Edisto River Basin Council

Phase 1 Progress Update

Outline

- Phase 1 Overview and Accomplishments
- RBC Feedback
- Challenges

Phase 1 Overview

- Nine Meetings
  - First meeting June 17, 2020
  - Monthly until September, then every 3 weeks
  - All virtual (Zoom), 2-3 hours
- Attendance
  - 19 to 22 members or their alternates attended each meeting
  - 10 total unexcused absences

Phase 1 Overview – Topics Covered

- River Basin Planning and Guiding Principles
- Planning Framework
- RBC Bylaws
- Water Legislation and Permitting
- Basin Hydrology and Monitoring
- Surface Water-Groundwater Connection
- Low Flow Characteristics
- FOIA Rules
- SCDHEC Water Atlas Demo
- Current Water Use
- Water Demand Projections
- Edisto Basin Climatology
- SC Drought Response Act
- Coastal Aquatic Resources
- Freshwater Aquatic Resources
- Cultural Resources
- Water Law
- Surface Water and Groundwater Models
- Environmental Flows Study

Phase 1 Overview – RBC Actions

- Selected Process Metrics
  - **Process Metrics** are benchmarks used to monitor the success or failure of the processes which led to RBC actions.

1. The process to select RBC members is well documented, transparent, and reflects broad-based outreach.
2. RBCs develop a River Basin Plan within two years of RBC formation.
3. RBC meetings adhere to timelines.
4. River Basin Plans are actionable, logical, and address or prevent challenges with a level of detail to be cost-accountable.

Phase 1 Overview – RBC Actions

- Selected Process Metrics
  - **Process Metrics** are benchmarks used to monitor the success or failure of the processes which led to RBC actions.

5. Information used and generated during the planning process is shared openly, publicly, and is easily accessible.
6. RBC meeting agendas are focused and promote efficient and productive meetings.
7. RBC members are able to effectively consider, digest, and understand technical information through presentations, discussion, and self-study.
8. Decisions are made using best available scientific, technical, legal or other objective criteria.

Phase 1 Overview – RBC Actions

- Developed Mission and Vision Statements and Goals

Mission Statement

To develop, update, and support implementation of a River Basin Plan for sustainable management of water resources in the Edisto.

Vision Statement

A resilient and sustainably managed Edisto River Basin where stakeholder and ecosystem needs are recognized, balanced and protected.

Phase 1 Overview – RBC Actions

- Developed Goals

1. Utilize the input of all stakeholders and best available science to develop and promote strategies, policies and legislative recommendations that allow sustainable use of water resources while protecting water quantity and quality in the Edisto River Basin.
2. Collaboratively work to engage the public and enhance their understanding of regional water issues and water policy.
3. Plan for sufficient water supplies to support sustainable development. Request that the State and local governments consider and encourage future development in areas with adequate water resources.
4. Ensure an adequate water supply of suitable quality to meet current and future human and ecosystem needs.
5. Encourage and recognize the value of land use practices that protect water resources.
6. Identify and promote strategies that improve resilience and minimize disruption in supply.

Phase 1 Actions and Activities Not Completed

- Field trips not taken
- Progress metrics were not selected
- Chair and Vice Chair were not selected

RBC Feedback

- **RBC was Surveyed in July and December**
  - ✓ Most RBC Members indicated they can effectively listen and participate in the virtual format.
  - ✓ A few noted internet issues or trouble voting/chatting
  - ✓ Most are OK with 3-hr meetings every three weeks
  - ✓ Most thought that the information presented in Phase 1 was appropriate and sufficient for them to move to the next phase
  - ✓ Most felt they understand how data and models will be used for planning
  - ✓ Most want to wait to elect Chair/Vice Chair
  - ✓ Concern that the RBC is not able to interact effectively or get to know members and their values and issues
  - ✓ Some concern of moving too fast and not accomplishing all required for Phase 1

Challenges

- Virtual format limits interaction
  - Some members are not able to share video
  - Limitations to full and robust discussion
  - One advantage - some appreciated not having to travel
- Selecting a Chair and Vice Chair
  - Important so that RBC can drive the process – not DNR, DHEC or Facilitator
- Providing Virtual Model Training
  - 10 members interested in learning SWAM

Baseline Water Demand Scenario Considerations

Permitted and Registered Surface Water Use Scenario

Per the Planning Framework:

Baseline Scenario – the model scenario used as a basis for comparing the relative impact of potential water management strategies on water availability. For the purposes of river basin planning, the **Baseline Scenario is the Permitted and Registered Water Use Scenario** for surface water and the Permitted Groundwater Use Scenario for groundwater.

In developing Surface Water Management Strategies to eliminate or mitigate shortages, RBCs must consider the Surface Water Shortages identified by this scenario. (pg. 52)

Performance Measures establish an objective means with which to compare scenarios to the **baseline case**. For comparing potential water management strategies, the Baseline Scenario is defined as the Permitted and Registered Surface Water Use… (pg. 66)

Potential Issues with Using the Fully Permitted and Registered Scenario as the Baseline for Comparison

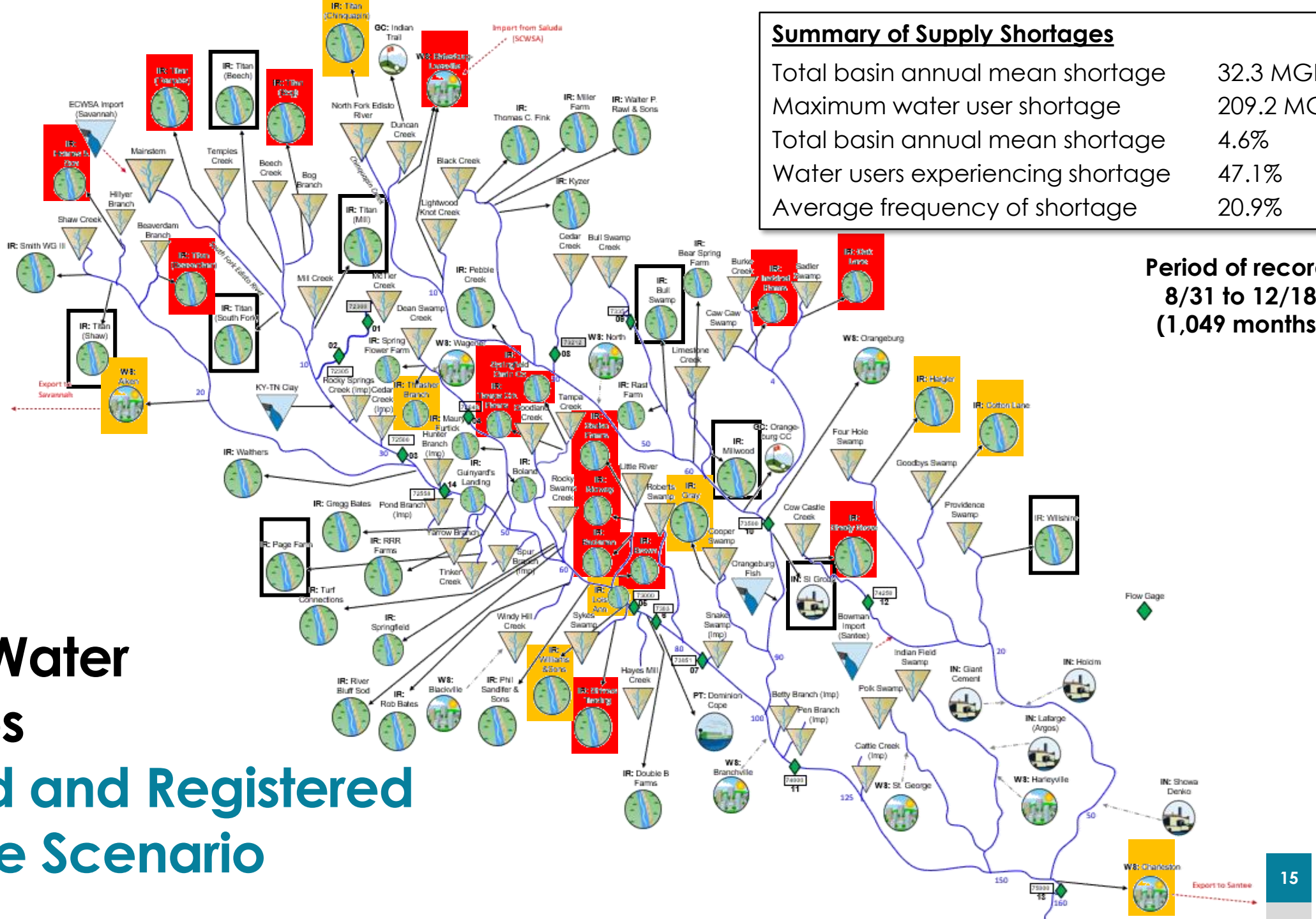
- Fully Permitted and Registered Scenario results in hydrologic conditions that are not likely to be realized
- Since it results in unrealistic hydrology, using it as a baseline for comparing scenarios that evaluate water management strategies may not provide much value
  - Could result in identification of inappropriate or unnecessary water management strategies
- Comparing **Business-As-Usual Scenario** to **Business-as-usual with Management Strategies in place** (for example) is preferred approach

Surface Water Shortages

Permitted and Registered Water Use Scenario

Frequency of Shortage

- < 10%
- 10-50%
- > 50%



Summary of Supply Shortages

Total basin annual mean shortage	32.3 MGD
Maximum water user shortage	209.2 MGD
Total basin annual mean shortage	4.6%
Water users experiencing shortage	47.1%
Average frequency of shortage	20.9%

Period of record: 8/31 to 12/18 (1,049 months)

Permitted and Registered Surface Water Use Scenario Results – South Fork Edisto Water Users

					Model Results At Permitted/Registered Demand			
Water User Name	Source Water	Location (mi)	Average Annual Demand (MGD)	Permitted/ Registered Demand (MGD)	Minimum Physically Available Flow (MGD)	Average Shortage (MGD)	Maximum Shortage (MGD)	Frequency of Shortage (%)
IR: Titan - South Fork	Mainstem	6	1.5	**4.4**	3.4	0.00	0.93	0.5%
IR: Walthers	Mainstem	37	2.8	**13.2**	36.8	0.00	0.00	0.0%
IR: Guinyard's Landing	Mainstem	46	0.0	**18.4**	32.2	0.00	0.00	0.0%
IR: Phil Sandifer & Sons	Mainstem	66	0.2	**1.6**	32.4	0.00	0.00	0.0%
IR: Lois Ann	Mainstem	68.9	0.0	**105.3**	30.8	1.21	73.94	5.1%
IR: Williams & Sons	Mainstem	69.1	0.1	**1.6**	0.00	0.08	1.63	5.3%
IR: Double B Farms	Mainstem	75	0.1	**1.1**	2.5	0.00	0.00	0.0%
WS: Charleston	Mainstem	159	38.4	**287.2**	81.8	10.23	209.18	11.3%

Surface Water Shortages

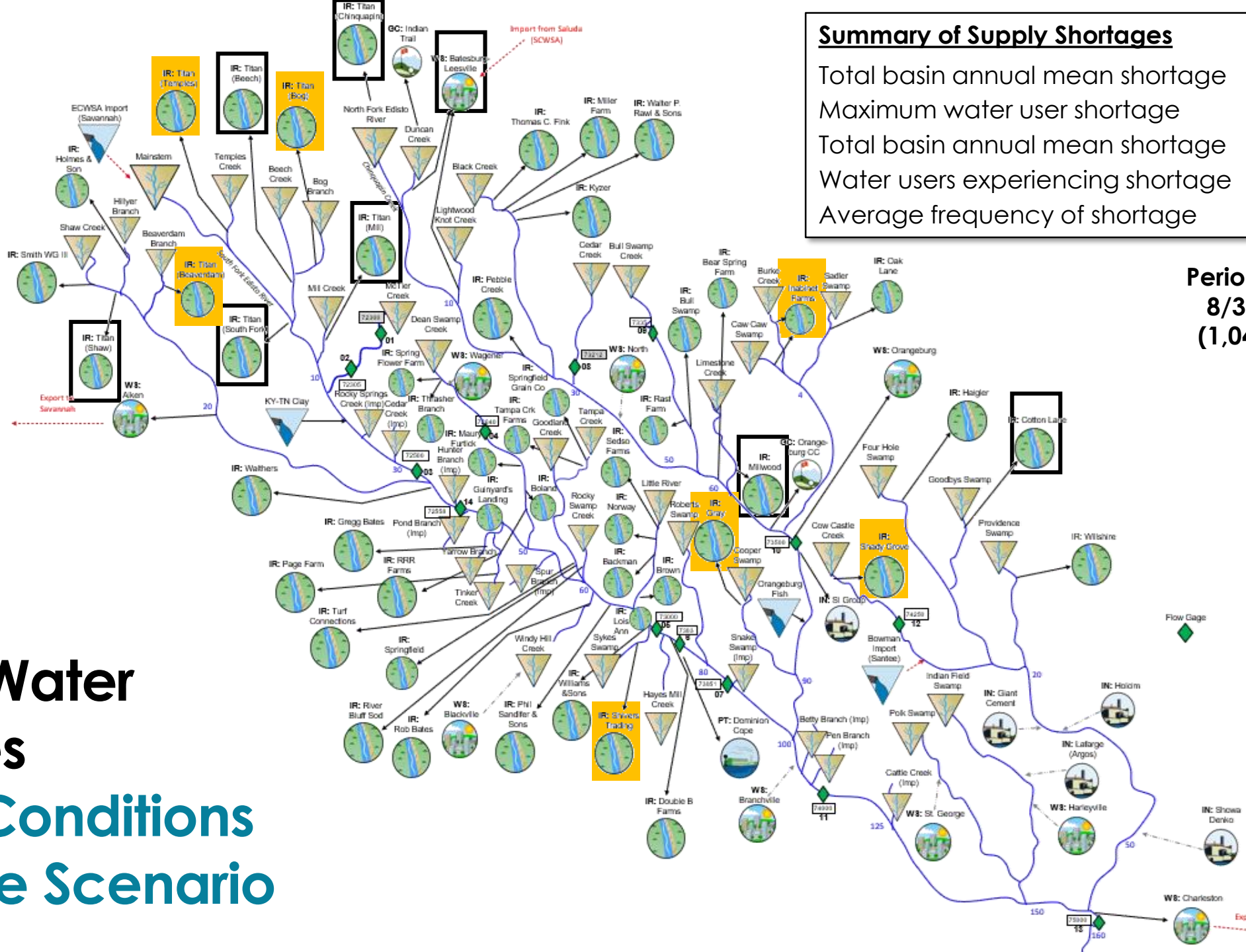
Current Conditions Water Use Scenario

Frequency of Shortage

< 10%

10-50%

> 50%



Summary of Supply Shortages

Total basin annual mean shortage	1.6 MGD
Maximum water user shortage	4.1 MGD
Total basin annual mean shortage	1.7%
Water users experiencing shortage	22.1%
Average frequency of shortage	3.4%

Period of record: 8/31 to 12/18 (1,049 months)