

Minimum Flows and Levels and Reservations Team (MFLRT) Update

December 6, 2018

WRAT Meeting

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CFWI MFLRT Lead

MFLs Program Lead, SWFWMD



MFLRT Update Items

- MFLRT scope of work schedule/status
- MFLRT methods/results appendix for the RWSP – status
(methods were reviewed at GAT and MFLRT meetings on 11/14/2018)
- MFLs-related measuring stick options– updated
(to be briefly discussed again at GAT meetings on 12/07/2018)



MFLRT Scope of Work Schedule/Status

Task	Start	Stop	Status
M1 – Support development of a reference condition for ECFTX modeling	2/21/2018	5/31/2018	Done
M2 – Characterize the current and future status of adopted minimum flows and levels and reservations	2/21/2018	1/31/2019*	Current status characterization done
M3 – Develop a technical appendix or supporting document on the current and future status of adopted minimum flows and levels and reservations for the 2020 CFWI regional water supply plan	4/18/2018	1/31/2019*	First draft of introductory sections developed
M4 – Summarize current and future status of adopted minimum flows and levels and reservations for the 2020 CFWI regional water supply plan	4/18/2018	2/28/2019*	To be done
M5 – Summarize adopted prevention or recovery strategies for the 2020 CFWI regional water supply plan	4/18/2018	2/28/2019*	To be done
M6 – Support review of 2015 CFWI Plan “next steps”	02/21/2018	To be determined	To be done

* May change based on proposed RWSP schedule changes

MFLRT Methods/Results Appendix for the RWSP - Status

B

Minimum Flows, Minimum Water Levels, and Reservations for Regional Water Supply Planning

ACKNOWLEDGEMENTS

This appendix was produced by the Minimum Flows and Levels and Reservations Team (MFLRT) of the Central Florida Water Initiative (CFWI) through a collaborative effort between government and stakeholder representatives.

Team Leadership and Membership

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- Working on revisions to first draft of introductory sections
- Document preparation task to be completed by 1/31/2019 (contingent upon “results” availability)



MFLs-Related Measuring Stick Options: Descriptions - Updated

29 MFLs Constraints

- Adopted MFLs for 22 lakes/wetlands within the CFWI Planning Area.
- Adopted MFLs for six springs within the CFWI Planning Area.
- Adopted MFLs for one river segment within the CFWI Planning Area.

NOTE: “As available” considerations will not be available by April 2019

Up to 16 MFLs-Related Considerations

- **As available,** MFLs that may be proposed but are not yet adopted for three lakes within the CFWI Planning Area.
- **As available,** revised MFLs that may be proposed but are not yet adopted for three lakes with established MFLs within the CFWI Planning Area (reevaluation MFLs).
- **As available,** revised MFLs that may be proposed but are not yet adopted for one river segment with established MFLs within the CFWI Planning Area (reevaluation MFLs).
- **As available,** revised MFLs that may be proposed but are not yet adopted for six springs with established MFLs within the CFWI Planning Area (reevaluation MFLs).
- An adopted Saltwater Intrusion Minimum Aquifer Level (SWIMAL) for the Most Impacted Area of the Southern Water Use Caution Area (SWUCA) within the SWFMWD.
- An established target regulatory water level based on five UFA wells used to characterize ground water levels below Lake Wales Ridge Lakes where MFLs have been established and are being recovered.
- An established target regulatory water level based on five Upper Floridan aquifer (UFA) used to characterize groundwater levels below the upper Peace River where MFLs have been established and are being recovered.

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MFLs-Related Measuring Stick Options (Table B-6) - Updated

Table B-6. MFL constraints and considerations identified as potential measuring sticks for initial evaluations of regional groundwater availability in the CFWI Planning Area.

Map Grid ^a	Water Body/Regulatory Well Target Name	County	Water Management District ^b	Year Adopted ^c	Recent MFLs (or Regulatory Target) Status
MFL Constraints					
Adopted Lake and Wetland MFLs within the CFWI Planning Area					
C-4	Aurora, Lake	Polk	SWFWMD	2018	Not Met
B-3	Boggy Marsh	Lake	SJRWMD	2001	Met
C-2	Brantley, Lake	Orange	SJRWMD	2001	Met
B-2	Cherry Lake	Lake	SJRWMD	2002	Met
C-4	Crooked Lake	Polk	SWFWMD	2017	Met
B-4	Eagle Lake	Polk	SWFWMD	2017	Not Met
C-4	Easy, Lake	Polk	SWFWMD	2018	Not Met
B-2	Emma, Lake	Lake	SJRWMD	2003	Met
B-3	Eva, Lake	Polk	SWFWMD	2018	Not Met
B-2	Louisa, Lake	Lake	SJRWMD	2000	Met
B-3	Lowery, Lake	Polk	SWFWMD	2018	Met
B-2	Lucy, Lake	Lake	SJRWMD	2003	Met
B-4	McLeod, Lake	Polk	SWFWMD	2017	Not Met
D-2	Mills Lake	Seminole	SJRWMD	1998	Met
B-2	Minneola, Lake	Lake	SJRWMD	2002	Met
B-2	North Lake Aphsawa	Lake	SJRWMD	2002	Met
B-2	Pine Island Lake	Lake	SJRWMD	2001	Met
C-2	Prevatt Lake	Orange	SJRWMD	1998	Met
B-2	South Lake Aphsawa	Lake	SJRWMD	2002	Met
C-4	Starr, Lake	Polk	SWFWMD	2017	Not Met
C-1	Sylvan Lake	Seminole	SJRWMD	1998	Met
C-4	Wailes, Lake	Polk	SWFWMD	2017	Not Met
Adopted River MFLs within the CFWI Planning Area					
C-1	Wekiva River at State Road 46	Lake/Seminole	SJRWMD	1992	Met
Adopted Spring MFLs within the CFWI Planning Area					
C-2	Miami Springs ^d	Seminole	SJRWMD	1992	Met
C-2	Palm Springs ^d	Lake	SJRWMD	1992	Not Met
C-1	Rock Springs ^d	Orange	SJRWMD	1992	Met
C-2	Sanlando Springs ^d	Seminole	SJRWMD	1992	Met
C-2	Starbuck Spring ^d	Seminole	SJRWMD	1992	Met
C-2	Wekiwa Springs ^d	Orange	SJRWMD	1992	Met
Considerations					
Proposed Lake MFLs within the CFWI Planning Area					

Map Grid ^a	Water Body/Regulatory Well Target Name	County	Water Management District ^b	Year Adopted ^c	Recent MFLs (or Regulatory Target) Status
B-2	Avalon, Lake or Johns Lake ^e	Orange	SJRWMD	na	na
C-1	East Crystal Lake ^f	Seminole	SJRWMD	na	na
C-2	Hodee, Lake ^f	Seminole	SJRWMD	na	na
Proposed, Revised Lake MFLs within the CFWI Planning Area (Reevaluation MFLs)					
C-2	Prevatt Lake ^f	Orange	SJRWMD	1998	Met
B-2	South Lake Aphsawa ^f	Lake	SJRWMD	2002	Met
C-1	Sylvan Lake ^f	Seminole	SJRWMD	1998	Met
Proposed, Revised River MFLs within the CFWI Planning Area (Reevaluation MFLs)					
C-1	Wekiva River at State Road 46 ^f	Lake/Seminole	SJRWMD	1992	Met
Proposed, Revised Spring MFLs within the CFWI Planning Area (Reevaluation MFLs)					
C-2	Miami Springs ^g	Seminole	SJRWMD	1992	Met
C-2	Palm Springs ^h	Lake	SJRWMD	1992	Not Met
C-1	Rock Springs ^f	Orange	SJRWMD	1992	Met
C-2	Sanlando Springs ^h	Seminole	SJRWMD	1992	Met
C-2	Starbuck Spring ^h	Seminole	SJRWMD	1992	Met
C-2	Wekiwa Springs ^f	Orange	SJRWMD	1992	Met
Adopted Aquifer MFLs (Reevaluation MFLs)					
A-5	SWUCA Salt Water Intrusion Minimum Aquifer Level ⁱ	Hillsborough/Manatee/Sarasota	SWFWMD	2007	Not Met
Regulatory Wells					
See Figure B-3	Ridge Lakes Regulatory Wells ^j	Polk/Hardee	SWFWMD	2007	Target Met
	Upper Peace River Regulatory Wells ^j	Polk	SWFWMD	2007	Target Met

^a Map grid refers to Figure B-1, except for the Ridge Lake and Upper Peace River Regulatory Wells, which are shown in Figure B-3.

^b South Florida Water Management District (SWFWMD), St. Johns River Water Management District (SJRWMD) and Southwest Florida Water Management District (SWFWMD).

^c Date listed is effective date for the MFLs rule; in some instances, adoption may have occurred in the preceding year.

^d Although minimum spring flows were set primarily to cumulatively maintain minimum flows in the Wekiva River System, the assumption was also made that these flows would be sufficient to protect the ecology of individual springs.

^e MFLs will be developed for either Lake Avalon or Johns Lake, but not both.

^f As available.

^g Reevaluated spring MFLs may be consolidated with reevaluated Wekiwa Springs MFLs

^h Reevaluated spring MFLs may be consolidated with reevaluated Little Wekiva River MFLs

ⁱ Well sites associated with the adopted Southern Water Use Caution Area (SWUCA) Salt Water Intrusion Minimum Aquifer Level are outside of the CFWI Planning Area, but groundwater withdrawals within the CFWI Planning Area may affect water levels in the wells.

^j Some established Ridge Lakes and Upper Peace River regulatory wells associated with the Southern Water Use Caution Area (SWUCA) recovery strategy are outside of the CFWI Planning Area, but groundwater withdrawals within the CFWI Planning Area may affect water levels in the wells.

- 13 identified considerations will not be available by April 2019.

- Currently plan to “footnote” them.

- Footnote on the next slide will be added to this table.

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MFLs-Related Measuring Stick Options (Table B-6 Footnotes) - Updated

Newly planned “footnote.”

- a Map grid refers to **Figure B-1**, except for the Ridge Lake and Upper Peace River Regulatory Wells, which are shown in Figure B-3.
- b South Florida Water Management District (SFWMD), St. Johns River Water Management District (SJRWMD) and Southwest Florida Water Management District (SWFWMD).
- c Date listed is effective date for the MFLs rule; in some instances, adoption may have occurred in the preceding year.
- d Although minimum spring flows were set primarily to cumulatively maintain minimum flows in the Wekiva River System, the assumption was also made that these flows would be sufficient to protect the ecology of individual springs.
- e MFLs will be developed for either Lake Avalon or Johns lake, but not both.
- f As available.
- g Reevaluated spring MFLs may be consolidated with reevaluated Wekiwa Springs MFLs
- h Reevaluated spring MFLs may be consolidated with reevaluated Little Wekiva River MFLs
- i Well sites associated with the adopted Southern Water Use Caution Area (SWUCA) Salt Water Intrusion Minimum Aquifer Level are outside of the CFWI Planning Area, but groundwater withdrawals within the CFWI Planning Area may affect water levels in the wells.
- j Some established Ridge Lakes and Upper Peace River regulatory wells associated with the Southern Water Use Caution Area (SWUCA) recovery strategy are outside of the CFWI Planning Area, but groundwater withdrawals within the CFWI Planning Area may affect water levels in the wells.
- x Prioritized for MFLs establishment and/or reevaluation in 2019 or 2020, but any new or revised MFLs are not likely to be available to support the scheduled April 2019 estimation of groundwater availability for the CFWI Planning Area.

MFLs-Related Measuring Stick Options (New Figure)

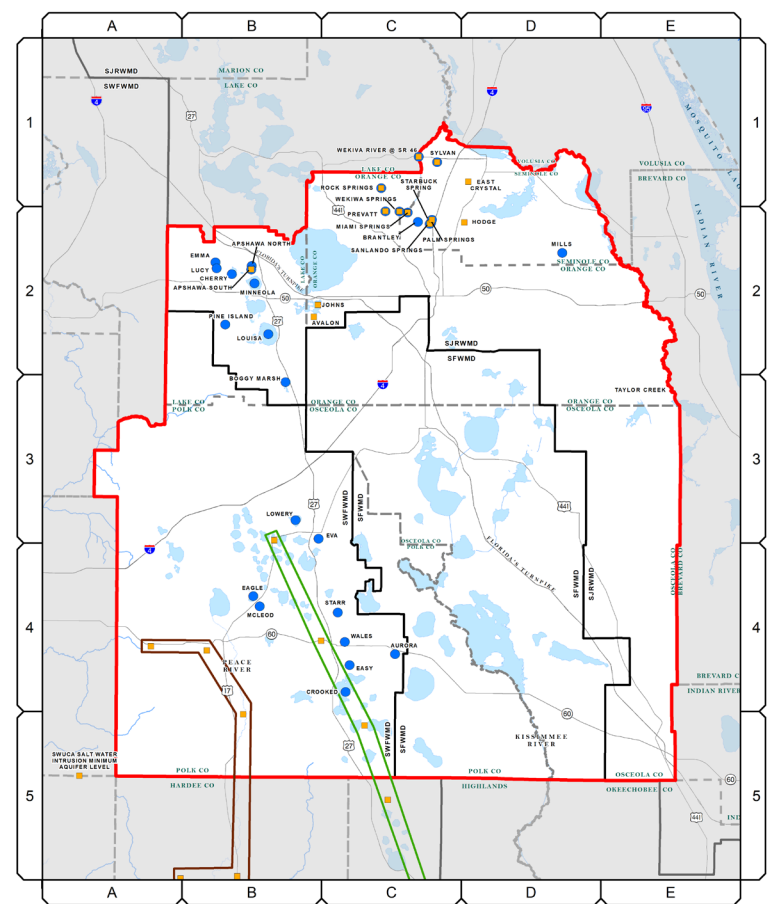
- 29 MFLs constraints
- Up to 16 MFLs-related considerations

13 “as available” considerations will not be available by April 2019

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Figure B-4. MFLs-related constraints and considerations.



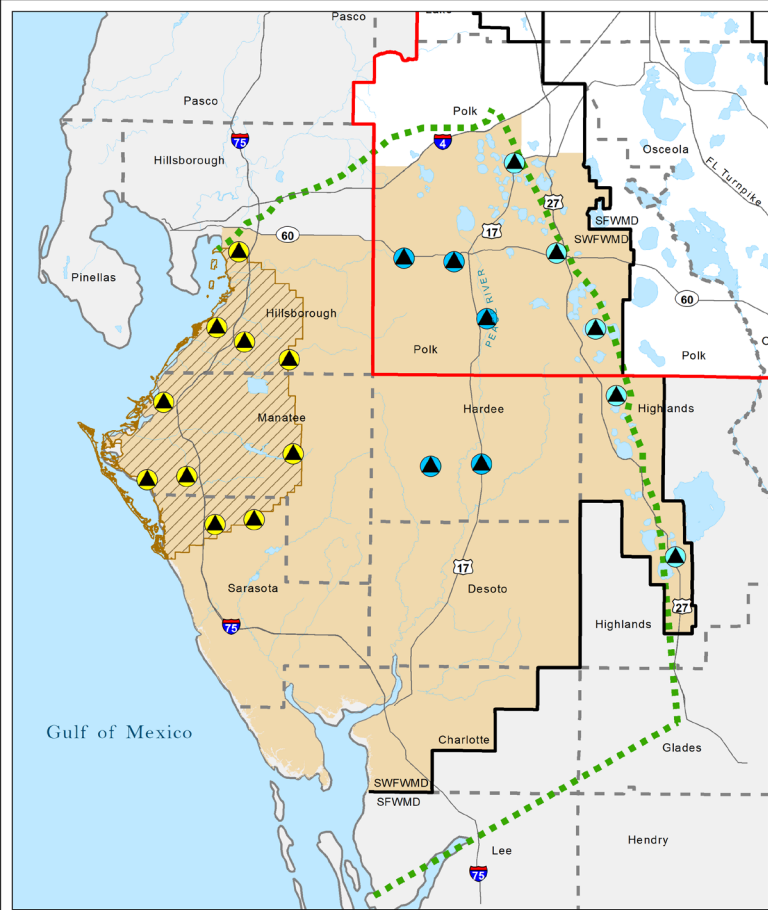
MFL Constraints and Considerations

- Constraint
- Consideration
- Central Florida Water Initiative Area
- Peace River Regulatory Wells
- Ridge Lake Regulatory Wells
- County Boundaries
- Water Management District Boundary



EXTRA SLIDES

SWUCA SWIMAL, MIA and Regulatory Wells (Figure B-3)



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Figure B-3. Southern Water Use Caution Area (SWUCA), Most Impacted Area of the SWUCA and the Southern West-Central Florida groundwater basin relative to the CFWI Planning area.

Note: Regulatory wells associated with the Saltwater Intrusion Minimum Aquifer Level (SWIMAL) adopted for the Most Impacted Area of the SWUCA, and regulatory wells in the Upper Peace River and Lake Wales Ridge area of the SWUCA established as part of the SWUCA Recovery Strategy are also shown.

- Most Impacted Area
- Southern West-Central Florida Groundwater Basin Boundary
- SWUCA SWIMAL Well
- Upper Peace River Well
- Ridge Lakes Well
- Southern Water Use Caution Area (SWUCA)
- CFWI Boundary
- County Boundaries
- Water Management District Boundaries



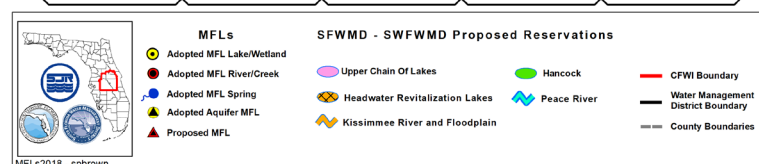
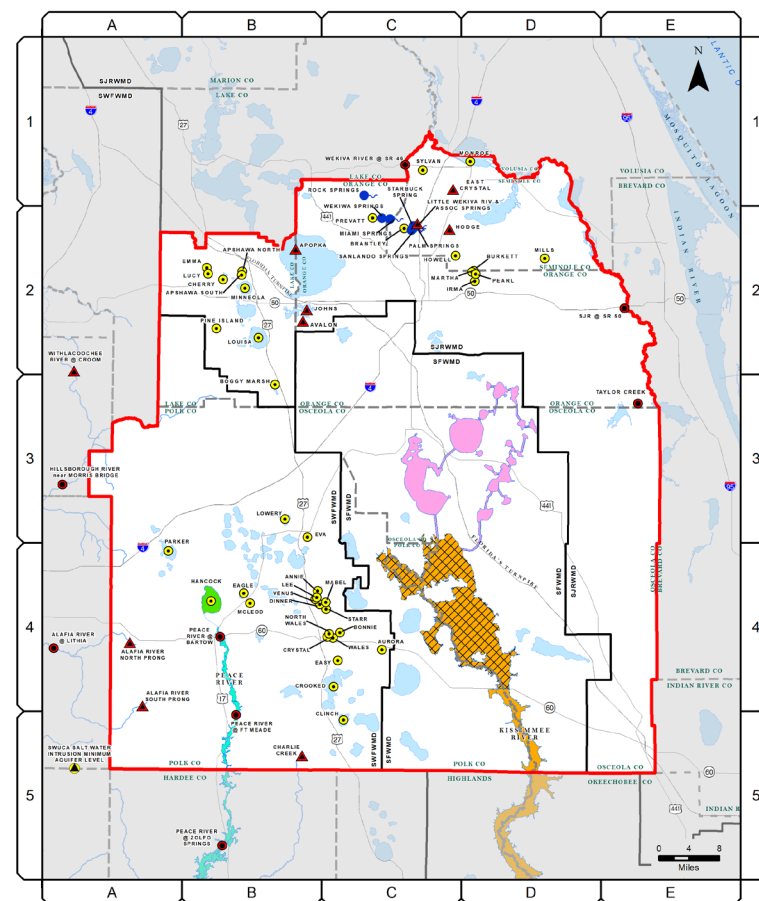
Adopted and Proposed MFLs/Reservations (Figure B-1) - Updated

- 54 adopted MFLs within or extending into the CFWI Planning Area
- 25 MFLs within or extending into the CFWI Planning Area currently prioritized/ scheduled for MFLs adoption/reevaluations
- 5 water bodies or groups of water bodies scheduled for reservation adoption

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Figure B-1. Adopted and proposed MFLs and proposed reservations within and extending into the CFWI Planning Area.



Draft RWSP Schedule

07/03/2018 DRAFT Schedule for 2020 CFWI RWSP

Task	Old Due Dates	Old Duration	New Due Dates	New Duration
Transient Model Calibration Completed	12/31/2017		November 2018 ?	
All Scenarios - Model Runs - Completed	9/30/2018		December 2018 - January 2019 ?	
Technical Methods Workshop	N/A		February ? 2019	
All Analyses Completed (This is all teams - MFLRT, EMT, GAT and includes producing maps and results for the RWSP)	10/17/2018		February 2019 - 4/30/2019	
Introduction, Progress since 2015, Demand, Conservation, Funding, WR Development, Sources Options Chapters and Appendices to RWSP	10/1/2018		2/1/2019	
All Remaining (model dependent) Chapters and Appendices to RWSP Team	8/30/2018 - 2/27/2019		5/30/2019	
Technical Writing Team Prepares 1st Internal Draft	2/27/2019 - 6/5/2019	95 Days	5/30/2019 - 8/14/2019	75 Days
1st Internal RWSP Draft Release	6/5/2019		8/15/2019	
Review by Internal Team and Comments	6/5/2019 - 8/7/2019	62 Days	8/15/2019-9/30/2019	45 Days
Technical Writing Team Prepares 2nd Internal Draft	8/7/2019 - 10/18/2019	71 Days	10/1/2019 - 12/9/2019	67 Days
2nd Internal RWSP Draft Release	10/18/2019		12/10/2019	
Review by Internal Team and Comments	10/18/2019 - 12/3/2019	45 Days	12/10/2019 - 1/10/2020	30 Days
SC Meeting to Notify Posting of External Draft of RWSP in March	N/A		January 2020	
Optional Briefing to GBs to Notify of RWSP Being Posted in March	N/A		January 2020	
Technical Writing Team Prepares External Draft	12/4/2019 - 2/3/2020	60 Days	1/10/2020 - 3/13/2020	63 Days
Present External Draft Summary to Governing Boards	March 2020		February 2020 / March 2020	
External Draft Posted to Websites	2/3/2020		3/13/2020	
Check in with SC & MOC (Start Review 3/13/2020 and have comments to us 5/15/2020)	N/A		April 2020	
Public Comment Period	2/5/2020 - 5/26/2020	111 Days	3/13/2020-5/15/2020	62 Days
Public Workshops	3/4/2020 - 5/1/2020		April 2020	
Review Comments, Answer and Update Draft RWSP	4/14/2020 - 8/25/2020	133 Days	5/15/2020-8/25/2020	103 Days
MOC Review of RWSP Updates and Changes Made	8/26/2020 - 9/16/2020	21 Days	8/26/2020 - 9/16/2020	21 Days
SC Approval	October ? 2020		October ? 2020	
Final Draft (with Comments / Responses Appendix) - Posted to Website After SC Approval	October ? 2020		October ? 2020	
Final Draft (with Comments / Responses Appendix) - Governing Board Approvals	October 2020		November 2020	

- May need to change MFLRT scope of work task dates once RWSP schedule is finalized.

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