

**Prevention Strategy for the
Implementation of Lake Butler Minimum Levels**

June 2020



**St. Johns River Water Management District
Division of Water Supply Planning and Assessment
Bureau of Water Supply Planning**

A. Introduction

Lake Butler is a sandhill lake located almost entirely within the city limits of Deltona in southwestern Volusia County and is included on the St. Johns River Water Management District (SJRWMD) minimum flows and minimum levels (MFLs) Priority List for adoption in 2020. The Lake Butler MFLs are currently met, however, they are projected to not be met during the 20-year planning horizon as a result of increased groundwater demand (Jennewein et. al. 2020). Pursuant to subsection 373.0421(2), *Florida Statutes* (F.S.), a prevention or recovery strategy must be approved concurrently with MFLs adoption if the water body is below, or is projected within 20 years to fall below, an adopted MFL. Consistent with the provisions for establishing and implementing MFLs provided for in section 373.0421, F.S., the *Prevention Strategy for the Implementation of Lake Butler Minimum Levels* (Lake Butler Prevention Strategy) lists projects and measures that, when implemented, ensure the Lake Butler MFLs will be met, while simultaneously providing sufficient water supplies for existing and projected reasonable beneficial uses.

B. Background

Volusia County has had a prevention/recovery strategy covering its boundary since 2013. On November 12, 2013, the SJRWMD Governing Board approved the *Prevention/Recovery Strategy for the Implementation of Minimum Flows and Levels for Volusia Blue Spring and Big, Daugharty, Helen, Hires, Indian, and Three Island Lakes* (2013 Volusia Strategy; SJRWMD 2013). As part of a phased implementation approach proposed within the 2013 Volusia Strategy, completion of five-year strategy assessments was recommended, and in 2018, SJRWMD performed its first assessment. The *2018 Five-Year Strategy Assessment for the Implementation of Minimum Flows and Levels for Volusia Blue Spring and Big, Daugharty, Helen, Hires, Indian, and Three Island Lakes* (2018 Volusia Strategy Assessment; SJRWMD 2019) identified additional projects that were necessary to ensure achievement of MFLs through the 2040 planning horizon.

Upon completion of the MFLs assessment for Lake Butler, SJRWMD reviewed the project scenario defined within the 2013 Volusia Strategy and determined that the projects contained therein would provide sufficient benefit to Lake Butler to ensure achievement of its MFLs at 2040. Furthermore, the projects identified in the 2018 Volusia Strategy Assessment, when implemented, would provide additional benefit to Lake Butler. Since Lake Butler MFLs will be achieved through the 2040 planning horizon as a result of the implementation of projects identified in the 2013 Volusia Strategy, it was not necessary to identify a new list of projects. All projects listed in the Lake Butler Prevention Strategy were extracted from the approved 2013 Volusia Strategy and the 2018 Volusia Strategy Assessment.

C. Strategy Objective, Approach, and Phased Implementation

Objective

The objective of the Lake Butler Prevention Strategy is to ensure that the Lake Butler adopted MFLs continue to be met during the next 20 years. This objective can be achieved by establishing and maintaining groundwater withdrawals at or below the sustainable groundwater yield through water conservation and water supply development projects or by mitigating the impact of groundwater withdrawals on Lake Butler through water resource development projects.

Approach

The approach outlined in the Lake Butler Prevention Strategy is intended to provide assurance that Lake Butler MFLs will be met in a way that maximizes flexibility for permittees and project partners. The basic approach includes the following:

- Identify projects and measures that provide water resource benefits sufficient to achieve the MFLs
- Identify and obtain funding resources to facilitate strategy implementation
- Continue to monitor water level trends to confirm benefits of projects and adjust projects and measures as necessary
- Implement projects and measures in a phased approach with a comprehensive review at five-year intervals

Phased Implementation

Strategy implementation will occur in five-year phases (Table 1). Actions to occur in subsequent phases will be determined during the strategy review process envisioned at the end of phases 1 and 2. Upon completion of each five-year phase, a five-year strategy assessment report will be prepared. This report may include the following information:

- Utilization of updated tools for resource assessments and analyses
- Updated freeboard calculation (based on the revised planning period)
- Updated MFL status assessment
- Project implementation status, including alternative projects, if warranted

Based on the findings of a five-year strategy assessment, the Lake Butler Prevention Strategy may be revised by the SJRWMD Governing Board. It is also possible that Lake Butler will be included in a future comprehensive update of the 2013 Volusia Strategy.

Table 1. Lake Butler Prevention Strategy Implementation

Action	Phase 1 (2020–2025)	Phase 2 (2025–2030)
Strategy approval	<ul style="list-style-type: none"> - By SJRWMD Governing Board (2020) - Initiates strategy implementation 	<ul style="list-style-type: none"> - If necessary, recommend revised strategy for Governing Board approval
Implement projects and measures	<ul style="list-style-type: none"> - Continue to work with the WVWS¹ to develop and construct strategy projects - Through the SJRWMD cost-share program, provide funding dollars, when available, to strategy projects 	<ul style="list-style-type: none"> - Continue to incentivize project development with an emphasis on water conservation and alternative water supply projects
Alignment of permitted allocations	<ul style="list-style-type: none"> - As permits modify or renew, adjust allocations where necessary to meet reasonable/ beneficial use criteria 	<ul style="list-style-type: none"> - Continue
Monitor trends in Lake Butler water levels	<ul style="list-style-type: none"> - Continue data collection efforts 	<ul style="list-style-type: none"> - Continue
Five-year strategy assessment	<ul style="list-style-type: none"> - Assess, refine, and approve revised strategy, if applicable 	<ul style="list-style-type: none"> - Assess, refine and approve revised strategy, if applicable

¹ WVWS = West Volusia Water Suppliers, which include Volusia County and the cities of DeLand, Deltona, and Orange City.

D. Stakeholder Outreach

SJRWMD has been coordinating with stakeholders for numerous years regarding MFL constraints in western Volusia County. Specifically, regular meetings with the West Volusia Water Suppliers (WVWS), consisting of Volusia County and the cities of DeLand, Deltona, and Orange City, have been helpful in identifying and implementing strategic projects in the area that benefit MFL water bodies. SJRWMD briefed interested members of the WVWS on the draft Lake Butler MFLs and Lake Butler Prevention Strategy on June 16, 2020. In addition, Lake Butler Prevention Strategy was posted for public viewing on the SJRWMD website on June 26, 2020.

E. Lake Butler MFLs

The MFLs for Lake Butler consist of seven environmental criteria with associated minimum level conditions (Jennewein et. al. 2020). These environmental criteria include a minimum infrequent high water level, minimum emergent marsh habitat reduction, large and small

wading bird forage habitat reduction, sandhill crane nesting habitat reduction, game fish spawning habitat reduction, and lake lobe connectivity (for small boat and fish passage). The MFL current status was assessed for each of the environmental criterion by comparing the minimum level condition with the current-pumping condition¹. The MFLs current status provides an Upper Floridan aquifer (UFA) freeboard value in cases where the MFL is currently met, or an UFA deficit in cases where the MFL is not currently met. For Lake Butler, all the MFLs were met under the current-pumping condition. The lake lobe connectivity MFL condition was the most constraining with 0.1 foot (ft) of UFA freeboard. Detailed information regarding the Lake Butler MFLs and current status assessment can be found in Lake Butler MFLs report (Jennewein et. al. 2020).

To determine the MFLs status at 2040, the UFA drawdown beneath Lake Butler was compared under current-pumping conditions (i.e., average withdrawals from 2014 to 2018) and 2040 projected-pumping conditions. The pumping/drawdown relationship provided in the Lake Butler hydrological analysis (Jennewein et. al. 2020) was used to estimate the drawdown associated with current-pumping conditions (1.8 ft). The Volusia groundwater flow model (Volusia model; Williams 2006) was then utilized to quantify the drawdown associated with 2040 projected-pumping conditions (2.3 ft). The increase in drawdown (0.5 ft) was applied to the current-pumping freeboard (0.1 ft) which resulted in a deficit of -0.4 ft at 2040. Because the Lake Butler MFLs will not be met under projected 2040 pumping conditions, Lake Butler is in prevention. Table 2 summarizes Lake Butler drawdown and freeboard values for the two pumping conditions.

Table 2. Lake Butler UFA Freeboard/Deficit at Current and 2040 Pumping Conditions

Pumping Scenario	UFA Drawdown from No Pumping (ft)	Lake Butler UFA Freeboard/Deficit (ft)	Withdrawals (10-mile radius ²) (mgd)
Current Pumping (2014–2018)	1.8	0.1	22.1
2040 Projections	2.3	-0.4	26.0

ft = feet; mgd = million gallons per day

¹ The current-pumping condition is defined as the reference hydrologic condition in which the lake was under the constant influence of *current groundwater pumping* for the period from 1948 to 2018. *Current groundwater pumping* in this analysis totaled average withdrawals from 2014 through 2018 (Jennewein et. al. 2020).

² Groundwater withdrawals within a 10-mile radius of Lake Butler is shown for comparative purposes only. The modeled drawdown and pumping/drawdown relationship both reflect impacts from groundwater withdrawals within the entire Volusia model domain.

F. Influence by Use Type

When determining project types to implement in a prevention or recovery strategy, it is important to develop an understanding of the water uses that have the largest impact on the water resource of concern. Only then can projects be selected that will result in the greatest benefit to the constrained water resource. An analysis was performed using the Volusia model 2040 simulation that evaluated UFA drawdown beneath Lake Butler from projected groundwater withdrawals by the various water use types in the Volusia model domain. The results indicate that UFA drawdown due to public supply withdrawals contribute 81 percent of the total impacts (Table 3). Commercial/ industrial/institutional and agricultural uses each account for 6 percent of the impacts to Lake Butler, with domestic self-supply use accounting for 5 percent. Impacts from the remaining use types account for less than 3 percent of the impacts to Lake Butler.

Table 3. 2040 Lake Butler Impact Influence by Use Type

Use Type	Percent of Total Impact ¹	Modeled Groundwater Withdrawals (mgd)
Public Supply	81%	93.2
Commercial/Industrial/Institutional	6%	3.7
Agriculture	6%	26.7
Domestic Self-supply	5%	10.3
Landscape/Recreation/Aesthetic	2%	2.5
Power Generation	<1%	0.3
TOTAL	100%	136.7

ft = feet; mgd = million gallons per day

¹ For Lake Butler, impact is defined as the UFA drawdown beneath the lake.

G. Projects and Measures that Achieve the Strategy Objective

Lake Butler is located in Volusia County, which has been covered by an approved prevention and recovery strategy since 2013. An analysis of the projects identified in the 2013 Volusia Strategy demonstrate that their implementation would provide sufficient benefit (i.e., UFA rebound) to Lake Butler to ensure MFL compliance through 2040 while meeting projected 2040 water demand. Furthermore, projects proposed in the 2018 Volusia Strategy Assessment will provide additional benefit to Lake Butler. Therefore, the Lake Butler Prevention Strategy does not propose new projects but instead summarizes the existing projects that provide benefit to Lake Butler, which were identified within the 2013 Volusia Strategy and 2018 Volusia Strategy Assessment.

Projects and measures that were identified in the 2013 Volusia Strategy include water conservation, aquifer recharge, development of alternative water supplies, and expansion of reclaimed water systems. These existing projects provide more than enough benefit to Lake Butler to ensure MFLs compliance at 2040. Projects proposed in the 2018 Volusia Strategy Assessment provide additional benefit to Lake Butler and include enhanced water conservation, increased aquifer recharge, and increased use of alternative water supplies.

2013 Strategy Project Implementation Status

Fourteen projects were identified in the 2013 Volusia Strategy, 11 of which provide measurable benefits to Lake Butler. As stated previously, implementation of the 2013 Volusia Strategy projects alone is sufficient to ensure compliance with Lake Butler MFLs at 2040. The status of each of these eleven projects is listed below.

Conservation — ONGOING

The 2013 Volusia Strategy estimated water conservation potential for public supply, domestic self-supply, and agricultural water use. Total water savings at 2035 was estimated at 5.1 million gallons per day (mgd) and was based on reductions in water use ranging from 4.6 percent (public supply in western Volusia County) to 5.9 percent (agriculture). Six conservation cost-share projects (five agricultural and one public supply) have been partially funded by SJRWMD in western Volusia County since 2016 with water savings estimated at 0.3 mgd.

West Volusia Water Suppliers (WVWS) Reclaimed Water Interconnects — COMPLETE

The reclaimed water interconnects between Volusia County and the cities of DeLand and Deltona were completed in 2016.

Sanford — Volusia County Reclaimed Water Interconnect — COMPLETE

The reclaimed water interconnect between the City of Sanford and Volusia County was completed in 2015.

Doyle Road Reclaimed Water Main Extension — COMPLETE

The Doyle Road reclaimed water main extension that connects the Deltona Lakes Water Reclamation Facility to the Alexander Avenue Resource Management Site was completed in 2015.

City of Deltona Golf Course Reclamation Water Expansion — COMPLETE

Originally anticipated to occur at the city of Deltona golf course, this project was subsequently renamed the “City of Deltona Reclaimed Pumping and Storage Expansion Project” and included the installation of a new reclaimed water pump station and a

reclaimed water ground storage tank at the Alexander Avenue Water Resources Facility. Construction was completed in 2015.

City of Deltona — Howland Blvd. Phase 3 Reclaimed Water Project — **COMPLETE**

The reclaimed water extension to Howland Boulevard in the city of Deltona, was completed in 2015.

Alexander Avenue Water Resource Facility — **IN PROGRESS**

Project 4A (formerly Alexander Avenue Water Resources Site)

This phase, completed in 2019, included storage, treatment, and pumping facilities for 4 mgd of stormwater and surface water.

Project 4B (formerly Deltona Lakes Pump Station, Transmission Main and Augmentation Facilities)

This phase of the project, which will include infrastructure to withdraw and pump surface water from Lake Monroe, is currently being designed. The city of Deltona has not yet requested authorization for the use of surface water from Lake Monroe in its consumptive use permit (CUP).

West Volusia Water Suppliers (WVWS) Aquifer Recharge Enhancement Project — **IN PROGRESS**

The WVWS Aquifer Recharge Enhancement Project was conceptualized to provide recharge with 4 mgd of reclaimed water at several sites. Currently, the city of Deltona is in the process of constructing phase I of this project, which originally included a new rapid infiltration basin at the Alexander Avenue Water Resource Facility. The project was recently redesigned as an exfiltration trench that will provide 0.6 mgd of recharge to the UFA. Phase I is expected to be completed in 2020.

DeLand Reuse Retrofit Part “B” and Wiley M. Nash Augmentation Facilities — **COMPLETE**

The retrofit of approximately 190 homes to receive reclaimed water was completed in 2016. The city of DeLand’s CUP was modified in 2017 to authorize 4 mgd of withdrawals from the St. Johns River for augmentation of its reclaimed water system. The withdrawal and treatment facilities became fully operational in 2019 upon the completion of enhancements to the river intake system and the replacement of filters at the treatment plant.

Deep Creek/Leffler Water Supply, Treatment and Transmission Facilities — **IN PROGRESS**

Aquifer performance tests (APTs) were completed at two sites within the Leffler property in 2018. Groundwater modeling of the proposed new wellfield should be completed in 2020, with wellfield operation planned to occur prior to 2024.

Farmton Water Supply and Transmission Facilities — **EXPIRED**

The Farmton Services LLC CUP authorized 4 mgd of withdrawals for bulk public water supply to the WWWS. However, an agreement between the permittee and the WWWS was never finalized and authorization of this allocation expired on December 31, 2019. In order to pursue this project in the future, Farmton Services LLC will need to reapply and receive authorization for a bulk public water supply allocation. Because this project is not currently being actively pursued, its benefits were not included in the analysis.

2018 Assessment Project Implementation Status

Six additional projects were identified in the 2018 Volusia Strategy Assessment, five of which provide a measurable benefit to Lake Butler. Although these projects are not necessary to achieve Lake Butler MFLs, their inclusion does offer flexibility to water users as additional project options. The status of each of these five projects is listed below.

Updated Water Conservation Potential — **ONGOING**

As part of the Central Springs/East Coast (CSEC) regional water supply plan (RWSP) process, updated water conservation potential for all water use types was calculated for Volusia County for 2040. The potential savings were generally greater than what was estimated in the 2013 Volusia Strategy for 2035. The maximum savings estimates were incorporated in the Volusia model to evaluate the water resource benefit from a higher level of conservation.

Volusia Blue Wetland Recharge Project — **IN PROGRESS**

This project consists of converting a sand mine into a wetland treatment and recharge basin approximately 0.5 mile from Blue Spring, which is anticipated to provide 2 to 4 mgd of recharge to the UFA. The recharge water will consist of stormwater from Mill Lake, reclaimed water produced by the WWWS, and surface water from the St. Johns River. Additional feasibility analyses, including construction and performance of a load test, are currently underway with a final project feasibility determination expected in the fall of 2020.

WWWS Groundwater Withdrawal Optimization — IN PROGRESS

The groundwater modeling simulations that evaluated the benefits of the projects in the 2013 Volusia Strategy, did not consider the optimization of groundwater withdrawals. This project involves reducing public supply withdrawals closest to Blue Spring and replacing those withdrawals with withdrawals from the proposed Deep Creek/Leffler wellfield.

WWWS Aquifer Enhancement Expansion — PROPOSED

This proposed project would increase the number of recharge sites in the primary and secondary recharge areas for Blue Spring in order to increase recharge to the Upper Floridan aquifer by 0.6 to 1.8 mgd (final recharge quantity depends on the realized capacity of the Volusia Blue Wetland Recharge Project).

Deltona Reclaimed Water Augmentation Expansion — PROPOSED

The city of Deltona is currently exploring the possibility of expanding the proposed surface water intake, transmission lines, and treatment capability associated with the Alexander Avenue Water Resource Facility from 4 mgd to 12 mgd. For the 2018 Volusia Strategy Assessment, staff considered an expansion to 8 mgd, which, once fully implemented, would provide an additional 4 mgd of surface water available to augment the reclaimed water system to replace groundwater for irrigation or recharge the Upper Floridan aquifer.

Project Benefits

The projects within the 2013 Volusia Strategy provide 0.8 ft of UFA rebound beneath Lake Butler, which is more than sufficient to ensure compliance with its MFLs at 2040 projected water demand (Table 4). Implementation of the projects within the 2018 Volusia Strategy Assessment, although not necessary to achieve Lake Butler MFLs, would provide an additional 0.1 to 0.3 ft of UFA rebound and offer flexibility to permittees in terms of project selection. Implementation of all projects within both the 2013 Volusia Strategy and 2018 Volusia Strategy Assessment would provide between 1.0 and 1.1 ft of UFA rebound beneath Lake Butler resulting in freeboard of 0.6 to 0.7 ft in 2040.

Table 4. Summary of Project Benefits¹ at Lake Butler

2040 Freeboard/Deficit (ft)	2013 Volusia Strategy Benefits (ft)	2040 Freeboard/Deficit with 2013 Strategy Projects (ft)	2018 Strategy Assessment Benefits (ft)	2040 Freeboard/Deficit with All Projects ² (ft)
-0.4	0.8	0.4	0.1 – 0.3	0.6 – 0.7

ft = feet

¹ For Lake Butler, benefit is defined as the amount of UFA rebound beneath the lake.

² Totals may not appear accurate as a result of rounding.

Actual projects and measures implemented to achieve the goals of the strategy objective may differ from those discussed in this strategy. Moreover, projects and measures listed within this and previous strategy documents do not become permit conditions by virtue of their inclusion in an approved strategy. Projects listed within this or previous strategy documents, or alternative projects that SJRWMD concurs will provide an equivalent benefit, may be developed and incorporated as CUP conditions through standard permitting procedures and in future strategy revisions, as appropriate.

H. Funding

Projects implemented as part of this and related strategies can be funded through cooperative cost-share among permittees and possibly SJRWMD through its cost-share program. The SJRWMD cost-share program is offered annually, upon budget availability, as a competitive solicitation for projects that benefit at least one SJRWMD core mission. SJRWMD provides 33 percent of construction costs for selected cost-share projects. From fiscal year (FY) 2014 through FY 2020, SJRWMD has awarded more than \$30 million in cost-share funds to cooperators in western Volusia County, with \$16.9 million awarded specifically for water supply, natural systems, and water conservation projects. Once fully implemented, these projects will provide approximately 16.9 mgd of alternative water supply and 0.3 mgd in water savings, with 0.2 mgd providing a natural systems benefit.

In addition to funding from SJRWMD, fiscal support may be available from the Florida Department of Environmental Protection (FDEP) for projects that benefit Florida springs. Because Lake Butler is located along the boundary of the Blue Spring springshed, it is possible that projects that benefit Lake Butler will also benefit Blue Spring. In these cases, cost-share dollars can increase to 50 percent of total construction cost with the addition of FDEP springs protection funds.

It is important to note that SJRWMD cost-share funding derived from ad valorem funds are intended to mitigate the water resource impact of domestic self-supply use and uses authorized under a general permit by rule. Therefore, a portion of the benefit achieved by a cost-share project may be reserved for the benefit of the water resource to offset these impacts, with the remaining benefit assigned to the entity(ies) constructing the project.

I. Regulatory Component

Ensuring the maintenance of Lake Butler and other Volusia County water body MFLs will require careful management of local and regional groundwater withdrawals. This can be achieved via the existing comprehensive system of rules, which regulate consumptive uses of water.

Consumptive Use Permit Criteria

The SJRWMD CUP permit criteria are listed in Chapter 40C-2, Florida Administrative Code (F.A.C.), and are expanded upon in the SJRWMD Applicant's Handbook: Consumptive Uses of Water. Several permit requirements will continue to provide assurance that existing and new consumptive uses are consistent with the strategy objective:

- Reasonable-beneficial water uses *must utilize the lowest quality water source that is technically, economically, and environmentally feasible*. Lower quality water sources include reclaimed water, stormwater, surface water, and other alternative water supplies.
- Reasonable-beneficial uses *must not cause harm to the water resources of the area*.
- Reasonable-beneficial uses *must be in accordance with any minimum flow or level and implementation strategy*.
- Reasonable-beneficial uses *must be in such quantity as is necessary for economic and efficient use*. To meet the requirements of this criterion, water use must be consistent with the demonstrated demand for a particular water use.

Regarding the economic and efficient use permitting criterion as it relates to demonstrated demand, the demonstrated water demand at the time of permit issuance may differ from the realized water use over the life of a CUP due to a variety of causes. Population projections for utility service areas increase and decrease over time due to fluctuations in growth rates or economic conditions. Actual water use for specific facilities can change over time due to process improvements or updated equipment. In addition, the actual water demand may be less than the projected water demand due to the implementation of conservation measures and expanded use of reclaimed water. At the time of CUP renewal, applicants must again provide a demonstration of need for the requested CUP allocations. This provides SJRWMD the opportunity to realign the CUP allocation with current water demand.

Water Shortage

In addition to permitting rules, the SJRWMD Governing Board is authorized via section 373.175, F.S., to declare a water shortage if it determines that "insufficient ground or surface water is available to meet the needs of the users or when conditions are such as to require temporary reduction in total water use within the area to protect natural resources from serious harm." Extended periods of less than average precipitation can exacerbate declining groundwater levels as there will typically be an increase in groundwater withdrawals for irrigation to offset the rainfall deficit. Water Shortage Orders provide a mechanism to reduce impacts to water resources during periods of water deficit. As necessitated by local climatic patterns and hydrologic conditions, SJRWMD may utilize Water Shortage Orders to implement water conservation and management practices to

prevent or reduce impacts to Lake Butler, or other MFL water bodies, from consumptive uses during periods of drought. Additional information regarding the SJRWMD water shortage rule can be found in 40C-21, F.A.C.

J. Project Implementation and Monitoring Progress

Project Implementation

Water conservation, aquifer recharge, alternative water supply, and reclaimed water projects originally identified in the 2013 Volusia Strategy will be incorporated as permit conditions where applicable and feasible in CUPs that impact Volusia County MFL water bodies that are in prevention or recovery. These project conditions will be incorporated as appropriate over the next 20 years as CUPs are modified or renewed. The implementation schedule for specific projects will be set forth in applicable cost-share projects and/or the CUP(s), as appropriate.

With the exception of one project that is currently not actively being pursued (Farmton), all of the projects from the 2013 Volusia Strategy have been completed or are in the feasibility determination or design phase. This level of project implementation has only been possible due to the extensive cooperation among the WVWS and its members' dedication to protecting MFL water bodies in western Volusia County.

Lake Butler's Response

The model-derived current-pumping condition water levels at Lake Butler form the baseline from which SJRWMD will determine compliance with the Lake Butler MFLs in the future. Water level monitoring at the SJRWMD Lake Butler monitoring station will continue throughout strategy implementation until such time that monitoring revisions may be necessary as determined by SJRWMD staff. Water level data will be added to the current pumping-condition water levels and frequency analyses will be performed to determine revised freeboard values for Lake Butler, which will occur no less than every five years to coincide with the Lake Butler five-year strategy assessments, or a comprehensive updated Volusia Strategy that would include all Volusia County MFL water bodies.

Reporting Requirements

As directed by subsection 373.036(7), F.S., each water management district is required to submit a consolidated water management district annual report to FDEP, which describes each water management district's managing of water resources. This report must contain, in part, the following information regarding all projects related to water quantity:

- A list of all projects identified to implement a recovery or prevention strategy
- A priority ranking for each listed project for which state funding through the water resources development work program is requested
- The estimated cost for each listed project
- The estimated completion date for each listed project
- The source and amount of financial assistance to be made available by FDEP, a water management district, or other entity for each listed project
- A quantitative estimate of each listed project's benefit to the water body identified in the recovery or prevention strategy

This report will track the status of projects listed in this and other SJRWMD strategies with annual updates reflecting new information and realized benefits added upon project completion. In order to ensure that Lake Butler MFLs will continue to be met throughout the 20-year planning horizon, interim UFA deficit values were calculated based on projected increases in Volusia County groundwater demand at five-year intervals. The interim deficit values dictate the minimum amount of UFA rebound that will be necessary through project implementation at each five-year interval (Table 5). Although it is estimated that UFA rebound will exceed the interim goals and ultimate target for Lake Butler, by achieving the minimum interim goals, Lake Butler MFLs will continue to be met throughout the entire 20-year planning horizon to 2040.

Table 5. Minimum Interim UFA Rebound Goals for Lake Butler

Total UFA Rebound at 2025 (ft)	Total UFA Rebound at 2030 (ft)	Total UFA Rebound at 2035 (ft)	Total UFA Rebound at 2040 (ft)	Target UFA Rebound (ft)
0.1	0.2	0.3	0.4	0.4

ft = feet

K. References

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