts



Stage of Decision-Making Process

Raise awareness

Promotion

Identification

of choices

Problem identification

Input from

Science

Prescription

Help problem

understanding

e.g., Provision

Frame the problem.

alter the

goals

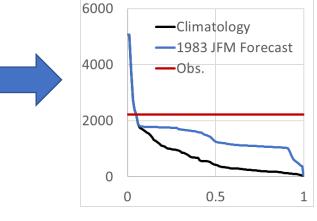
of data

Problem

definition

Intelligence gathering

Seasonal Hydrologic Forecasts



Nature of Science's Influence

e.g., New

Termination

e.g., Training,

Operationalisation

Appraisal

Application/

Routinisation

Invocation/ Implementation

actors.

Mobilization of

Persuasion

problem

Monitoring, Evaluation,

Assist

Decision Making

Process

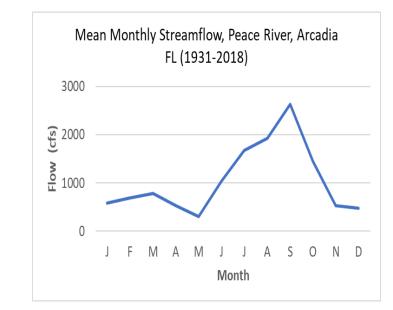
learning

Source Allocation



Motivation

- Florida has distinct wet and dry seasons
- Low capacity for "cheap" storage
- Utilities are now using multiple water sources
- How to use the right source at the right time?

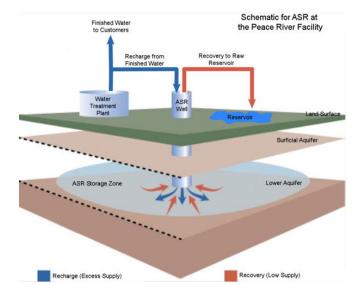




Desalination



Aquifer Storage and Recovery





Tampa Bay Water

- Current sources:
 - Groundwater (13 Wellfields)
 - Hillsborough and Alafia Rivers
 - C.W. Bill Young Reservoir
 - Desalination Plant



	2012		
Groundwater Permit pre 1998 192 MGD		45.5%	45.5%
1998 158 MGD	(12-month moving	Groundwater	
2002 121 MGD	average)	Surface Water	
2008 90 MGD		📕 Desalina	tion

1998

2008

28%

100%

61%

11%

9%

New Port

St. Petersburg

Pinellas County



Pasco

County

Hillsborough

County

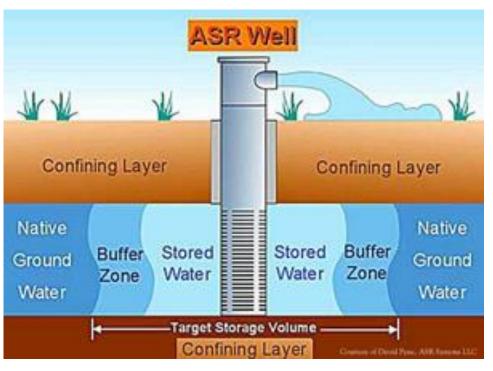


Peace River



- Peace River is their only source
 - Reservoir
 - Largest Aquifer Storage and Recovery (ASR) system East of the Mississippi
- When to start recovery?
 - Too soon: costs go up (treated twice), higher TDS
 - Too late: less reservoir water to dilute TDS, saltwater upconing?





Questions?

2010

extremes allow tools science Access Sea process Land years active wellfields unique Demands resource record Need Direction/focus stakeholder language/definition **T1SC** quantitative dialogue/communication stakeholders-engagement Realistic related participation achieve State depth acceptable problem and prodadil **CS** strengths/limitations Available lity understanding Projections continued Regulations model Cooperative une Quality i temporal mo Improved 3mo groundwater time predictions requirements use change analysis cooperation Utility fully Development lations e g next among multi-decadal agree space • clearly possible probabilistic Accurate needs ties timeframes hydrologic UL projects temperature courrent term in Understanding Rainmaker Good predictive estimates WMD 1 -1 1-18 groundwater/surface Knowledge precipitation Policies/regulations models information Understand together recognize address partnership topo come Water impact Short months demand Rainfall Future riverflow product forecasts



Florida Water and Climate Alliance www.FloridaWCA.org

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