Submitted 10/2/2023: Friends of the Wekiva River's Major Questions on the Draft MFL Report

- Page 49 – How was groundwater use within the springshed determined for 2014-2018? Why would groundwater use be highest in 2000 (245 mgd vs 100 mgd in 2018)? How was this determined (estimated?) Is this just from UFA or includes LFA? This doesn't seem consistent with the 2020 RWSP which showed groundwater use of 590 mgd within overall CFWI in 2014 vs 700 mgd in 2020 – why would groundwater use within the Wekiva springshed drop so much when it increased in the remainder of CFWI area? How could average groundwater use (2014-2018) be only 110 mgd in Wekiva springshed?
- Page 62: How can hardwood swamps in upstream segments (i.e., higher elevations) be protected by averaging the hardwood swamp elevations to each compliance point (i.e., won't swamps contiguous to upstream segments be less prone to flooding, and swamps contiguous to downstream segments be more prone?) See next to last para on page 64. How were FH elevations for each compliance point determined? Please explain last 2 paragraphs using Wekiva River locations as an example.
- Page 101: When will the Recovery Plan be developed? Will Recovery Plan be based on limiting withdrawals to the average of 2014-2018 pumping condition, or will the Recovery Plan allow for any increased pumping since 2014-2018? As acknowledged several times, pumping has increased since 2018 because of the surge in population in central FL. If there is no "freeboard" for the average 2014-2018 pumping, then will groundwater pumping be reduced to average of 2014-2018 rates? Will users be encouraged to replace withdrawals of fresh groundwater from the UFA with wells into the fresh groundwater in the LFA?
- Page 101: Define "projected reasonable beneficial uses." What are examples of how ***future*** reasonable beneficial uses would be permitted?
- Page 101: "compliance with minimum flows (Table 29)" is based on "long-term 30-year moving average." Are the minimums in Table 29 the Minimum Averages? How long must the moving 30-year average flow of Wekiwa Springs be less than 64.4 cfs before the minimum flow MFL is exceeded? Note: in early 2000's, the flow dropped below the current MFL for several years. What happens when an MFL is exceeded?
- Page 101: Are the durations and return intervals part of the MFL for MA?
- Page 101: Is the FH part of the MFL? If so, how will compliance be determined?
- Page 120: Does "adaptive management" mean that pumping greater than the 2014-2018 average flows will be allowed for some time in the Recovery Plan? Would that mean that flows & levels that do not meet the proposed MFLs will be allowed until the Recovery Plan is fully implemented? What time frame will groundwater users be given to mitigate their withdrawals from the aquifer?

Submitted 11/29/2023 by Jay Exum:

Questions for the SJRWMD related to the draft MFLs for the Wekiva River, Little Wekiva River, Wekiwa, Rock, Miami, Palm, Starbucks and Sanlando Springs

Page 25 - I understand the difficulty in determining a correlation between rainfall and discharge rates, but if detecting changes in flow rates are so difficult, is it realistic to use monitoring of flow data to determine exceedance of the MFL and/or the need for actions related to a recovery plan? In other words, if the model is the only way to project changes in groundwater over time, how can monitoring data be a reliable indicator of deviations from the objectives?

Page 27 - for now, it doesn't appear that the land use data are an important factor in determining the MFL, but, using data from 2014 doesn't make this part of the analysis very current. The SJRWMD used to update these maps every five years, and as I understood it from about a year ago, a new land cover map was on its way. Perhaps data for the Wekiva basin are complete? At the very least, it probably makes sense to use the Cooperative Land Cover database rather than the Florida Land Use Cover Classifications Systems that you refer to in the text.

Page 38 - the separate and more recent (2018) BMAP for Wekiwa and Rock Springs should also be referenced here.

Page 74 - does the WMD have any opinion as to why the event-based metrics are not met for the LWR under the no pumping condition?

Page 77 - this comment refers to numerous different pages, but it has to do with the fact that metrics indicative of a healthy aquatic system along the LWR could be met by a disproportionately higher percentage of surface water flow. A more sensitive metric would include consideration of the historical contribution of groundwater to the total flow in the LWR. Will the proposed metrics mask the diminished flow in the springs along the LWR because of greater volumes of surface water?

Page 100 – It is stated that the recommended minimum flows for Miami Springs, Palm Springs, Sanlando Springs and Starbuck Springs are equal to the site-specific average flow under the current-pumping conditions. These springs in general have the highest flow reduction from historical to current of the systems studied. Two questions; first, aren't current flow rates in most of these springs substantially below the existing MFL and likely to require relative drastic actions in the recovery plan? Second, why would Palm Springs, and to a lesser extent, Starbucks Springs have a lower MFL in this plan?

Page 120 - do you have examples of thresholds that have been tripped to require more detailed analysis after observed flow rates fell below the adopted minimum flow? Do you have examples of reductions in flows that occurred because of this process?

General Questions

Why weren’t manatee passage and foraging habitat considered in this MFL update?

What are example recovery strategies? How do they fit with CFWI Regional Water Supply conclusions?

Can FOWR be a partner in monitoring real-time data at all MFL monitoring stations?

Does the SJRWMD typically get challenges to proposed MFL's from affected industries?

Submitted via email by Jay Exum on 11/30/2023:

Don't the unique attributes, recreation values and state and federal designations warrant an impact tolerance of less than 15% for the Wekiva River Basin?

Submitted via email by Mike Cliburn on 12/6/2023:

1. Figure 32 of the draft MFL report indicates that groundwater pumping within the Wekiwa River springshed declined between around 2000 and 2018. However, the 2020 Regional Water Supply Plan for the CFWI area estimated that groundwater use increased in the Lake and Orange County portions of the CFWI study area between 2015 and 2020 (Appendix A, Tables A-12a and A-12b). So why would groundwater pumping within the Wekiwa River springshed have declined when the overall groundwater demand within the CFWI portions of Orange and Lake Counties increased? How was the 2014 – 2018 average groundwater pumping rate determined – was it based on records of individual CUP holders?

2. Does Figure 32 show groundwater pumping from only the UFA or does it include pumping from the LFA?

3. Did the MFL analysis confirm safe passage for fish during the minimum average level conditions in the Wekiva River, Little Wekiva River and Rock Springs Run?

4. The draft MFL report notes that groundwater pumping has increased since the 2014 – 2018 pumping rates. Given that there is no "freeboard" for the average 2014 - 2018 groundwater pumping rate, then will the goal of the Recovery Plan be to reduce groundwater pumping to the average of the 2014 - 2018 pumping rates?

5. Several CUP holders already have or are in the process of switching their groundwater withdrawals from the Upper Floridan Aquifer (UFA) to the Lower Floridan Aquifer (LFA). Given that the UFA is interconnected with the LFA within the CFWI area, how will the SJRWMD assure that switching withdrawals from the UFA wells to LFA will not, over time, reduce the potentiometric surface of the UFA and thereby reduce spring flows in the Wekiwa River springshed? Isn't switching withdrawals from the UFA to the LFA just "kicking the can down the road"?

6. Page 115 of the draft report states that "The recovery strategy will also provide sufficient water supply options to meet existing and projected reasonable beneficial uses." What are examples of projected reasonable beneficial uses that could be permitted, given that there is no "freeboard" at the groundwater pumping that occurred during 2014 – 2018?

7. Page 116 of the draft MFL Report states that "If the average long-term observed flow for a given water body falls below the adopted minimum flow, this will trigger a more detailed analysis." How long must the average long-term observed flow be below the adopted minimum flow before an analysis is triggered? How will the SJRWMD determine if the average long-term observed flows comply with the

adopted MFL? For example, in the early 2000's, the Wekiwa Springs flow dropped below the current MFL for several years.

8. Will the Recovery Plan allow groundwater pumping rates that exceed the 2014 - 2018 average pumping rates for some period of time while CUP holders implement the Recovery Plan? Would that mean that flows and levels might not comply with the proposed MFLs until the Recovery Plan is fully implemented? What time frame will CUP holders be given to mitigate the impact of their withdrawals from the Floridan Aquifer?

9. Can the groundwater model determine the impact of specific CUP holders on the freeboard?