

Technical Working Group Update

Rainbow River

Southwest Florida
Water Management District



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Springs Scientist

Natural Systems and Restoration

Rainbow: TWG Summary

- **First Meeting: April 6, 2021**
 - Water Quality & Natural Systems Sections
- **Second Meeting: May 4, 2021**
 - Natural Systems Section

Rainbow: Current QO

Water Quality	Target
Water clarity in the river	>100 feet ¹
Nitrate concentration in the springs and river	<0.35 mg/L ²
Water Quantity	
Minimum flows for the springs and river system	TBD in 2016 ³
Natural Systems	
Coverage of desirable submerged aquatic vegetation in the river	>65% ⁴
Coverage of invasive aquatic vegetation (hydrilla/filamentous algae) in the river	<10% ⁴

¹ Based on Anastasiou 2006 and average river-wide data presented in Table 3

² FDEP 2013 – Nutrient TMDL for Rainbow Springs Group and Rainbow Springs Group Run

³ SWFWMD 2015 Minimum Flows and Levels Priority List and Schedule

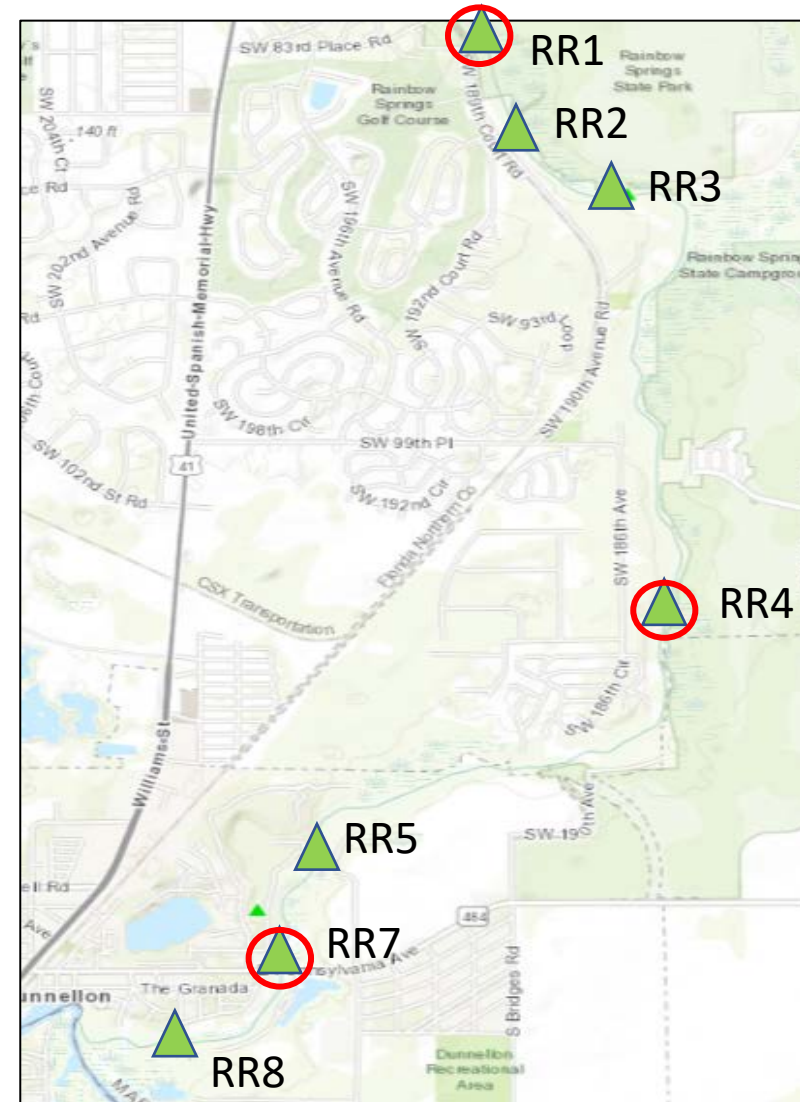
⁴ Based on data presented in Table 4 from the 2011 Rainbow River vegetation evaluation (Atkins and DCWI 2012)

Rainbow: TWG Refinement Discussion

- **Water clarity as an indicator status**
- **Presenting Quantifiable Objectives as different river portions**
 - **Water clarity**
 - **Natural systems (submerged aquatic vegetation)**

Rainbow: TWG Refinement Discussion

- Presenting Quantifiable Objectives as different river portions
 - Water clarity



Rainbow Refinements Summary

Indicators

Water clarity	Threshold
Near the headspring	1 standard deviation from historical average
Middle portion of river	
Lower portion of the river	

Quantifiable Objectives

Water quality	Target
Nitrate concentration in the springs and river	< 0.35 mg/L
Water quantity	
Minimum flows for the springs and river	> 95% natural flow
Natural systems	
Desirable submerged aquatic vegetation in the upper and lower portions of the river	> 65%
Invasive aquatic vegetation in the upper and lower portions of the river	< 10%

District staff recommendation

Action item:

Approve refinements to the quantifiable objectives as recommended by District staff.

- Move water clarity to indicator status
- Parse water clarity to headspring, middle, and lower portions
- Parse desirable and invasive submerged aquatic vegetation to upper and lower portions

TWG Order of Systems

- **Oldest to Newest:**
 - **Rainbow (Nov 2015)**
 - **Crystal River/Kings Bay (Dec 2015)**
 - **Weeki Wachee (Mar 2017)**
 - **Chassahowitzka (Aug 2017)**
 - **Homosassa (Aug 2017)**

Detailed TWG Timeline

	Apr '21	May '21	Jun '21	Jul '21	Aug '21	Sep '21	Oct '21	Nov '21	Dec '21	Jan '22	Feb '22	Mar '22
TWG	(6) Rainbow River – 1	(4) Rainbow River – 2										
SCMC		(26) Discuss item: Rainbow River		(14) Action item: Rainbow River								
SCSC				(28) Action item: Rainbow River								

Detailed TWG Timeline

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TWG	(6) Rainbow River – 1	(4) Rainbow River – 2			(17) Crystal River – 1	(16) Crystal River – 2					(TBD) Weeki Wachee – 1	(TBD) Weeki Wachee – 2
SCMC		(26) Discuss item: Rainbow River		(14) Action item: Rainbow River			(20) Discuss: Crystal River		(8) Action item: Crystal River			
SCSC				(28) Action item: Rainbow River				(10) Meeting		(26) Discuss: Crystal River		(9) Action item: Crystal River

Questions or comments?

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