May 31, 2023

VIA EMAIL
Sean.King@srwmd.org

Sean King, Ph.D., PE
Minimum Flows and Levels Office Chief
Suwannee River Water Management District
9225 CR 49
Live Oak, FL 32060

Subject: North Florida Utility Coordinating Group (NFUCG)
Comments on Draft MFL Reports for the Upper and Middle Suwannee River

Dear Sean:

On behalf of the North Florida Utilities Coordinating Group (NFUCG), we have reviewed the *Minimum Flows And Levels Assessment For The Upper Suwannee River Draft For Peer Review* (Draft USR MFL Report) prepared by HSW in December 2022 and *Minimum Flows And Levels For The Middle Suwannee River Draft* (Draft MSR MFL Report) prepared by WSP USA in December 2022. The NFUCG's member agencies represent over 1.3 million water customers in North Florida and have long been committed to providing clean, safe, affordable potable water to our communities. At the same time, the NFUCG's member agencies have and continue to make major investments to protect our shared environment and natural systems and enhance the sustainability of our water resources. We achieve those goals in part through long-term planning and coordination with regulatory agencies, such as the District, and other stakeholders.

We appreciate the effort that the District and its consultants have put toward developing this MFL and appreciate this opportunity to provide review and comment. Based on our review, we have identified some areas where we feel the analyses documented therein could be improved. Of particular note are several comments and observations related to the Reference Timeframe Flow (RTF). The RTF is calculated for each minimum flow and level (MFL) gage and is a critical component of both the MFL and the calculation of the allowable change which will be used in the status assessment for these MFLs.

These comments are provided for your evaluation as an attachment to this letter. Due to the inherently technical nature of these comments, we would be happy to meet to discuss or clarify them after the District has had a chance to review them. We also think that is important that the peer reviewers be provided these comments so that they may consider this information as they perform their important work. As the District has in the past, we would appreciate it if you provide them to the peer reviewers.

Thank you for your consideration of these comments and we look forward to continuing to work with you on this and other important issues.

Sincerely,

Richard F Hutton

Rick Hutton, PE
On Behalf of the North Florida Coordinating Group

Comments on Draft USR MFL Report and Draft MSR MFL Report

Liquid Solutions Group, LLC
May 26, 2023

1. **Document the Development of the RTF for each MFL.** As described in the Draft USR MFL Report and Draft MSR MFL Report, the Reference Timeframe Flow (RTF) is a critical component of the MFL analyses. The RTF is used to calculate the MFL flow for most of the water resources values (WRVs) documented in the reports. It is also a critical part of the calculation used to determine the allowable change in river flows before the MFL is violated.

   Appendix C of the Draft USR MFL Report and Appendix VII of the Draft MSR MFL Report generally document the process for determining the RTF. However, the example used is for the Lower Santa Fe River (LSFR) at the Ft. White gage. Therefore, while the general process may be similar, the tabulated data and figures all relate to the LSFR and not the Suwannee River. The LSFR-specific information provided in the Appendix example is quite useful. However, due to the importance of the RTF to the MFL process, the development of the RTF for each USR and MSR MFL gage location should be fully documented. As such, we request that these appendices be updated with specific information for these MFLs similar to what was done for the LSFR.

2. **Ensure Consistency Between the RTF and Future NFSEG Use.** While the current scope of the public review and peer review only includes the derivation of the MFL, it is important to recognize how the documented MFL work will be used in the future. A key next step will be the assessment of the MFL and determination of its status – namely whether it is currently violated or will be violated in the future. In order to get the most accurate result, it is important that the assessment effort be consistent with the MFL-setting effort.

   As documented in the MFL Reports, the calculation of the RTF includes the estimation of daily adjustment factors to account for the effect that groundwater pumping and recharge activities, including injection wells, have historically had on flows in the Suwannee River. This calculation requires the use of information derived from the North Florida Southeast Georgia (NFSEG) Groundwater Model. As a result, for recent periods, such as the NFSEG model calibration year of 2009, it would be expected that RTF adjustments should match direct output from the NFSEG model. However, as shown in Table 1, this is not the case.

Table 1. RTF Adjustments Compared to NFSEG-Calculated Impacts

Gage	Year	Average RTF Adjustment (cfs)	NFSEG Impact (Relative to Pumps Off) (cfs)
USR at White Springs	2009	0.7	0.2 (increase)
USR at Suwannee Springs	2009	44.2	45.8
MSR at Ellaville	2009	299.7	309.0
MSR at Branford	2009	332.0	341.7

The differences of up to approximately 10 cfs could reduce the amount of water available for withdrawal or lead to inaccurate conclusions about the status of an MFL. Furthermore, while apples-to-apples comparison is not possible, a review of impacts from the 2014-2018 NFSEG

model simulation compared to the RTF adjustments for 2014-2015 shows much larger differences between these two methods (over 90 cfs at both the Ellaville and Branford gages).

The comparison of the RTF and the NFSEG is relevant because, based on previous MFL work by the District, the MFL assessment will likely use NFSEG model simulations, and not the RTF methodology. As such, if the RTF calculation remains as documented, then the MFL status assessment methodology will be inconsistent and could lead to the significant impact differences described above. We recommend that the need for this consistency in future phases of the MFL process be recognized and addressed.

3. **Incorporate Seasonal Pumping into the RTF to Address Seasonal MFLs.** The calculation of the RTF includes a single value for the pumping and recharge adjustment for each year. Therefore, the adjustment does not account for intra-year variability in pumping and recharge. This variability is especially important in areas with a significant amount of agricultural pumping where irrigation withdrawals are timed to meet crop needs. It is also important since some of the WRVs assessed for the MFL are seasonal and only calculated for a portion of the year. In this case, an annual average or single adjustment value can lead to inaccurate results. We recommend addressing the seasonality of withdrawals in areas that affect the USR and MSR MFLs as part of the RTF calculation methodology.

4. **Update the MFL to Address Seasonality of Constraints.** As noted above, several of the WRVs assessed, including the most constraining, incorporate seasonality in that they are only calculated for a portion of the year. In addition to developing an RTF which accounts for seasonal pumping and recharge, we recommend that the MFLs be expressed to specifically address the time of year when the WRV is constraining. Such an MFL would be protective while not overly constraining on water supplies with protection in times of year that is not required. Additionally, such an MFL would potentially provide additional flexibility in developing methods to meet the MFL during critical dry conditions.

5. **Expand Scope of Peer Review to Include the MFL Status Assessment.** The calculation of the MFL and the assessment of the MFL are linked and are of equal importance. Therefore, consistency between these processes is required to ensure that valid and defensible MFLs are developed. In addition, the status evaluation methodology is critical because it is used to determine whether a prevention or recovery strategy is necessary; the spatial and quantitative contribution of water users to impacts; and the water supply projects, water resource projects, and regulatory solutions that may be contemplated for inclusion in a prevention or recovery strategy.

   We are concerned that the scope of the peer review initiated by the District excludes consideration of the status assessment process, so the peer reviewers only have the opportunity to review a portion of the MFL process without consideration of broader implications. Furthermore, we believe that aside from technical reasons, sound public policy would seek to provide maximum transparency and consistency with other MFLs in the North Florida Partnership Area which have included peer review of the status assessment.

Michael Holloway
Consulting Engineer

May 26, 2023

Sean King
MFL Office Chief
9225 CR 49
Live Oak, FL 32060

Subject: Upper and Middle Suwannee River MFL – Public Comments from Agricultural Stakeholders

Mr. King,

The Department of Environmental Protection and the Suwannee River Water Management District should reconsider setting the MFL based on fall fish passage as the limiting water resource value alone. The Reference Timeframe Flow was developed using annualized water use data, which we do not feel is the most appropriate method given the seasonality of some of the water resource values. Annualized water use is not representative of actual water use from agriculture during the months fall fish passage was evaluated. Utilizing Gulf Sturgeon passage as the limiting water resource value for the whole year is not the best use of the scientific data presented and would limit agricultural users during times when fish passage is not a concern.

Agricultural water use is seasonal, with lower water use in fall and winter. Water use in the spring and summer will have no impact on the flow of the Suwannee River in the fall. Typical weather patterns cause high irrigation in May and June before the rainy season begins. Dairies are utilizing more cooling misters during the hot summer months as well. We understand water use permits are typically issued using average daily water use and permits will likely need to be adjusted. We feel it is in the agricultural stakeholders' best interest to be given seasonal allocations instead of being limited by an evaluation of fish passage over only three months of the year. Doing so wouldn't reduce the permitted use but better reflect when the water is being used.

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Please consider utilizing more than one water resource value as needed to better align with actual water use in the basin. Fish passage from September to November could be utilized in conjunction with the next most limiting water resource value that occurs during peak agricultural water use for the Upper and Middle Suwannee Rivers and provide the same level of protection to Gulf Sturgeon fall passage.

We are still reviewing the information provided in the MFL Technical documents and their appendices and may submit more comments in the future.

Thank you for your consideration,
Michael Holloway, PE
Agricultural Engineer