



SFWMD Implementation of Senate Bill 2516 (2021)

# PROGRESS REPORT

November 1, 2021

The Lake Okeechobee Watershed Restoration Project (LOWRP) is a component within the Comprehensive Everglades Restoration Plan (CERP) that provides water storage, water supply and wetland restoration north of Lake Okeechobee.





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Lake Okeechobee



# EXECUTIVE SUMMARY

The Florida Legislature appropriated a total of \$150 million for the Lake Okeechobee Watershed Restoration Project during the previous three legislative sessions. During the 2021 legislative session, the Florida Legislature also passed Senate Bill 2516 to further support the expeditious implementation of the Lake Okeechobee Watershed Restoration Project. The legislation provides a dedicated funding stream for the project and direction to the South Florida Water Management District (SFWMD) to expedite its planning, design, and construction.

The South Florida Water Management District began additional work starting in 2019 to advance the Aquifer Storage and Recovery (ASR) Well component of the project upon receiving the dedicated state appropriations and continues urging the U.S. Army Corps of Engineers to advance the project at the federal level. Several initial ASR well cluster sites are being implemented in three priority locations based on the locations expected to be the most productive and efficient. The South Florida Water Management District also completed a Science Plan to effectively site and construct the wells. The Science Plan provides a framework to address remaining scientific uncertainties about ASR wells and meet state and federal water quality standards.

Furthermore, the South Florida Water Management District began expeditious implementation of the Paradise Run and Kissimmee River Center wetland restoration components by beginning land acquisition necessary to begin restoration work.

The South Florida Water Management District continues expeditious implementation of the Lake Okeechobee Watershed Restoration Project in accordance with Senate Bill 2516 (2021) and will continue local, state, federal, tribal, and stakeholder engagement throughout the development of this project.

## Goals and objectives of the project include:

- Increasing water storage capacity in the watershed north of Lake Okeechobee, resulting in improved Lake Okeechobee water levels.
- Improving quantity, timing, and distribution of water to the Northern Estuaries.
- Restoring wetlands within the project area.
- Improving water supply for existing legal users.

## The Revised Recommended Plan (Figure 1) includes:

- Approximately 10 clusters of ASR wells at separate sites around Lake Okeechobee for an estimated total of 55 individual ASR wells.
- 5,900 acres of wetland restoration at project sites along the Kissimmee River (C38 Canal).

**Figure 1: Revised Recommended Plan (Alt ASR)**



### MAP LEGEND

- ASR Well Clusters
- Kissimmee River Center Wetland
- Paradise Run Wetland
- Tribal Owned Land
- Tribal Trust Lands



## BACKGROUND

The Greater Everglades Ecosystem spans from the Shingle Creek area near Orlando and continues south through Florida Bay between the mainland of Florida and the Florida Keys. This vast landscape was historically prone to rapid inundation of water and seasonal changes in water levels in its many rivers, lakes, and wetlands.

The 20th century led to significant changes in this Everglades ecosystem and the hydrology in South Florida. After severe hurricanes in 1926 and 1928 devastated communities along the coast and near Lake Okeechobee, the federal government and State of Florida supported drainage and flood control efforts to protect human lives. Construction on a dike around Lake Okeechobee began, as did changes to existing waterways connecting to the east and west coast. The first major drainage and navigation changes began in the early 1930s, but efforts were slowed significantly by the Great Depression. In 1948, the U.S. Congress created the Central and Southern Florida (C&SF) Project to build the massive flood control system in place today.

The complex water management system put in place provides flood control and navigation benefits but also had unintended negative consequences for the ecosystems. In 2000, the Comprehensive Everglades Restoration Plan (CERP) was authorized by the U.S. Congress.

This large-scale plan remains the most ambitious and largest environmental restoration program in the world and lays out a 50/50 partnership between the State of Florida and federal government.

### **CERP includes 68 individual project components across the Greater Everglades Ecosystem**

Construction of individual project components are divided between the U.S. Army Corps of Engineers and South Florida Water Management District. Each component must separately be authorized by Congress once initial planning efforts are completed. Congress generally reviews Comprehensive Everglades Restoration Plan projects for authorization in the biennial Water Resources Development Act. The next Water Resources Development Act is anticipated in late 2022.

# LAKE OKEECHOBEE WATERSHED RESTORATION PROJECT

The Comprehensive Everglades Restoration Plan envisions new water infrastructure north, south, east and west of Lake Okeechobee to achieve restoration goals and support improved operations of Lake Okeechobee. The Lake Okeechobee Watershed Restoration Project serves as a major project within the Comprehensive Everglades Restoration Plan intended to support water storage, water supply and ecosystem restoration north of Lake Okeechobee. When the Comprehensive Everglades Restoration Plan was authorized in 2000, the original Lake Okeechobee Watershed Restoration Project plan envisioned large, above ground storage, restored wetlands, and numerous ASR wells.

The U.S. Army Corps of Engineers finalized the Lake Okeechobee Watershed Restoration Project Recommended Plan (Alternative 1BWR), which defined the project's features, in August 2020. The original Recommended Plan included a 46,000 acre-foot shallow storage feature known as a wetland attenuation feature (WAF) with 25 ASR wells to support the WAF's operations; approximately 10 clusters of ASR wells at separate sites around Lake Okeechobee for an estimated total of 55 individual ASR wells; and two wetland restoration sites along the Kissimmee River (C38 Canal). The U.S. Army Corps of Engineers is in the process of modifying the Recommended Plan to remove the WAF and expand one of the wetland restoration sites in a new plan known as the Revised Recommended Plan (Alt ASR).

The South Florida Water Management District signed a Pre-Partnership Credit Agreement (PPCA, see Appendix B) for the Lake Okeechobee Watershed Restoration Project with the U.S. Army Corps of Engineers in January 2021. This PPCA preserves the State of Florida's ability to receive cost-share credit and allows the South Florida Water Management District to begin construction on the ASR wells and wetland restoration features within the Lake Okeechobee Watershed Restoration Project.

The project is not yet authorized by Congress. In order for the State of Florida to receive cost-share credit on its investments, the Lake Okeechobee Watershed Restoration Project must be submitted by the U.S. Army Corps of Engineers to Congress for review and authorization. On June 25, 2021, Executive Director Drew Bartlett requested that the U.S. Army Corps of Engineers seek Congressional approval of the Lake Okeechobee Watershed Restoration Project before passage of the 2022 Water Resources Development Act (see Appendix A). The U.S. Army Corps of Engineers subsequently issued a waiver that allows the necessary changes to be made to the project's components needed for Congressional authorization. The U.S. Army Corps of Engineers anticipates that the Lake Okeechobee Watershed Restoration Project will be submitted to Congress for review and authorization by August 2022.

The South Florida Water Management District remains committed to working with the U.S. Army Corps of Engineers to support the Lake Okeechobee Watershed Restoration Project's submittal to Congress for inclusion in the next federal Water Resources Development Act. We are also committed to continuing to engage the Legislature, tribal governments, stakeholders, and the public as the components of the Lake Okeechobee Watershed Restoration Project are implemented.



SFWMD Executive Director Drew Bartlett at the L63N Cluster Site

# AQUIFER STORAGE AND RECOVERY (ASR) WELL COMPONENT

Drill Rig at SFWMD ASR Well Site.

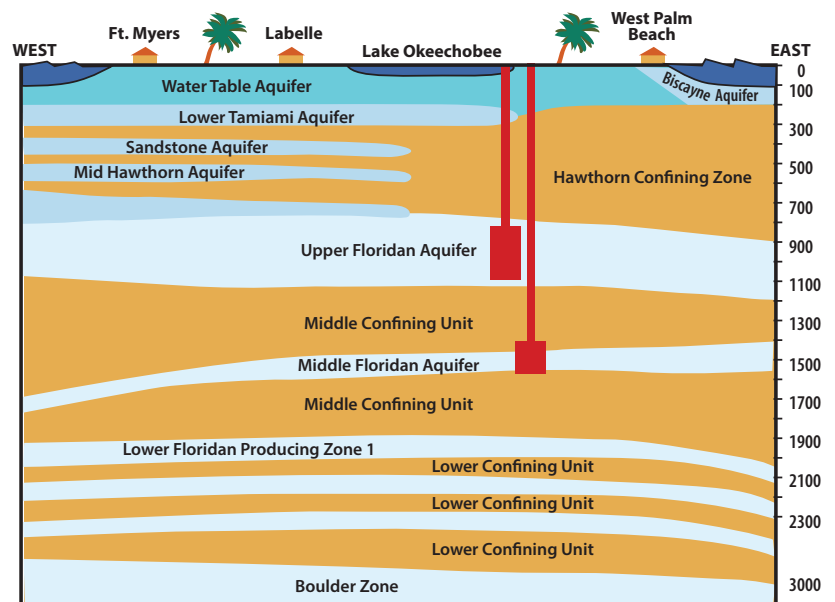
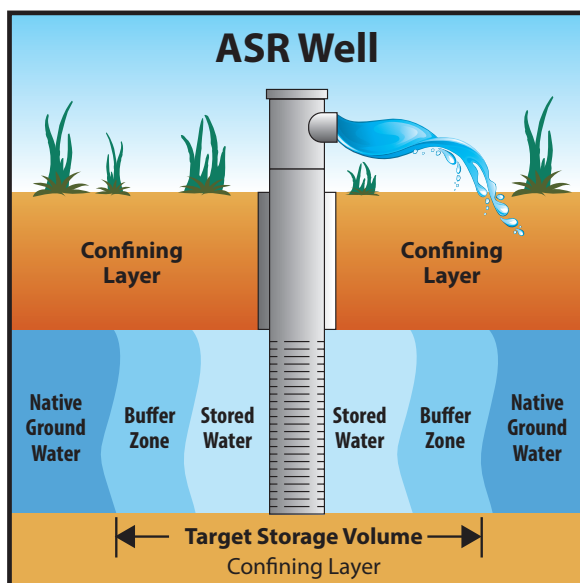


The Revised Recommended Plan (Alt ASR) for the Lake Okeechobee Watershed Restoration Project, without the wetland attenuation feature, includes an estimated total of 55 individual ASR wells to be placed at 10 separate well cluster sites around Lake Okeechobee to provide underground water storage.

ASR wells provide water storage in an underground aquifer by utilizing a well for both pumping water into (“recharge”) and out of (“recovery”) the aquifer. It allows water to be stored without the need for large tracts of land.

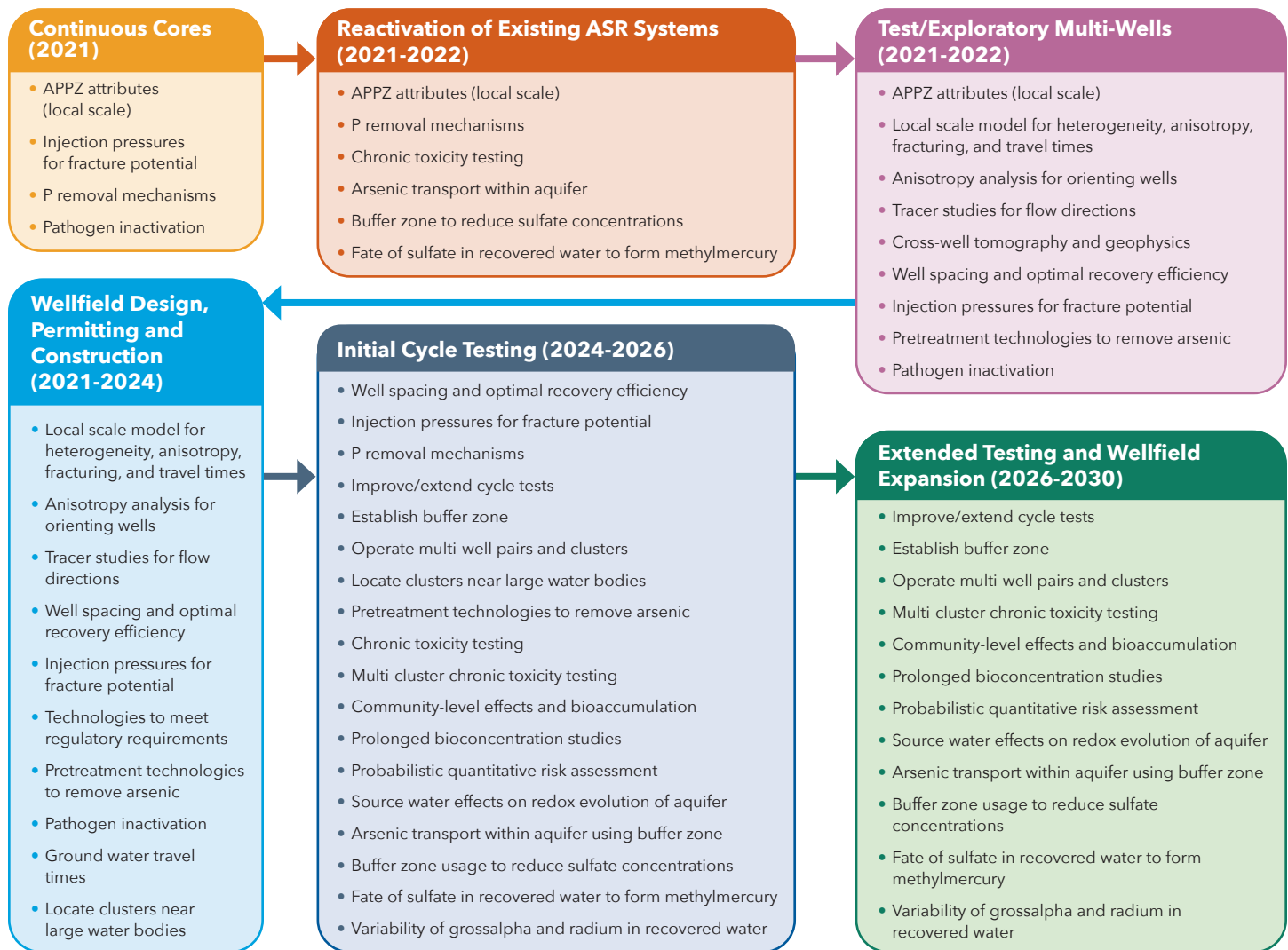
Surface water is collected during times when water is available (typically during the wet season), treated to meet applicable water quality standards, and then pumped into an aquifer. Water can be stored and subsequently recovered and distributed for purposes such as water supply for people or the environment. ASR well systems are currently used in Florida for the storage of potable drinking water, treated surface water, groundwater and reclaimed water.

Figure 2 and 3: ASR Well Diagrams Within the Aquifers



# SCIENCE PLAN AND PREVIOUS STUDIES

## ASR Phased Implementation as Recommended by the National Research Council: *Initial ASR Well Clusters*



The South Florida Water Management District developed a Science Plan to support the implementation of ASR wells in the Lake Okeechobee Watershed Restoration Project. The Science Plan was built on previous studies and reports associated with ASR well use in the Comprehensive Everglades Restoration Plan.

Prior to the implementation of the Lake Okeechobee Watershed Restoration Project, the results of the construction and testing of the ASR pilot projects along the Hillsboro Canal and Kissimmee River (KRASR) were published in the 2013 CERP ASR Pilot Project Technical Data Report and the 2015 CERP ASR Regional Study Final Report. The investigations determined that 80 ASR wells could be constructed in the vicinity of Lake Okeechobee. The CERP ASR Regional Study Final Technical Data Report was then reviewed by the National Research Council in 2015. The National Research Council concurred

with the report findings and identified some scientific uncertainties and topics for continued investigation.

There remain technical uncertainties regarding the effects of large-scale ASR implementation as envisioned in the Comprehensive Everglades Restoration Plan. To address these uncertainties, the South Florida Water Management District and U.S. Army Corps of Engineers conducted the 2015 CERP ASR Regional Study Final Report, focusing on the hydrogeology of the Floridan Aquifer System (FAS), any ecological risks posed by recovered water and the aquifer capacity for storage. In 2015 ASR Regional Study Final Technical Data Report documented these studies and included findings from numerous scientific investigations and pilot projects that were constructed to address uncertainties.





### Key findings from the 2015 ASR Regional Study Final Technical Data Report included:

- Large-capacity ASR systems appear to be feasible in South Florida.
- To date, no “fatal flaws” have been uncovered that might hinder the implementation of ASR wells identified in the Lake Okeechobee Watershed Restoration Project.
- Variability in aquifer characteristics will result in varying well performances, making it prudent to conduct a thorough exploratory and technical program review before constructing ASR wells.
- Groundwater modeling indicated the overall number of wells should be reduced from 333 wells. The model indicated approximately 130 wells in the upper and middle portions of the Floridan Aquifer System would meet the performance criteria. Of those, 80 ASR wells could be constructed around Lake Okeechobee.
- Water recovered from the ASR well pilot projects did not have any persistent acute or chronic toxicologic effects on test species such as fathead minnows, water fleas, and periphyton. However, there were a few instances where reproduction was inhibited, warranting further investigation.
- While not intended to provide water quality benefits, some reductions in phosphorus were present.
- Further implementation of ASR wells should proceed in a phased approach using a science plan.

Upon completion of the ASR Regional Study Final Technical Data Report, the National Research Council agreed with the finding that no “fatal flaws” associated with ASR wells had been discovered and agreed with the key findings and uncertainties identified by the 2015 ASR Regional Study Final Technical Data Report. The report concluded that phased implementation of ASR well construction and testing would provide opportunities to address remaining uncertainties. The intent of the South Florida Water Management District’s Science Plan is to identify potential plans of study to address the remaining uncertainties from the NRC’s 2015 review as ASR wells are constructed in a phased approach.

In 2020, the Final Integrated Project Implementation Report/Environmental Impact Statement (PIR/EIS) for the Lake Okeechobee Watershed Restoration Project was released and the original Recommended Plan included 80 ASR wells. During public review of the PIR/EIS, stakeholder concerns were raised about the remaining ASR uncertainties highlighted by the National Research Council review. During the July 2019 SFWMD Governing Board meeting, the South Florida Water Management District committed to developing a plan for scientific research in order to investigate the uncertainties as ASR wells are constructed in a phased manner. The 2021 Science Plan is the result of that commitment. The Science Plan is intended to be updated annually or as needed as the ASR program is implemented and as data, research, and additional science become available. The Science Plan will be reviewed annually by the ASR peer-review panel which consists of eminent Florida scientists and scholars, to be kept apprised of the investigations’ findings and to assist in developing future studies that ensure ASR technology is implemented in a science-led, phased approach. The inaugural version of the Science Plan and information about previous studies can be found at [SFWMD.gov/ASR](https://www.sfwmd.gov/ASR).

# TESTING AND CONSTRUCTION OF ASR WELLS

Based on geological data and water availability, three initial sites were selected to begin ASR well implementation for the Lake Okeechobee Watershed Restoration Project. Conditions in the aquifers vary within the defined Lake Okeechobee Watershed Restoration Project's footprint, and the South Florida Water Management District prioritized well cluster sites on readily-available areas expected to be most productive. Implementation of several well clusters are being designed, built, and tested at the L63N, C38N and C38S sites with the funding provided by the Legislature.

Prior to initial permitting and construction, the proposed ASR wells and well cluster locations require site, geologic, hydrologic, and lithologic evaluations to determine site suitability. Based on site analyses and review, additional efforts may be necessary to address site-specific conditions such as protected species and wetlands. The South Florida Water Management District will comply with all permit conditions associated with the siting of project features, and some site-specific conditions may take a year or more to address.

In order to build a test/exploratory well, a Florida Department of Environmental Protection (DEP) Underground Injection Control (UIC) permit is required for each test well and/or well cluster. The permit requires site and well cluster specific information such as the site location, geology, lithology, hydrogeology, monitoring plan, and impacts to adjacent users. Ninety percent substantially complete design of the well is needed in order to submit the permit application. In order to protect groundwater resources, the UIC permit review process is extensive and a UIC permit may take several months to issue in order to meet stringent safety requirements. Once the permit is received, it takes six months to one year to construct the test wells, and three months to perform the pump tests. Based on the test results, the design and spacing of operational ASR wells is determined.

An operational UIC permit for the well cluster will be required to begin using the ASR wells for water storage. An operational UIC permit cannot be obtained until a water treatment facility is constructed, which takes two to three years to design, permit and build. Construction and operation of an ASR well cluster also requires additional state and federal permits such as a Comprehensive Everglades Restoration Plan

Regulation Act (CERPRA) permit, Section 404 (federal permit for works on jurisdictional waters), Section 408 (for works on federal projects or levees), consumptive water use permit (CUP), and a National Pollutant Discharge Elimination System (NPDES) permit.

The South Florida Water Management District and the Department of Environmental Protection collaborated to create a plan and increase permit efficiency. UIC test/exploratory well permits have been obtained for the C38N and C38S well cluster sites. A UIC operational permit application for the existing Kissimmee River Aquifer Storage and Recovery Pilot project well was submitted to the Department of Environmental Protection. Additionally, a master CERPRa permit application was submitted which contains program level information as an effort to expedite future CERPRa construction permits for each facility.

For the Lake Okeechobee Watershed Restoration Project, the depth of the ASR wells is determined during exploratory drilling by various scientific and technical reviews to evaluate feasibility, including continuous core analyses, packer tests and pump tests. The approximate depths of the ASR wells within the Lake Okeechobee Watershed Restoration Project are shown in the red rectangles in Figure 3, page 7, which will be installed in both the Upper Floridan Aquifer and Avon Park Permeable Zone also known as the Middle Floridan Aquifer.

Prior to the injection into an aquifer by an ASR well, surface water must be treated by a water treatment facility to meet appropriate water quality standards. Chapter 62-528, F.A.C., requires that water being recharged through an ASR well into an Underground Source of Drinking Water (USDW) must meet drinking water standards (DWS). For the Lake Okeechobee Watershed Restoration Project, a water treatment facility must be built and operated at each of the ASR well cluster sites.

Many treatment options were considered, and a shortlist of technologies was created. The shortlisted technologies were arranged into five potential treatment options. Each option underwent consideration of treatment performance and evaluation in terms of economic and non-economic criteria. The shortlist was further refined to two of the preferred treatment options to be examined through "proof of concept" testing to take place at the existing Kissimmee River Aquifer Storage and Recovery pilot project location.



The two treatment options now being tested include:

1. Coagulation followed by media filtration coupled with ultraviolet (UV) disinfection.
2. Coagulation followed by microfiltration/ ultrafiltration using membranes.

Information gained from the current proof of concept testing will be used to identify a final treatment approach for the full-scale treatment systems necessary for the use of ASR well clusters. At that point, estimated costs for the operations and maintenance of each treatment facility will be available. Each of the treatment facilities are anticipated to be similar in size to a drinking water plant for a mid-sized city in Florida.

### Schedule

Factors that could primarily influence the project sequencing and schedule include funding availability and permitting requirements. Many of the near-term phases can be described and planned with some certainty. Implementation to date is based primarily on funding already appropriated coupled with the recurring funding made available by Senate Bill 2516 (2021). Activities in later years are less clearly defined and will be adjusted in accordance with the Science Plan and as additional funding becomes more certain. Figure 4 below shows the costs and schedule associated with the expeditious implementation of three well clusters. Figure 4 also demonstrates that the funding provided by Senate Bill 2516 (2021) would not be enough to complete all feasible ASR wells within the Lake Okeechobee Watershed Restoration Project prior to March 30, 2027, the deadline required by the bill.

Figure 4: Potential ASR Well Implementation Schedule (3 Well Clusters)

LOWRP ASR Program Implementation	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
<b>L63N Well Cluster Site</b>											
Well Construction (5 wells + 1 existing APPZ well)	SITING	CORE/DATA	TEST WELLS 1&2	TEST WELLS 3&4	TEST WELLS 5						
Treatment Plant				DESIGN, PERMITTING & CONSTRUCTION							
Testing and Operations							CYCLE TESTING			O&M	
Science Plan Tasks			SCIENCE PLAN								
<b>C38N Well Cluster Site</b>											
Well Construction (10 wells)	SITING	TEST WELLS 1&2	TEST WELLS 3&4	TEST WELLS 5&6	TEST WELLS 7&8	TEST WELLS 9&10					
Treatment Plant			DESIGN, PERMITTING & CONSTRUCTION								
Testing and Operations							CYCLE TESTING			O&M	
Science Plan Tasks			SCIENCE PLAN								
<b>C38S Well Cluster Site</b>											
Continuous Core		CORE/DATA	CORE/DATA								
Well Construction (10 wells)	SITING	TEST WELLS 1&2	TEST WELLS 3&4	TEST WELLS 5&6	TEST WELLS 7&8	TEST WELLS 9&10					
Treatment Plant			DESIGN, PERMITTING & CONSTRUCTION								
Testing and Operations							CYCLE TESTING			O&M	
Science Plan Tasks			SCIENCE PLAN								
Existing KRASR Well Refurbishment			DESIGN & PERMITTING			CYCLE TESTING			O&M		
Science Plan Tasks for Existing KRASR			SCIENCE PLAN								
<b>C59 Well Cluster Site</b>											
Well Construction (4-10 wells)	SITING		DATA								
Science Plan Tasks			SCIENCE PLAN								
<b>L63S Well Cluster Site</b>											
Well Construction (4-10 wells)	SITING		CORE/DATA								
Science Plan Tasks			SCIENCE PLAN								
<b>Taylor Creek Well Cluster Site</b>											
Well Construction (4-10 wells)		SITING	DATA								
Science Plan Tasks			SCIENCE PLAN								
<b>C40 Well Cluster Site</b>											
Well Construction (4-10 wells)		SITING	CORE/DATA								
Science Plan Tasks			SCIENCE PLAN								
<b>C41 Well Cluster Site</b>											
Well Construction (4-10 wells)		SITING	CORE/DATA								
Science Plan Tasks			SCIENCE PLAN								
<b>C43 Well Cluster Site</b>											
Well Construction (4-10 wells)			DATA								
Science Plan Tasks			SCIENCE PLAN								
<b>C44 Well Cluster Site</b>											
Well Cluster (4-10 wells)			DATA								
Science Plan Tasks			SCIENCE PLAN								
<b>Summary Phases</b>											
							SITING EVALUATION				
							CORE & DATA COLLECTION				
							TEST/EXPLORATORY WELLS				
							DESIGN, PERMITTING & CONSTRUCTION				
							CYCLE TESTING				
							OPERATION & MAINTENANCE (O&M)				
							SCIENCE PLAN				
<b>Estimated Costs:</b>	\$2,111,128	\$24,479,328	\$97,628,122	\$115,445,738	\$94,675,944	\$93,365,000	\$42,760,000	\$6,450,000	\$5,400,000	\$5,400,000	\$5,400,000
	<b>TOTAL: \$493,115,260</b>										

# WETLAND RESTORATION COMPONENT

The Lake Okeechobee Watershed Restoration Project's Revised Recommended Plan (Alt ASR) includes two separate wetland restoration projects along the Kissimmee River (C38 Canal) located at Paradise Run and Kissimmee River Center (see Figure 1, Page 4). The project intends to restore approximately 5,900 acres of wetlands and will provide both environmental and recreation benefits.

## Land Acquisition Activities Necessary For Wetland Restoration

The South Florida Water Management District has worked closely with the U.S. Army Corps of Engineers to define the footprint for both the Paradise Run wetland restoration project and the Kissimmee River Center wetland restoration project of the Lake Okeechobee Watershed Restoration Project. The footprint of each project site is based on the existing topography and elevation with consideration to regional impacts. The resulting project boundaries will allow restoration of historically impacted wetlands within two portions of the original Kissimmee River. Ownership research of parcels within the footprints was

prepared by the South Florida Water Management District to determine the status of the privately owned lands to assist in accurate mapping, appraisal, environmental and cultural resource assessments. Mapping of both project boundaries was completed by the South Florida Water Management District and reviewed and accepted by the U.S. Army Corps of Engineers.

The South Florida Water Management District has met with local landowners throughout the development of the wetland restoration component to develop the project footprint and will continue to engage local landowners and other stakeholders through the land acquisition process.

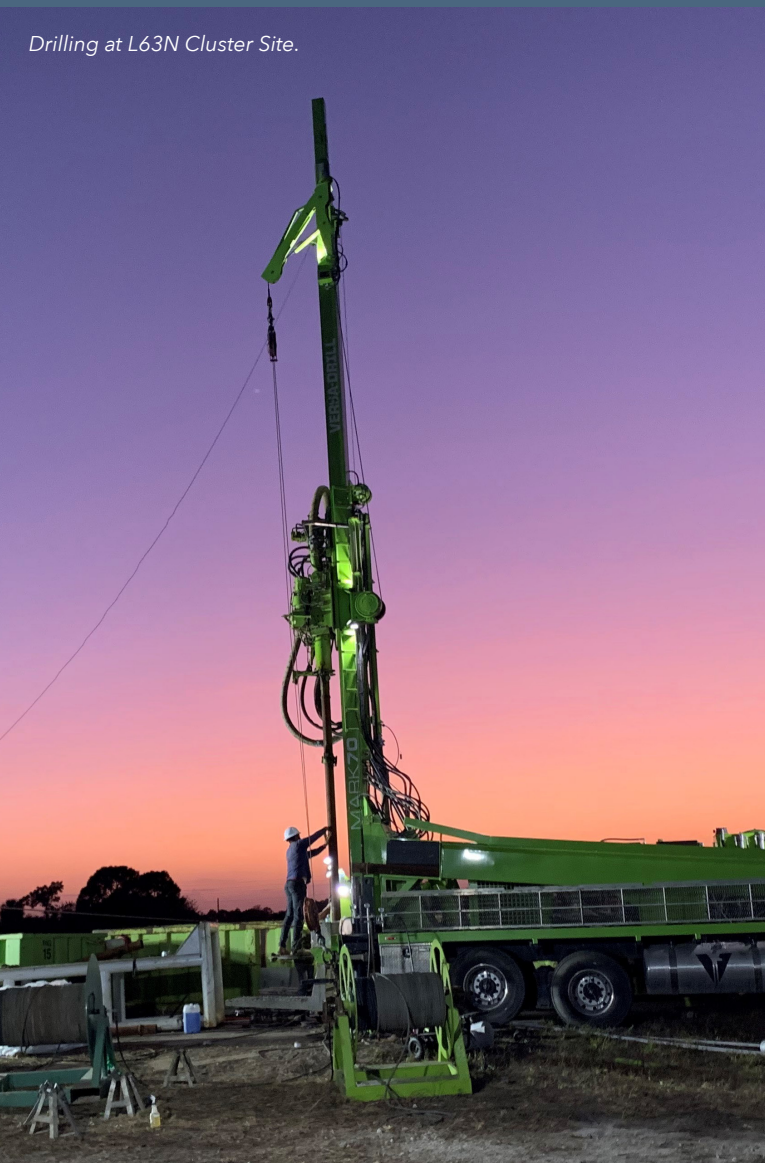
The South Florida Water Management District is currently conducting value estimates of the privately-owned lands within the respective wetland footprints. In addition, the South Florida Water Management District is conducting the necessary environmental assessments to support restoration permitting and review of cultural resources (if necessary). All land estimates and assessments are expected to be completed this year.

Lake Okeechobee



# CONCLUSION

Drilling at L63N Cluster Site.



The South Florida Water Management District continues to implement Comprehensive Everglades Restoration Plan components to support the restoration of the Florida Everglades and improve the quantity, quality, timing and distribution of water throughout the Greater Everglades Ecosystem.

Unprecedented support by the Florida Legislature and Governor DeSantis has led to dozens of Everglades restoration projects either breaking ground, achieving significant milestones, or reaching full completion.

The South Florida Water Management District will continue to expeditiously implement the Lake Okeechobee Watershed Restoration Project in accordance with its Science Plan to ensure the project's objectives are met.

## Recent accomplishments include:

- ✓ Completed the Kissimmee River Restoration Project construction in Okeechobee County.
- ✓ Completed the C44 Reservoir and Stormwater Treatment Area in Martin County and continued advancement of other Indian River Lagoon-South project components in Martin and St. Lucie Counties.
- ✓ Initiated the final phase of construction on the Caloosahatchee (C43) Reservoir in Hendry County.
- ✓ Began construction ahead of schedule on the EAA Reservoir Project's Stormwater Treatment Area in Palm Beach County.
- ✓ Completed an ASR Science Plan and began drilling exploratory and test wells for the Lake Okeechobee Watershed Restoration Project in Okeechobee and Glades Counties.
- ✓ Completed the S333N Structure in Miami-Dade County.
- ✓ Completed roadbed removal of the Old Tamiami Trail in Miami-Dade County.
- ✓ Broke ground on the 8.5 Square Mile Area Seepage Wall in Miami-Dade County.
- ✓ Completed the S191A Pump Station in Okeechobee County to support water quality improvements for Lake Okeechobee and the operations of the Lakeside Ranch Stormwater Treatment Area.
- ✓ Began operation of the first pump station of the Picayune Stand Restoration Project in Collier County.
- ✓ Continued Restoration Strategies and other Stormwater Treatment Area enhancement projects in Palm Beach County to support clean water for the Everglades.
- ✓ Completed several Dispersed Water Management projects in various South Florida counties.
- ✓ Began planning, design and land acquisition efforts in support of other Comprehensive Everglades Restoration Plan projects including the Western Everglades Restoration Project (Hendry, Collier, Monroe, Miami-Dade, and Broward Counties) and the Loxahatchee River Watershed Restoration Project (Martin and Palm Beach Counties).

SFWMD Implementation of Senate Bill 2516 (2021)

# PROGRESS REPORT

November 1, 2021



**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**

3301 Gun Club Road • West Palm Beach, Florida

561.686.8800 • 1.800.432.2045

[sfwmd.gov](http://sfwmd.gov)

## APPENDIX



# SOUTH FLORIDA WATER MANAGEMENT DISTRICT

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June 25, 2021

Mr. Jaime A. Pinkham  
Acting Assistant Secretary of the Army for Civil Works  
Department of the Army  
108 Army Pentagon  
Room 3E446  
Washington, DC 20310-0108

Subject: Expedite Authorization of Comprehensive Everglades Restoration Plan Storage and Conveyance Projects (Letter pursuant to Senate Bill 94, passed into State law in 2021)

Dear Secretary Pinkham:

Highlighted by the current Lake Okeechobee System Operating Manual process, Comprehensive Everglades Restoration Plan (CERP) storage and conveyance is critically important to managing water in South Florida for people and the environment. The State of Florida is dedicated to funding and constructing CERP features for the betterment of South Florida's 8.7 million residents. To maintain progress on CERP implementation, our citizens depend on the U.S. Army Corps of Engineers (USACE) to advance the administrative aspects of the CERP.

As an example, the USACE is only able to advance federal construction efforts if the State of Florida remains ahead of the federal government in CERP expenditures. However, State expenditures are only recognized as credit in our cost-share agreement after the USACE secures Congressional authorization for a CERP project.

The State, under Governor DeSantis' leadership, is expediting construction of CERP and has committed more than \$915 million in funding for CERP projects since 2019. These funds are advancing projects and represent the state's interest in the expeditious implementation of CERP.

To match the State's urgency with building out CERP, we urge the USACE to submit the Project Implementation Reports for the Lake Okeechobee Watershed Restoration Project (LOWRP) and the Western Everglades Restoration Project (WERP) to Congress in time for authorization in the Water Resources Development Act of 2022. The Florida Legislature has already appropriated \$150 million for LOWRP implementation, and the South Florida Water Management District is positioned to begin implementation of WERP when a Tentatively Selected Plan is approved.



Secretary Pinkham  
June 25, 2021  
Page 2

We are committed to expediting Everglades restoration, and we appreciate your commitment to advancing CERP components for authorization and construction. Please do not hesitate to contact me if we can assist in advancing LOWRP and WERP for authorization.

Thank you,

Drew Bartlett  
Executive Director

DB/mj

C: Lt. General Scott Spellmon  
MG William Graham  
BG Jason Kelly  
COL Andrew Kelly

COMPREHENSIVE EVERGLADES RESTORATION PLAN  
PRE-PARTNERSHIP CREDIT AGREEMENT  
BETWEEN  
THE DEPARTMENT OF THE ARMY  
AND THE  
SOUTH FLORIDA WATER MANAGEMENT DISTRICT  
FOR WORK CARRIED OUT  
FOR  
THE LAKE OKEECHOBEE WATERSHED RESTORATION PROJECT

THIS AGREEMENT is entered into this 27th day of January, 2021, by and between the Department of the Army (hereinafter the “Government”) represented by the U.S. Army Engineer, Jacksonville District (hereinafter the “District Engineer”) and the South Florida Water Management District (hereinafter the “Non-Federal Interest”) represented by the Executive Director.

WITNESSETH, THAT:

WHEREAS, the Non-Federal Interest proposes to perform certain work (hereinafter “the Proposed Work”, as defined in Paragraph 1 of this Agreement) prior to the execution of a Project Partnership Agreement for the construction of the environmental restoration at the Lake Okeechobee Watershed Restoration Project; and

WHEREAS, Section 601(e)(5)(B) of the Water Resources Development Act of 2000, as amended by Section 6004 of the Water Resources Development Act of 2007, provides that the Secretary of the Army may provide credit toward the non-Federal share for the reasonable cost of any work performed in connection with a project that is necessary for the implementation of the Comprehensive Everglades Restoration Plan, including work completed in the period of design or period of construction, as well as work carried out before the date of a Project Partnership Agreement for a project, to include work carried out prior to a project being authorized by Congress, if such work is carried out pursuant to terms and conditions specified in an agreement between the Non-Federal Interest and the Assistant Secretary of the Army.

NOW, THEREFORE, the Government and the Non-Federal Interest agree as follows:

1. The Non-Federal Interest proposes to carry out the Proposed Work in accordance with the terms and conditions of this Agreement. The Proposed Work shall consist of the following features, as generally described in the Lake Okeechobee Watershed Restoration Project Final Integrated Project Implementation Report and Environmental Impact Statement, dated August 2020.

A. Aquifer Storage and Recovery (ASR) wells

- i. No more than fifty-five (55) ASR wells, each with five (5) million gallons per day capacity, located throughout the Lake Okeechobee watershed in the following proposed clusters and locations:
  - a. One cluster located adjacent to the C-44 canal in Port Mayaca which will flow out of the C-44 into Lake Okeechobee or to the St. Lucie River Estuary;
  - b. Three cluster areas, including refurbishments of existing wells, located in the S-191 sub-watershed adjacent to the L-63N, L-63S, or L-64 canals that can flow to Lake Okeechobee;
  - c. Two clusters, including refurbishments of existing wells, located adjacent to the C-38 canal downstream of S-65E that flow back into the C-38 canal;
  - d. One cluster located along Taylor Creek, downstream of S-192 and upstream of the S-133 pump station, which releases fresh water to Lake Okeechobee; and
  - e. One well cluster along the C-43 canal in Moore Haven that can flow to Lake Okeechobee or the Caloosahatchee River.

ASR system construction consists of all inherent work, such as associated electrical power upgrades, telemetry, monitoring in compliance with permits, and work to address the uncertainties identified in the PIR and other related project documents.

- ii. Sequencing: ASR system implementation will be phased based on principles and considerations that include, but are not limited to, assessing feasibility (including monitoring during operational testing to determine cluster feasibility), realizing benefits at the earliest opportunity, and informing financial decisions and budgets. There are also other factors that may influence implementation, such as funding availability, maintaining cost-share balance, findings of exploratory testing, and the integration of projects that may be constructed by other agencies. Due to the number of factors that may influence implementation and construction sequencing, the Non-Federal Interest and Jacksonville District will coordinate and agree to work prior to proceeding with construction of each ASR well and ASR system implementation.

## B. Wetland Restoration Sites

- i. Paradise Run Site:
  - a. Construction of a 200 cfs inflow pump station [also referred to as pumping station] (S-721);
  - b. Construction of a 100 cfs outlet riser culvert (S-732);
  - c. Construction of a 50 cfs inlet riser culvert (S-730) and a 200 cfs gated culvert (S-729);
  - d. Excavation of approximately 24,500 linear feet of channel;

- e. Construction of perimeter embankments to avoid offsite impacts; and
  - f. Construction of an inflow structure as an interim measure to maintain the design L-59 flood risk reduction requirements and to ensure flow within the southern portion of Paradise Run.
- ii. Kissimmee River-Center Site:
    - a. Construction of a 100 cfs inflow pump station (S-735);
    - b. Construction of a 75 cfs outlet riser culvert (S-736); and
    - c. Excavation of approximately 21,500 linear feet of channel.
  - iii. Recreation features identified in PIR Appendix F that may include vehicle access roads/turn lanes, parking areas, fences/guardrails, boat ramps, trailheads, shelters/kiosks, small boat portages, signage, vehicle and pedestrian gates, picnic tables bike racks, fishing pier or platforms, and restroom facilities.

Wetland restoration site construction consists of all inherent work, such as associated electrical power upgrades, telemetry, and stilling wells.

2. The Non-Federal Interest shall complete all necessary environmental coordination and obtain all applicable Federal, State, and local permits required for the performance of any Proposed Work it carries out.

3. Any costs incurred for the cleanup of hazardous material regulated by the Comprehensive Environmental Response, Compensation, and Liability Act (hereinafter "CERCLA"; 42 U.S.C. Sections 9601-9675), that may exist in, on, or under lands, easements, or rights-of-way required for the Proposed Work are a Non-Federal Interest responsibility. No credit shall be afforded for such clean-up costs unless otherwise provided for in the Project Partnership Agreement and consistent with Article II. A.1 of the Master Agreement.

4. As between the Government and the Non-Federal Interest, the Non-Federal Interest shall be considered the operator of the Proposed Work for the purposes of CERCLA liability. To the maximum extent practicable, the Non-Federal Interest shall operate, maintain, repair, replace, and rehabilitate the Proposed Work in a manner that will not cause liability to arise under CERCLA.

5. The Government may inspect any work performed under this Agreement. The Non-Federal Interest hereby gives the Government the right to enter, at reasonable times and in a reasonable manner, upon lands, easements, or rights-of-way which the Non-Federal Interest owns or controls for access to the Proposed Work for the purposes of inspection.

6. The parties to this Agreement shall each act in an independent capacity in the performance of their respective functions under this Agreement, and neither party is to be considered the officer, agent, or employee of the other.

7. The Non-Federal Interest understands that to be eligible for credit for the costs of the

Proposed Work:

- a. The Assistant Secretary of the Army (Civil Works) must make a written determination that the Proposed Work is integral to the authorized project;
  - b. The Proposed Work must comply with applicable Federal design and construction standards and applicable Federal and State laws and regulations for construction of Federal public works projects, including, but not limited to, satisfactory compliance with:
    - i. Applicable Federal labor laws covering non-Federal construction such as 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*));
    - ii. the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*);
    - iii. the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c);
    - iv. Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d);
    - v. Department of Defense Directive 5500.11 issued pursuant thereto, as well as Army Regulation 600-7, entitled “Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army”; and
    - vi. Applicable provisions of Chapter 373, Florida Statutes.Credit will not necessarily be afforded for costs associated with compliance with state statutes and regulations.
  - c. The Non-Federal Interest shall keep books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to this Agreement to the extent and in such detail as will properly reflect total costs for the Proposed Work and the Non-Federal Interest shall make such evidence available for inspection and audit by authorized representatives of the Government;
  - d. Any contract awarded for the Proposed Work shall include provisions consistent with all applicable Federal and State laws and regulations;
  - e. Except as otherwise provided by Section 601(e)(3) of the Water Resources Development Act of 2000, the Non-Federal Interest shall not use Federal funds for the Proposed Work unless the Federal granting agency verifies in writing that the expenditure of such funds for a non-Federal matching share is expressly authorized by statute; and
  - f. The costs for the Proposed Work must be auditable, reasonable, allocable, allowable, and necessary, as determined by the Government.
8. The Non-Federal Interest understands that:

- a. Section 902 of the Water Resources Development Act, Public Law 99-662, as amended, establishes the maximum cost of the authorized project;
- b. The costs incurred for the Proposed Work are not subject to interest charges, nor are they subject to adjustment to reflect changes in price levels between the time the Proposed Work is completed and the time that credit may be afforded; and
- c. Any costs attributable to land management, any costs of cleanup of hazardous material regulated by the CERCLA (except as provided in paragraph 3), and any costs of operation, maintenance, replacement, repair, or rehabilitation of the Proposed Work incurred prior to execution of a Project Partnership Agreement are not eligible for credit.

9. If the parties agree to enter into a Project Partnership Agreement for the project, then the Project Partnership Agreement will contain provisions that allow for credit if the Secretary determines that the Proposed Work for which credit is sought is integral to the authorized project and the terms and conditions required under the Pre-Partnership Credit Agreement have been met.

10. Nothing in this agreement creates any duty, obligation, commitment to, participation in, or responsibility for the planning, design or construction of the Proposed Work by the Corps. Any activity undertaken by Non-Federal Interest for implementation of the Proposed Work is solely at its risk and full responsibility. Any duty, obligation or responsibility for the Proposed Work by the Government will only arise if and when the Proposed Work is accepted by the Government as part of a Federal water resources development project through compliance with the terms of an executed Project Partnership Agreement providing for implementation of a Federal project.

11. Execution of this Agreement shall not:

- a. be relied upon as a promise of Federal approval for any project nor the inclusion of any of the Proposed Work as integral to a Federally authorized project;
- b. commit the United States to any type of reimbursement or credit for the Proposed Work;
- c. alter any process followed by the Government in determining the requirements or planning the design for the Federal project to achieve its Federal purposes;
- d. be construed as preventing the Government from modifying the Federal project or any portion of the Federal project that could result in the Proposed Work performed by the Non-Federal Interest no longer being integral to the Federal project;
- e. provide any assurance that a Project Partnership Agreement will ever be executed for the project, the Proposed Work, or any portion of the project; and


f. be construed as committing the Government to assume any responsibility for the Proposed Work.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, which shall become effective upon the date it is signed by the District Engineer.

THE DEPARTMENT OF THE ARMY

SOUTH FLORIDA WATER  
MANAGEMENT DISTRICT

BY: KELLY.ANDREW.DONALD.JR.1025510875  
Digitally signed by  
KELLY.ANDREW.DONALD.JR.102  
5510875  
Date: 2021.01.27 17:40:59 -05'00'  
Andrew D. Kelly  
Colonel, U.S. Army  
District Engineer

BY:   
Drew Bartlett  
Executive Director

Date: 1/27/21

Date: 1/27/21

CERTIFICATE OF AUTHORITY

I, Carolyn S. Ansay, do hereby certify that I am the principal legal officer of the South Florida Water Management District, and that the South Florida Water Management District is a legally constituted public body with full authority and legal capability to perform the terms of this Comprehensive Everglades Restoration Plan Pre-Partnership Credit Agreement between the Department of the Army and the South Florida Water Management District in connection with the Proposed Work to be carried out prior to signing a Project Partnership Agreement for the Lake Okeechobee Watershed Restoration Project and that the person who executed this Agreement on behalf of the South Florida Water Management District acted within his statutory authority.

IN WITNESS WHEREOF, I have made and executed this certification this  
27<sup>th</sup> day of January 2021.



\_\_\_\_\_  
Carolyn S. Ansay  
General Counsel  
South Florida Water Management District