

August 13, 2026



St. Johns River Water Management District

Apopka Service Center
2501 S. Binion Road
Apopka, FL 32703

Re: DRAFT Middle St. Johns River Basin Plan (2026)

Dear District Staff:

The St. Johns Riverkeeper applauds the St. Johns River Water Management District (SJRWMD) for working with stakeholders to implement solutions that restore and protect the Middle Basin of the St. Johns River (MSJRB), as outlined in the SJRWMD Middle St. Johns River Basin Plan (DRAFT PLAN). The District's ongoing monitoring, modeling, and restoration activities are essential to uphold the ecological integrity and resilience of MSJRB's springs, lakes, creeks, streams, and rivers.

Several ongoing and planned activities represent significant investments in restoring and protecting the Middle Basin's health. These efforts are particularly important for vulnerable areas of the basin, including Lake Jesup, Lake Harney, Lake Monroe, Lake George, the Econlockhatchee and Wekiva rivers, the Wekiva and Rock Springs systems, and the basin's remaining wetlands, floodplains, and spring-fed systems.

However, several gaps remain in the MSJRB's DRAFT PLAN that must be addressed to ensure SJRWMD achieves their stated and our mutual goals for restoration and water quality.

- **Update and evaluate outdated water quality targets:** The DRAFT PLAN relies on [Total Maximum Daily Loads \(TMDLs\) and restoration targets](#) established between 2006 and 2009. Given nearly two decades of population growth, development pressures, changing hydrology, and mounting nutrient pollution, the District should encourage the Florida Department of Environmental Protection (FDEP) to identify a process and timeline for determining whether these TMDLs remain appropriate. This process should be supported by continued refinement and iteration of FDEP's St. Johns River Water Quality Model, the scientific basis driving the development of TMDLs and Basin Management

Action Plans (BMAPs). If the agencies believe the existing TMDLs remain valid, the DRAFT PLAN should explain why and summarize the supporting scientific basis.

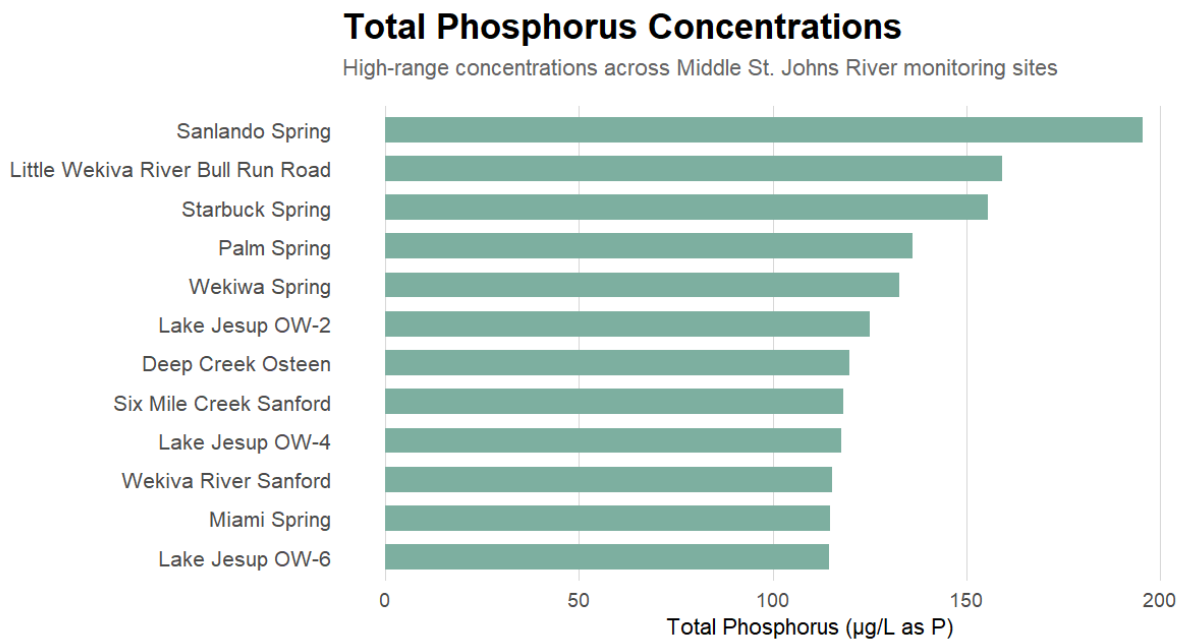
- **Establish measurable outcomes rather than relying on project inventories:** While the DRAFT PLAN provides a comprehensive overview of ongoing and proposed projects, it lacks measurable performance benchmarks that would allow concerned stakeholders to evaluate meaningful progress related to water quality and basin health. For instance, the District's Loch Haven Chain of Lakes study identified 34 potential projects, but the DRAFT PLAN does not clearly demonstrate how the expected reductions from the selected projects compare with existing nutrient loads or the reductions necessary to achieve water quality goals. The DRAFT PLAN should establish specific quantitative goals for chlorophyll-a targets, submerged aquatic vegetation recovery, acres of floodplain restored, or reductions in harmful algal bloom frequency, among other indicators. Such measurable outcomes will strengthen accountability and improve transparency, setting a precedent for future plans to report progress toward clearly defined objectives rather than describing completed activities in vague language.

- **Align nutrient-reduction projects with current nutrient loads and reduction needs:** Many of the nutrient-load estimates used to characterize the scale of the problem in the DRAFT PLAN are based on relatively old datasets. Estimated annual nutrient loads from Deep Creek and Lakes Harney, Jesup, and Monroe were modeled using data collected between 1996 and 2003, while estimates for Lake George, Silver Glen Springs, and Juniper and Salt Springs were based on data collected between 2003 and 2013. Given changes in nutrient sources and land use over the intervening decades, these estimates must be updated to accurately reflect current loading conditions.

The DRAFT PLAN also identifies several nutrient-reduction projects across the Middle Basin, but it does not adequately demonstrate whether the scale of these interventions is commensurate with the magnitude of nutrient loading or the reductions required to meet restoration milestones. For example, about 8,300 pounds of phosphorus are identified for removal from Lake George through rough fish harvesting projects—equivalent to roughly 4 metric tons. This represents a small fraction of the 236 metric tons of phosphorus loading from the Middle to the Lower Basin. Similarly, the DRAFT PLAN identifies 139 projects targeting nutrient reductions in Lake Jesup, including offline media-based projects expected to remove approximately 50,000 pounds of nitrogen and 5,000 pounds of phosphorus. Yet Lake Jesup receives approximately 353,000 pounds of watershed loading (329,100 pounds of nitrogen and 24,200 pounds of phosphorus), and 48% of loading in the lake's western region is derived from its three largest tributaries. As a result, the DRAFT PLAN acknowledges that nitrogen, phosphorus, and chlorophyll-a targets remain unmet. The Middle Basin BMAP's required-reduction milestones further illustrate the scale of the challenge, identifying

total reductions of 87,656 pounds per year of nitrogen and 17,710 pounds per year of phosphorus by 2032. The DRAFT PLAN should therefore provide a clear accounting of how the identified projects contribute toward these milestones, the remaining reductions needed, and whether the proposed projects are sufficient to achieve restoration targets.

Figure 1. High-range concentrations of phosphorus in the Middle Basin according to the SJRWMD's 2025 status and trends report. The status assessment period was five years, from Jan. 1, 2020, to Dec. 31, 2024. Water quality status is represented by the median of annual median values from the five-year assessment period.



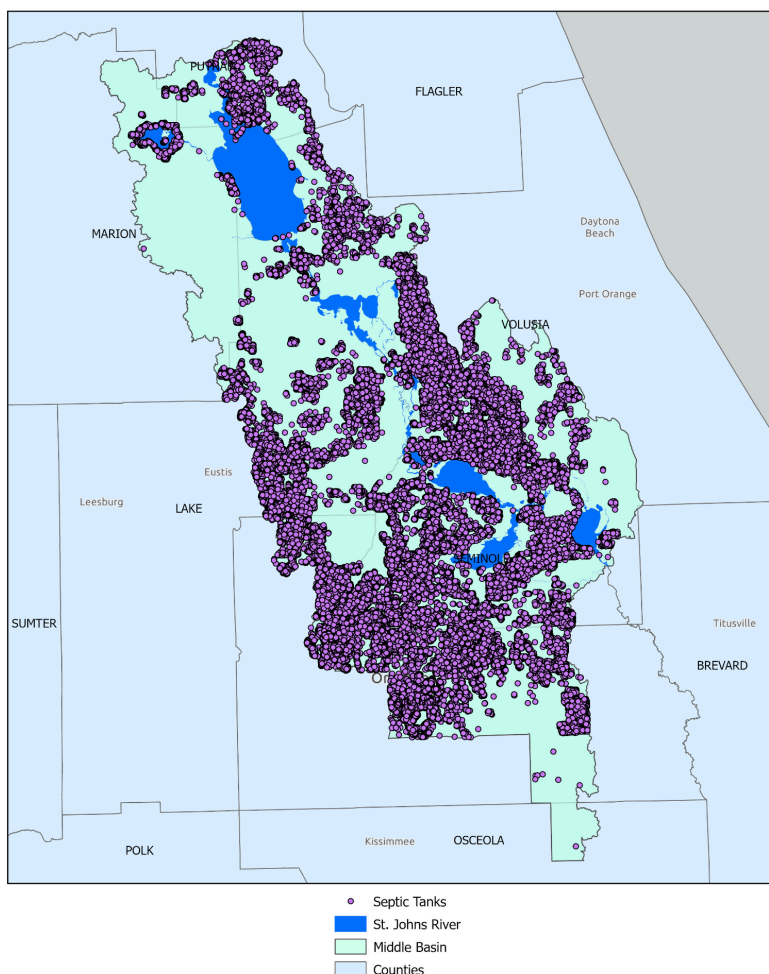
- **Address legacy/internal nutrient loading alongside source reduction in Lake Jesup:** The DRAFT PLAN prioritizes reducing nutrient loading in Lake Jesup, particularly through sediment treatment, media-based treatment technologies, and phosphorus inactivation projects. However, comparatively less attention is given to preventing continued external nutrient inputs from stormwater, wastewater infrastructure, and septic systems. Long-term restoration will require a whole-systems approach that works towards the [District's TMDL goal of 40 µg/L for Total Phosphorus \(TP\)](#), the target adopted in 2009 that would allow sufficient water clarity for growth of submerged aquatic vegetation across 25% of Lake Jesup. According to the [SJRWMD's 2025 status and trends report](#), TP

concentrations ranged from 114 to 125 µg/L in different regions of Lake Jesup (see Figure 1), far exceeding the TMDL goal. This underscores the urgent need for remediation of both historic nutrient sources and continued reduction of new nutrient inputs entering the watershed.

- **Improve stormwater, wastewater, and septic accountability:** The DRAFT PLAN identifies several stormwater treatment projects that will improve local water quality, but it doesn't go into adequate detail about a basin-wide strategy for reducing nutrient inputs from aging wastewater infrastructure and onsite sewage treatment systems. Recent wastewater spills, including an [untreated sewage discharge of about 30,000 gallons](#) to Mills Creek and Lake Monroe from Sanford North Wastewater Treatment Facility following heavy rainfall in January 2026, demonstrate the sustained vulnerability of

Figure 2. Distribution of septic systems in the Middle St. Johns River Basin. Map based on 2017 data from the Florida Department of Environmental Protection's Florida Water Management Inventory

Septic Tanks in the Middle St. Johns River Basin, Florida



infrastructure during storm events. According to the [2017 Florida Water Management Inventory project](#), the

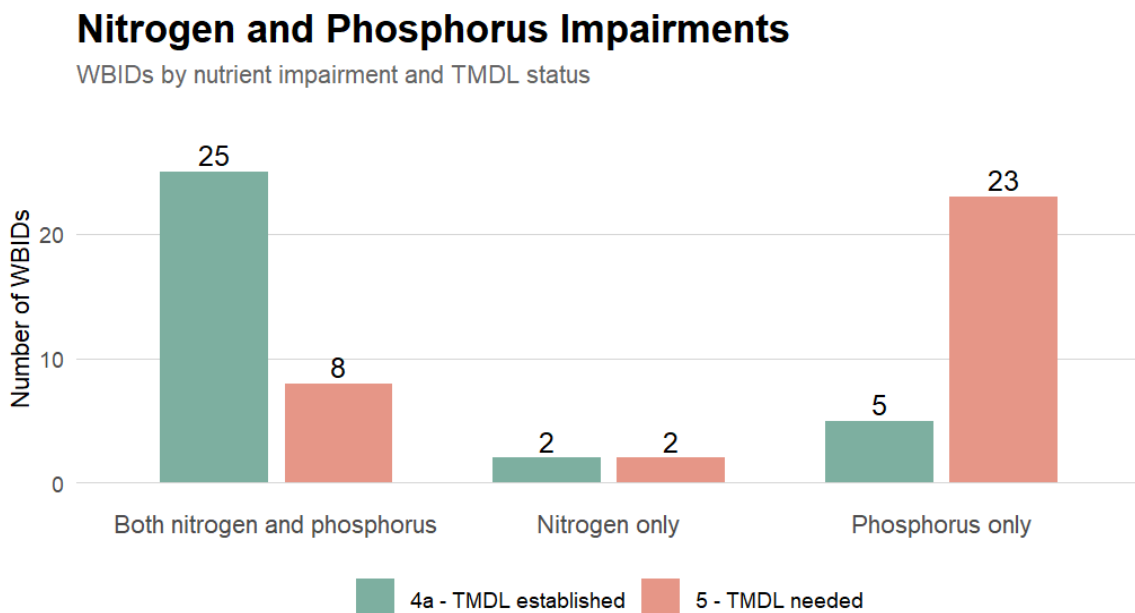
Middle Basin has 163,004 septic tanks (see Figure 2). In the Wekiwa/Rock Springs watershed, septic tanks are the biggest polluter, contributing 52% of nitrogen loads to the springshed, according to 2024 [analysis by the Florida Springs Council](#). Thus, we encourage the District to work in tandem with FDEP to prioritize stormwater retrofits, support septic-to-sewer conversions, improve wastewater infrastructure, and track implementation through milestones.

- **Strengthen discussion of harmful algal blooms:** The harmful algal bloom section primarily describes monitoring activities and response efforts.

Given that several of the Middle Basin’s key waterbodies, including Lakes [Jesup](#) and [George](#), have endured persistent HABs during the summer months, it is important that preventing future HABs remain a top priority for the District. The DRAFT PLAN would benefit from additional discussion of long-term bloom trends, ecological and recreational impacts, and how monitoring data are used to inform management decisions and restoration priorities.

- **Address upstream nutrient loading from sewage sludge:** Upstream nutrient loading is a major driver of nutrient pollution in the Middle Basin, contributing 2,321 metric tons of nutrient loading annual – 2,147 MT of nitrogen and 174 MT of phosphorus. Our analysis of the 2024-26 FDEP Biennial Assessment illustrated that 65 of the 502 total waterbodies (WBIDs) in the Middle Basin are impaired for nitrogen, phosphorus, or both (see Figure 3). The DRAFT PLAN further indicates that approximately 70% of nitrogen and phosphorus loads to Lakes Harney and Monroe originate upstream.

Figure 3. Middle Basin waterbodies identified as impaired for nitrogen and phosphorus under Florida’s Impaired Waters Rule (IWR). The map shows WBIDs within the Middle St. Johns River Basin that are listed as impaired for nitrogen and/or phosphorus based on the Florida Department of Environmental Protection’s statewide biennial assessment. Category 4a: Impaired waterbodies with an EPA-approved TMDL. Category 5: Impaired waterbodies where water quality standards are not attained and a TMDL has not yet been completed.



According to the [Middle Basin BMAP](#), about 96.4% of total nitrogen loading and 95% of total phosphorus loading to the Middle Basin’s impaired waterbodies enters from the

Upper St. Johns River, Econlockhatchee River, and Lake Jesup basins. Projects within the impaired watersheds alone will not achieve TMDLs and reductions from upstream sources are necessary to meet water-quality standards in the impaired waterbodies. The DRAFT PLAN should therefore more clearly address the contribution of upstream nutrient sources, including the dumping of sewage sludge within the Upper Basin's watershed, where applicable. Furthermore, the District should coordinate with FDEP and other responsible entities to curb loading from these nutrient sources and clearly account for these reductions in the basin's restoration strategy.

- **Integrate projected growth and land use changes:** Central Florida is the seat of rapid urban development, population growth, and suburban sprawl, with a predicted 92% population increase from 2010 to 2070, according to [analysis by 1000 Friends of Florida](#). While the DRAFT PLAN describes the watershed in rich detail, there is little discussion of the impacts of projected population growth, development pressures, land use transformations, and subsequent rises in water demand. Incorporating these trends into the planning process will help the District, along with the public, understand future management challenges and restoration priorities.
- **Establish benchmarks and performance measures for SAV monitoring.** The DRAFT PLAN recognizes the importance of SAV as an indicator of watershed health and notes the decline of SAV populations following Hurricane Irma in 2017. It describes ongoing and planned mapping efforts across the MSJRB's lakes and spring systems; however, it does not establish benchmarks for evaluating SAV recovery. The District should also establish evidence-based, time-bound benchmarks for SAV coverage, biomass, and species composition (e.g., minimum % cover required after 3 years). This, along with the District's contingency plans if criteria aren't met, would keep the public apprised of restoration progress. Such benchmarks would provide a clear basis for evaluating restoration progress and responding to emerging water-quality concerns that restrict SAV growth, especially given that 5 OFSs have been designated as impaired for nitrogen, including Volusia Blue Spring, where nitrogen concentrations have increased by more than 5% annually. The DRAFT PLAN also indicates that SAV surveys of Lakes Jesup, Harney, and Monroe occurred in 2025, and further mapping is planned for spring runs in July 2026. Making these updated data publicly available, through reports and workshops, would strengthen transparency and accountability.
- **Address projected water withdrawals' impact on spring protection goals:** The DRAFT PLAN recognizes that maintaining sufficient spring flows is essential to protecting Outstanding Florida Springs (OFSs), but provides limited discussion of how groundwater withdrawals will be managed amid rising water demands. The [Central Florida Water Initiative](#) projects that groundwater demands could exceed available supplies by approximately 96 million gallons per day by 2045. Over-extraction from the Floridan

Aquifer lowers groundwater levels and pressure, reducing spring flows, diminishing flushing, and increasing the risk of algal growth. The District should clarify how cumulative impacts from water withdrawals, alternative water supply projects, and future consumptive use permits will be evaluated to ensure groundwater use remains compatible with long-term spring flow protection goals.

- **Strengthen resilience to the impacts of extreme weather events:** While the DRAFT PLAN discusses flood protection, hydrology, and ecosystem restoration throughout, it doesn't go into detail about how extreme weather may affect the long-term health of the Middle Basin. Prolonged drought reduces wetland hydroperiods and depletes the aquifer, intense rainfall events cause stormwater runoff and flooding, and extreme heat can exacerbate algal blooms, altering the ecological balance of the watershed. [Experts estimate](#) that low-lying areas bordering lakes Jesup and Monroe will become increasingly vulnerable to flooding in the coming decades. While the flood forecasting model predicts the consequences of heavy rainfall events, forecasting alone does not constitute a comprehensive strategy. The District should establish resilience plans that account for the ecosystem's vulnerability to a warming world. This approach will help ensure restoration and management decisions remain effective under future climate conditions.

Recommendations

1. **Consult with FDEP to update outdated water-quality targets:** Review the Middle Basin's existing TMDLs and restoration targets and establish a process and timeline for determining whether they remain appropriate.
2. **Set measurable restoration goals:** Establish clear, measurable targets for water quality, SAV recovery, wetland restoration, harmful algal blooms, and other key indicators, and report progress against them.
3. **Align nutrient-reduction projects with current nutrient loads:** Update outdated nutrient-load estimates and clearly show whether proposed projects are sufficient to meet required reductions.
4. **Address both internal and external nutrient sources in Lake Jesup:** Pair sediment and in-lake treatments with continued reductions in nutrient inputs from stormwater, wastewater, and septic systems. Additionally, update Figure 7 to clearly indicate that the loading attributed to the tributaries of Lake Jesup represents watershed loading only. The current pie chart may imply that this loading includes sediment and atmospheric sources, which is misleading.

5. **Improve stormwater, wastewater, and septic management:** Alongside FDEP and local governments, prioritize and encourage infrastructure improvements, stormwater retrofits, and septic-to-sewer conversions, with clear milestones for implementation.
6. **Make harmful algal bloom prevention a restoration priority:** Expand the discussion of long-term HAB trends, impacts, and how monitoring results will guide management and restoration decisions.
7. **Address upstream nutrient sources:** Account for nutrient loading entering the Middle Basin from the dumping of sewage sludge in the Upper Basin and include those sources and reductions in the basin's restoration strategy.
8. **Plan for future growth and water demand:** Incorporate projected population growth, development, land-use changes, and increasing water demand into restoration and management decisions.
9. **Set measurable SAV recovery benchmarks:** Establish time-bound targets for SAV coverage, biomass, and species composition, and identify actions to take if recovery goals are not met.
10. **Protect spring flows and SJR surface water from increasing water withdrawals:**
Evaluate the cumulative effects of groundwater withdrawals, alternative water supplies, and future consumptive-use permits on long-term spring flows and surface water flow of the St. Johns River.
11. **Plan for extreme weather:** Incorporate drought, extreme rainfall, flooding, and heat into the Middle Basin's restoration and management strategies to ensure projects remain effective and relevant in a warming world.

At St. Johns Riverkeeper, we work to empower communities to protect their local tributaries and the river they depend on. Defending the health of our river requires an interagency, grassroots approach rooted in science-based advocacy and the fundamental right to clean water.

We believe the Final Middle St. Johns River Basin Plan should prioritize measurable outcomes, source reduction, transparent reporting, and adaptive management that anticipates rapidly emerging changes across our watershed. These approaches will help ensure that the substantial investments being made throughout the Middle Basin translate into a clean, safe, and resilient river – both now and for generations to come.

We thank the St. Johns River Water Management District and their team's commitment to improving water quality, protecting the Outstanding Florida Springs and enhancing flood protection. We appreciate the opportunity to provide feedback on additional science needed as well as critical cross-agency integration to ensure the St. Johns River meets water quality standards and remains healthy for generations to come.

For Our River.

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