Tab 1	**CS/SB 776** by **CJ, Gainer**; (Similar to H 00783) Racketeering

Tab 2	**SB 976** by **Brodeur**; (Identical to H 00727) Study of the Little Wekiva River

130930	A	S	RCS	EN, Brodeur	Delete L.25 - 41:	03/02 02:48 PM

Tab 5	**SB 94** by **Brodeur**; Water Storage North of Lake Okeechobee

The Florida Senate

COMMITTEE MEETING EXPANDED AGENDA

ENVIRONMENT AND NATURAL RESOURCES
Senator Brodeur, Chair
Senator Stewart, Vice Chair

MEETING DATE: Tuesday, March 2, 2021
TIME: 1:30—3:30 p.m.
PLACE: *Mallory Horne Committee Room,* 37 Senate Building

MEMBERS: Senator Brodeur, Chair; Senator Stewart, Vice Chair; Senators Albritton, Ausley, Bean, and Perry

TAB	BILL NO. and INTRODUCER	BILL DESCRIPTION and SENATE COMMITTEE ACTIONS	COMMITTEE ACTION
	PUBLIC TESTIMONY WILL BE RECEIVED FROM ROOM A2 AT THE DONALD L. TUCKER CIVIC CENTER, 505 W PENSACOLA STREET, TALLAHASSEE, FL 32301		
1	**CS/SB 776** Criminal Justice / Gainer (Similar H 783)	Racketeering; Revising the definition of the term "racketeering activity" to include certain actions relating to the illegal sale, purchase, take, or possession of wild animal life, freshwater aquatic life, or marine life, and related crimes, etc. CJ 02/16/2021 Fav/CS EN 03/02/2021 Favorable RC	Favorable Yeas 5 Nays 0
2	**SB 976** Brodeur (Identical H 727)	Study of the Little Wekiva River; Requiring the Department of Environmental Protection, in consultation with the St. Johns River Water Management District, Seminole County, the Fish and Wildlife Conservation Commission, and the Department of Transportation, to conduct a study and issue a report on sediment accumulation and water quality in the Little Wekiva River by a specified date; requiring a permit application for a development located partially or wholly within the Wekiva River Protection Area to include a study of the potential impacts to the Wekiva River, etc. EN 03/02/2021 Fav/CS AEG AP	Fav/CS Yeas 5 Nays 0
3	Presentation by David Pyne and Mark McNeal on Aquifer Storage and Recovery		Presented
4	Presentation by Drew Bartlett from the South Florida Water Management District on the Aquifer Storage and Recovery Science Plan		Presented

TAB	BILL NO. and INTRODUCER	BILL DESCRIPTION and SENATE COMMITTEE ACTIONS	COMMITTEE ACTION
5	**SB 94** Brodeur	Water Storage North of Lake Okeechobee; Requiring the South Florida Water Management District to request that the United States Army Corps of Engineers seek congressional approval of a project implementation report for the Lake Okeechobee Watershed Restoration Project by a specified date; requiring the district, in partnership with the corps, to expedite the development and implementation of aquifer storage and recovery wells; requiring the district to expedite implementation of the aquifer storage and recovery science plan developed by the district and the corps, etc. EN 03/02/2021 Favorable AP	Favorable Yeas 5 Nays 0

Other Related Meeting Documents

The Florida Senate

BILL ANALYSIS AND FISCAL IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: The Professional Staff of the Committee on Environment and Natural Resources

BILL:	CS/SB 776
INTRODUCER:	Criminal Justice Committee and Senator Gainer
SUBJECT:	Racketeering
DATE:	March 1, 2021
REVISED:	

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Erickson	Jones	CJ	**Fav/CS**
2.	Anderson	Rogers	EN	**Favorable**
3.			RC	

Please see Section IX. for Additional Information:

COMMITTEE SUBSTITUTE - Substantial Changes

I. Summary:

CS/SB 776 amends the definition of "racketeering activity" in the Florida RICO (Racketeer Influenced and Corrupt Organization) Act to include violations of ch. 379, F.S., and Title 68, F.A.C., relating to the illegal sale, purchase, take, or possession of wild animal life, freshwater aquatic life, or marine life, and related crimes. Chapter 379, F.S., and Title 68, F.A.C., are implemented by the Florida Fish and Wildlife Conservation Commission (FWC). The effect of this change is that it will allow such unlawful acts to be prosecuted as racketeering if the commission of the acts constitutes racketeering. A criminal violation of the Florida RICO Act is a first degree felony. The Act also provides for civil remedies.

The FWC estimates the bill will have an indeterminate impact on the commission. The Legislature's Office of Economic and Demographic Research preliminarily estimates that the bill will have a "positive insignificant" prison bed impact, meaning an increase of 10 or fewer prison beds. See Section V. Fiscal Impact.

The bill takes effect upon becoming a law.

II. Present Situation:

Under Article IV, section 9, of the State Constitution, the FWC exercises the regulatory and executive powers of the state concerning wild animal life, freshwater aquatic life, and marine life.[1] The FWC implements ch. 379, F.S., and rules adopted in Title 68,[2] F.A.C.[3]

License fees for taking wild animal life, freshwater aquatic life, and marine life and penalties for violating FWC regulations are prescribed by general law.[4] Further, the FWC's exercise of executive powers in the area of planning, budgeting, personnel management, and purchasing are provided by law.[5] The Legislature may also enact laws in aid of the FWC that are not inconsistent with its constitutionally-conferred powers, except for special laws or general laws of local application relating to hunting or fishing.[6]

Section 379.401, F.S., details FWC's four-tier system for penalties and violations, civil penalties for noncriminal infractions, criminal penalties, and suspension and forfeiture of licenses and permits.[7] Level One violations are considered the least serious while Level Four violations are considered the most serious.[8]

Level Two Violations

Examples of a Level Two violation include:

- Violating rules or orders of the commission relating to seasons or time periods for the taking of wildlife, freshwater fish, or saltwater fish;
- Violating rules or orders of the commission relating to restricted hunting areas, critical wildlife areas, or bird sanctuaries;
- Violating rules or orders of the commission relating to tagging requirements for wildlife and fur-bearing animals;
- Violating rules or orders of the commission relating to the use of dogs for the taking of wildlife;
- Violating rules or orders of the commission which are not otherwise classified; and
- Violating rules or orders of the commission prohibiting the unlawful use of traps, unless otherwise provided by law.[9]

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[1] FLA. CONST. art. IV, s. 9.
[2] Title 68 is also referred to as "chapter 68."
[3] "The rules of the FWC have the force of a legislative act, and the Legislature is prohibited from adopting statutes that conflict with those rules." *Florida Fish and Wildlife Conservation Commission v. Daws*, 256 So.3d 907, 917 (Fla. 1st DCA 2018) (citations omitted), review denied, 2018 WL 6605838 (Fla. 2018).
[4] FLA. CONST. art. IV, s. 9.
[5] *Id*.
[6] *Id.*
[7] Information in this analysis relating to level violations and penalties was reproduced from *Bill Analysis and Fiscal Impact Statement* (CS/CS/SB 688) (Feb. 20, 2020), Florida Senate, *available at* https://www.flsenate.gov/Session/Bill/2020/688/Analyses/2020s00688.rc.PDF (last visited Feb. 8, 2021).
[8] Section 379.401, F.S.
[9] Section 379.401(2)(a), F.S.

The penalties for Level Two violations are as follows:

Level Two Violation	Degree of Offense	Fine or Incarceration	License Restrictions
First offense	2nd Degree Misdemeanor[10]	Max: $500 or Max: 60 days	None
Second offense within three years of previous Level Two violation (or higher)	1st Degree Misdemeanor[11]	Min: $250; Max: $1,000 Max: one year	None
Third offense within five years of two previous Level Two violations (or higher)	1st Degree Misdemeanor[12]	Min: $500; Max: $1,000 Max: one year	Suspension of license for one year
Fourth offense within 10 years of three previous Level Two violations (or higher)	1st Degree Misdemeanor[13]	Min: $750; Max $1,000 or Max: one year	Suspension of license for three years

Level Three Violations

Examples of a Level Three violation include:
- The illegal sale or possession of alligators;
- The taking of game, freshwater fish, or saltwater fish while a required license is suspended or revoked; and
- The illegal taking and possession of deer and wild turkey.[14]

The penalties for a Level Three violation are as follows:

Level Three Violation	Degree of Offense	Fine or Incarceration	License Restrictions
First offense	1st Degree Misdemeanor[15]	Max: $1,000 Max: one year	None
Second offense within 10 years of a previous Level Three violation (or higher)	1st Degree Misdemeanor[16]	Min: $750; Max: $1,000 Max: one year	Suspension of license or permit for up to three years
Fishing, hunting, or trapping on a suspended or revoked license, s. 379.354(17), F.S.	1st Degree Misdemeanor	Mandatory $1,000[17] Max: one year	May not acquire license or permit for five years

[10] Section 379.401(2)(b)1., F.S.
[11] Section 379.401(2)(b)2., F.S.
[12] Section 379.401(2)(b)3., F.S.
[13] Section 379.401(2)(b)4., F.S.
[14] Section 379.401(3), F.S.
[15] Section 379.401(3)(b)1., F.S.
[16] Section 379.401(3)(b)2., F.S.
[17] Section 379.401(3)(b)3., F.S.

Level Four Violations

Examples of a Level Four violation include:
- The making, forging, counterfeiting, or reproduction of a recreational license or the possession of same without authorization from the commission;
- The sale of illegally-taken deer or wild turkey;
- The unlawful killing, injuring, possessing, or capturing of alligators or other crocodilia or their eggs;
- The intentional killing or wounding of any species designated as endangered, threatened, or of special concern; and
- The killing of any Florida or wild panther.[18]

The penalties for Level Four Violations are as follows:

Level Four Violation	Degree of Offense	Fine or Incarceration	License Restrictions
First offense[19]	3rd Degree Felony	Max: $5,000 Max: Five Years	None

Florida RICO Act

The "Florida RICO (Racketeer Influenced and Corrupt Organization) Act" is the short title for ss. 895.01-895.06, F.S.[20] "Racketeering activity" means committing, attempting to commit, conspiring to commit, or soliciting, coercing, or intimidating another person to commit any of a number of offenses listed in the definition.[21]

Section 895.03, F.S., provides that it is unlawful for any person:
- Who with criminal intent has received any proceeds derived, directly or indirectly, from a pattern of racketeering activity or through the collection of an unlawful debt[22] to use or invest, whether directly or indirectly, any part of such proceeds, or the proceeds derived from the investment or use thereof, in the acquisition of any title to, or any right, interest, or equity in, real property or in the establishment or operation of any enterprise.[23]
- Through a pattern of racketeering activity or through the collection of an unlawful debt, to acquire or maintain, directly or indirectly, any interest in or control of any enterprise or real property.

[18] Section 379.401(4)(a), F.S.
[19] Section 379.401(4)(b), F.S.
[20] Section 895.01, F.S.
[21] Section 895.02(1), F.S. These offenses include violations of specified Florida laws (e.g., Medicaid fraud, kidnapping, human trafficking, and drug offenses) as well as any conduct defined as "racketeering activity" under 18 U.S.C. s. 1961(1).
[22] Section 895.02(2), F.S., defines an "unlawful debt" as any money or other thing of value constituting principal or interest of a debt that is legally unenforceable in this state in whole or in part because the debt was incurred or contracted in violation of specified Florida laws (e.g., various gambling offenses) as well as any gambling activity in violation of federal law or in the business of lending money at a rate usurious under state or federal law.
[23] Section 895.02(3), F.S., defines "enterprise" as any individual, sole proprietorship, partnership, corporation, business trust, union chartered under the laws of this state, or other legal entity, or any unchartered union, association, or group of individuals associated in fact although not a legal entity; and it includes illicit as well as licit enterprises and governmental, as well as other, entities. A criminal gang as defined in s. 874.03, F.S., constitutes an enterprise.

- Employed by, or associated with, any enterprise to conduct or participate, directly or indirectly, in such enterprise through a pattern of racketeering activity or the collection of an unlawful debt.
- To conspire or endeavor to violate any of the previously-described activity. [24]

Section 895.04, F.S., provides that a conviction for engaging in the above activities results in a first degree felony.[25]

In addition to criminal penalties under s. 895.04, F.S., s. 895.05, F.S., imposes civil liability for violations of the Florida RICO Act, including forfeiture to the state of all property, including money, used in the course of, intended for use in the course of, derived from, or realized through conduct in violation of the act.[26]

Trafficking in Wild Animal Life, Freshwater Aquatic Life, or Marine Life

The FWC describes the problem of trafficking in wild animal life, freshwater aquatic life, or marine life:

> There is a significant black-market trade in Florida's wildlife, freshwater aquatic life, and marine life. This includes live wildlife and aquatic species, including captive wildlife, as well as eggs, products, and parts thereof. Trafficking in wild species is the fourth most profitable transnational crime behind the drug trade, arms trade, and human trafficking. Criminal organizations are often involved in more than one illegal trade.
>
> Factors such as overexploitation/harvest, increased regulation, and global trends, mean that law enforcement agencies must look broadly at the variety of wildlife and aquatic life subject to exploitation and illegal commercialization. Marine life species targeted for trafficking has included corals, live rock, sea cucumbers, reef fish, shrimp, ornamental aquarium fish, and lobsters. Wildlife targeted for trafficking has included live animals such as freshwater turtles, federal Endangered Species Act (ESA) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) listed species (i.e., sharks, sea turtles [including eggs]) and parts thereof, cervids, captive wildlife (monkeys, tigers, venomous/non venomous reptiles and tegus), black bears (gall bladders, paws), and alligators (including eggs). Wildlife, freshwater aquatic life, and marine life are trafficked for many reasons; the species or parts thereof that are being trafficked are usually determined by the consumer demand at the time. For these reasons, it is important that anti-racketeering efforts are not limited to one category of animal life or type of species.
>
> Species listed under the ESA and CITES, and Florida's listed endangered and threatened species, are of particular concern as illegal collection and trafficking are significant factors in the further decline of these species. However, less regulated species are often some of the most exploited and are harvested in large numbers. Illegal wildlife markets

[24] Section 895.03(4), F.S.
[25] A first degree felony is generally punishable by up to 30 years in state prison and a fine not exceeding $10,000. Sections 775.082 and 775.083, F.S.
[26] Section 895.05(2), F.S.

> sometimes follow a "boom and bust" cycle. Wildlife, freshwater aquatic life, and marine life will be exploited until the species is over harvested and declines to the extent the species are difficult to acquire or special protections are placed on the species. Once one species has followed this "boom and bust" cycle, markets will shift to a new species and so on.
>
> In addition, trafficking involves offenses beyond illegal take or sale of species. Efforts to launder trafficked wildlife and aquatic life may involve the falsification of records, licenses, and documents and concealment of sources of acquisition as related crimes that further the criminal enterprise.[27]

Prosecution of Trafficking in Wild Animal Life, Freshwater Aquatic Life, or Marine Life

In October of 2020, the FWC announced that a group of suspects were charged with racketeering, money laundering, scheming to defraud, "and other organized criminal laws involving an elaborate organized enterprise to smuggle Florida's wildlife to interstate and international buyers."[28] The smuggling involved illegally trapping flying squirrels, but FWC investigators also learned that the "Florida suspects were dealing in multiple species of poached animals. Protected freshwater turtles and alligators were illegally taken and laundered through other seemingly legitimate licensed businesses. Documents were falsified concealing the true source of the wildlife."[29]

The FWC notes some of the problems arising from current prosecution of trafficking in wild animal life, freshwater aquatic life, or marine life:

> Individuals associated with wildlife trafficking are difficult to deter [from] exploiting fish and wildlife without the appropriate charges. While there are a variety of laws that protect wildlife and even a few that protect against the illegal sale of wildlife in Florida, the current laws protecting against the illegal tak[ing], possession, purchase, and sale of wildlife and aquatic life are primarily misdemeanors and typically only result in small fines and probation when traffickers are convicted. These laws do little to affect the criminal organizations engaged in trafficking.
>
> To combat organized crime, Florida's RICO (Racketeer Influence and Corrupt Organization) Act makes it unlawful for a person to engage in a pattern of criminal activity to acquire, establish, operate, maintain, or control, or be associated with or employed by an enterprise, or conspire to do so. Currently, there are no predicate offenses under Florida's RICO Act specifically related to the illegal trafficking of wildlife and aquatic life.[30]

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[27] Florida Fish and Wildlife Conservation Commission (FWC), *Senate Bill 776 Legislative Bill Analysis* (Feb. 8, 2021), *available at* https://www.flsenate.gov/Committees/Show/CJ/MeetingPacket/5050/9012_MeetingPacket_5050.pdf. (*See* p. 247).
[28] FWC, *FWC uncovers a transnational wildlife trafficking operation in Florida* (Oct. 19, 2020), https://myfwc.com/news/all-news/trafficking-case-1020/ (last visited Feb. 19, 2021).
[29] *Id.*
[30] FWC, *Senate Bill 776 Legislative Bill Analysis* (Feb. 8, 2021), *available at* https://www.flsenate.gov/Committees/Show/CJ/MeetingPacket/5050/9012_MeetingPacket_5050.pdf. (*See* p. 248).

The Office of Statewide Prosecution has assisted the FWC in prosecution of theft of alligators and alligator eggs by prosecuting these acts under RICO.[31] The RICO prosecution relies on theft, a predicate RICO offense.[32] However, the office notes that defense counsel has challenged the prosecution, "arguing there could be no theft of wildlife from the State as the State did not own the wildlife. The case is currently being challenged on appeal."[33]

The FWC has provided the following reasons for adding violations of ch. 379, F.S., and Title 68, F.A.C., and related crimes, as predicate Florida RICO offenses:

> The bill "does not enlarge any crimes related to wildlife or aquatic life, but makes these existing crimes prosecutable under RICO. The inclusion of crimes under Chapter 379, F.S., and Title 68, F.A.C., as predicate offenses under RICO would provide a powerful tool in the effort to combat wildlife trafficking and disrupt a highly profitable illegal trade. Prosecuting these cases under RICO would enable the State of Florida to pursue asset forfeiture which would greatly undermine the profitability of these criminal enterprises. Florida's legitimate businesses and its citizens who rely on natural resources for a living as well as recreational experiences would see a positive impact. The disruption of wildlife trafficking would also assist with the prevention and mitigation of communicable infectious diseases that originate from wildlife. Finally, the amendment to RICO would allow Florida to address wildlife trafficking crimes that do not have a federal nexus."[34]

III. Effect of Proposed Changes:

The bill amends the definition of "racketeering activity" in s. 895.02(8), F.S., of the Florida RICO Act to include violations of ch. 379, F.S., and Title 68, F.A.C., relating to the illegal sale, purchase, take, or possession of wild animal life, freshwater aquatic life, or marine life,[35] and related crimes. Chapter 379, F.S., and Title 68, F.A.C., are implemented by the FWC. The effect of this change is that it will allow such unlawful acts to be prosecuted as racketeering if the commission of the acts constitutes racketeering. A criminal violation of the Florida RICO Act is a first degree felony. The Act also provides for civil remedies.

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[31] *RE: FWC Proposed Legislation* (undated memo), Kelly A. McKnight, Assistant Statewide Prosecutor, Office of Statewide Prosecution, Office of the Attorney General, *available at* https://www.flsenate.gov/Committees/Show/CJ/MeetingPacket/5050/9012_MeetingPacket_5050.pdf. (*See* p. 253). Section 895.02(8)(a)32., F.S.

[32] Section 895.02(8)(a)32., F.S.

[33] *RE: FWC Proposed Legislation* (undated memo), Kelly A. McKnight, Assistant Statewide Prosecutor, Office of Statewide Prosecution, Office of the Attorney General, *available at* https://www.flsenate.gov/Committees/Show/CJ/MeetingPacket/5050/9012_MeetingPacket_5050.pdf. (*See* p. 253).

[34] FWC, *Senate Bill 776 Legislative Bill Analysis* (Feb. 8, 2021), *available at* https://www.flsenate.gov/Committees/Show/CJ/MeetingPacket/5050/9012_MeetingPacket_5050.pdf. (*See* p. 248).

[35] The FWC notes that "[i]t is critical that the amendment's language address the enumerated crimes under both Chapter 379, F.S., and Title 68, F.A.C. There are many crimes related to wildlife trafficking that are offenses under the Commission's regulations, but that do not have a companion statutory offense under Chapter 379, F.S. Violations of these offenses have a prescribed penalty in statute, but the offense itself is articulated and charged under the regulations of Title 68, F.A.C. In addition, criminal organizations often utilize related crimes (i.e., mislabeling, falsifying documents or records, hiding sources of acquisitions, etc.) to conceal and further illegal activity. For this reason, prosecutors need the ability to pursue racketeering charges for related crimes under the laws and rules of the Commission." *Id.*

The bill takes effect upon becoming a law.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

The bill does not appear to require cities and counties to expend funds or limit their authority to raise revenue or receive state-shared revenues as specified by Article VII, s. 18, of the State Constitution.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

D. State Tax or Fee Increases:

None.

E. Other Constitutional Issues:

None identified.

V. Fiscal Impact Statement:

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

None.

C. Government Sector Impact:

The FWC estimates the bill will have an indeterminate impact on the commission.[36]

The Legislature's Office of Economic and Demographic Research (EDR) preliminarily estimates that the bill will have a "positive insignificant" prison bed impact, meaning an increase of 10 or fewer prison beds.[37]

The EDR provides the following additional information relevant to its estimate:

[36] *Id*.
[37] The EDR estimate requested by the Senate Committee on Criminal Justice is available at https://www.flsenate.gov/Committees/Show/CJ/MeetingPacket/5050/9012_MeetingPacket_5050.pdf. (*See* p. 256).

> Per [Florida Department of Law Enforcement or] FDLE, there were 436 misdemeanor arrests in CY 2019, with 114 guilty/convicted and 61 adjudications withheld under Chapter 379, and there were 337 arrests in CY 2020, with 48 guilty/convicted and 40 adjudications withheld. For felony violations, in CY 2019, there were 37 arrests, with 28 guilty/convicted and 14 adjudications withheld. In CY 2020, there were 80 arrests, with 4 guilty/convicted and 8 adjudications withheld. Per [Department of Corrections or] DOC, there was one new commitment to prison in FY 18-19 and one new commitment to prison in FY 19-20 for felony violations associated with Chapter 379.

Per DOC, in FY 18-19, there were 82 new commitments to prison under s. 895.03, F.S. In FY 19-20, there were 58 new commitments. Given that under current statute there are a large number of offenses where these felonies could apply, including offenses that have a high volume of commitments each year, the additions of Chapter 379 and violations of Title 68 are not expected to have a significant impact on prison beds.[38]

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Statutes Affected:

This bill substantially amends section 895.02 of the Florida Statutes.

IX. Additional Information:

A. Committee Substitute – Statement of Substantial Changes:
(Summarizing differences between the Committee Substitute and the prior version of the bill.)

CS by Criminal Justice on February 16, 2021:
The committee substitute revises the description of predicate offenses being added to the definition of "racketeering activity" in the Florida RICO Act to indicate that "racketeering activity" includes violations of ch. 379, F.S., and Title 68, F.A.C., relating to the illegal sale, purchase, take, or possession of wild animal life, freshwater aquatic life, or marine life, and related crimes.

B. Amendments:

None.

This Senate Bill Analysis does not reflect the intent or official position of the bill's introducer or the Florida Senate.

[38] *Id.*

By the Committee on Criminal Justice; and Senator Gainer

591-02152-21 2021776c1

A bill to be entitled

An act relating to racketeering; amending s. 895.02, F.S.; revising the definition of the term "racketeering activity" to include certain actions relating to the illegal sale, purchase, take, or possession of wild animal life, freshwater aquatic life, or marine life, and related crimes; providing an effective date.

Be It Enacted by the Legislature of the State of Florida:

Section 1. Paragraph (a) of subsection (8) of section 895.02, Florida Statutes, is amended, and a new paragraph (c) is added to that subsection, to read:

895.02 Definitions.—As used in ss. 895.01-895.08, the term:

(8) "Racketeering activity" means to commit, to attempt to commit, to conspire to commit, or to solicit, coerce, or intimidate another person to commit:

(a) Any crime that is chargeable by petition, indictment, or information under the following provisions of the Florida Statutes:

1. Section 210.18, relating to evasion of payment of cigarette taxes.

2. Section 316.1935, relating to fleeing or attempting to elude a law enforcement officer and aggravated fleeing or eluding.

3. Chapter 379, relating to the illegal sale, purchase, take, or possession of wild animal life, freshwater aquatic life, or marine life, and related crimes.

CODING: Words ~~stricken~~ are deletions; words underlined are additions.

4. Section 403.727(3)(b), relating to environmental control.

5.~~4.~~ Section 409.920 or s. 409.9201, relating to Medicaid fraud.

6.~~5.~~ Section 414.39, relating to public assistance fraud.

7.~~6.~~ Section 440.105 or s. 440.106, relating to workers' compensation.

8.~~7.~~ Section 443.071(4), relating to creation of a fictitious employer scheme to commit reemployment assistance fraud.

9.~~8.~~ Section 465.0161, relating to distribution of medicinal drugs without a permit as an Internet pharmacy.

10.~~9.~~ Section 499.0051, relating to crimes involving contraband, adulterated, or misbranded drugs.

11.~~10.~~ Part IV of chapter 501, relating to telemarketing.

12.~~11.~~ Chapter 517, relating to sale of securities and investor protection.

13.~~12.~~ Section 550.235 or s. 550.3551, relating to dogracing and horseracing.

14.~~13.~~ Chapter 550, relating to jai alai frontons.

15.~~14.~~ Section 551.109, relating to slot machine gaming.

16.~~15.~~ Chapter 552, relating to the manufacture, distribution, and use of explosives.

17.~~16.~~ Chapter 560, relating to money transmitters, if the violation is punishable as a felony.

18.~~17.~~ Chapter 562, relating to beverage law enforcement.

19.~~18.~~ Section 624.401, relating to transacting insurance without a certificate of authority, s. 624.437(4)(c)1., relating to operating an unauthorized multiple-employer welfare

CODING: Words ~~stricken~~ are deletions; words underlined are additions.

arrangement, or s. 626.902(1)(b), relating to representing or aiding an unauthorized insurer.

20.~~19.~~ Section 655.50, relating to reports of currency transactions, when such violation is punishable as a felony.

21.~~20.~~ Chapter 687, relating to interest and usurious practices.

22.~~21.~~ Section 721.08, s. 721.09, or s. 721.13, relating to real estate timeshare plans.

23.~~22.~~ Section 775.13(5)(b), relating to registration of persons found to have committed any offense for the purpose of benefiting, promoting, or furthering the interests of a criminal gang.

24.~~23.~~ Section 777.03, relating to commission of crimes by accessories after the fact.

25.~~24.~~ Chapter 782, relating to homicide.

26.~~25.~~ Chapter 784, relating to assault and battery.

27.~~26.~~ Chapter 787, relating to kidnapping or human trafficking.

28.~~27.~~ Chapter 790, relating to weapons and firearms.

29.~~28.~~ Chapter 794, relating to sexual battery, but only if such crime was committed with the intent to benefit, promote, or further the interests of a criminal gang, or for the purpose of increasing a criminal gang member’s own standing or position within a criminal gang.

30.~~29.~~ Former s. 796.03, former s. 796.035, s. 796.04, s. 796.05, or s. 796.07, relating to prostitution.

31.~~30.~~ Chapter 806, relating to arson and criminal mischief.

32.~~31.~~ Chapter 810, relating to burglary and trespass.

CODING: Words ~~stricken~~ are deletions; words underlined are additions.

33.~~32.~~ Chapter 812, relating to theft, robbery, and related crimes.

34.~~33.~~ Chapter 815, relating to computer-related crimes.

35.~~34.~~ Chapter 817, relating to fraudulent practices, false pretenses, fraud generally, credit card crimes, and patient brokering.

36.~~35.~~ Chapter 825, relating to abuse, neglect, or exploitation of an elderly person or disabled adult.

37.~~36.~~ Section 827.071, relating to commercial sexual exploitation of children.

38.~~37.~~ Section 828.122, relating to fighting or baiting animals.

39.~~38.~~ Chapter 831, relating to forgery and counterfeiting.

40.~~39.~~ Chapter 832, relating to issuance of worthless checks and drafts.

41.~~40.~~ Section 836.05, relating to extortion.

42.~~41.~~ Chapter 837, relating to perjury.

43.~~42.~~ Chapter 838, relating to bribery and misuse of public office.

44.~~43.~~ Chapter 843, relating to obstruction of justice.

45.~~44.~~ Section 847.011, s. 847.012, s. 847.013, s. 847.06, or s. 847.07, relating to obscene literature and profanity.

46.~~45.~~ Chapter 849, relating to gambling, lottery, gambling or gaming devices, slot machines, or any of the provisions within that chapter.

47.~~46.~~ Chapter 874, relating to criminal gangs.

48.~~47.~~ Chapter 893, relating to drug abuse prevention and control.

49.~~48.~~ Chapter 896, relating to offenses related to

CODING: Words ~~stricken~~ are deletions; words underlined are additions.

financial transactions.

50.~~49.~~ Sections 914.22 and 914.23, relating to tampering with or harassing a witness, victim, or informant, and retaliation against a witness, victim, or informant.

51.~~50.~~ Sections 918.12 and 918.13, relating to tampering with jurors and evidence.

(c) Any violation of Title 68, Florida Administrative Code, relating to the illegal sale, purchase, take, or possession of wild animal life, freshwater aquatic life, or marine life, and related crimes.

Section 2. This act shall take effect upon becoming a law.

CODING: Words ~~stricken~~ are deletions; words underlined are additions.

Little Wekiva River Restoration Project

Background History:

The Little Wekiva River (LWR) is located on the west side Seminole County and is designated an Outstanding Florida Water (OFW) and flows into the Wekiva River which is designated as a Wild and Scenic River. The restoration project is planned to begin north of Springs Landing Bridge and end south of SR46 downstream of the confluence of the Big and Little Wekiva Rivers.

The LWR is a flashy system that historically had severe erosion and sedimentation problems. A study that focused on these issues was completed by the SJRWMD around 1998. As a result, numerous erosion control projects were constructed within the LWR by Orange County, Altamonte Springs, and Seminole County to reduce the erosion and downstream sedimentation.

Project History:

Over the past 3-5 years, excessive sedimentation and invasive plant growth has occurred within the LWR starting in and around the area east of Ibis Lane and northward.

The proposed restoration area is approximately 7,000 LF in length and approximately 20 acres in total. This multi-agency, multi-jurisdictional project would provide much needed maintenance and restoration of the Little Wekiva River (LWR) in this area. Proposed project activities will include the harvesting of invasive plant islands, removal of deposited sediments within the river, re-contouring of historic meanders, and replanting with beneficial native plant species. The excess accumulated sediments and vegetation are causing the river to expand into the flood plain and potentially increase residential, commercial and municipal flooding. Estimated project cost is $1,650,000.

Staff Activities:

County staff has taken the lead on this project and is coordinating with residents, as well as with SJRWMD, FDEP, FWC, FDOT, Rep. Stephanie Murphy, Orange County, City of Altamonte Springs, Florida Audubon (property owner on the west side of the LWR), and Friends of Wekiva.

County staff has conducted multiple site assessments with agency staff and residents.

A (virtual) technical meeting was hosted by Seminole County (Kim Ornberg) on November 19, 2020, which included participants from FDEP, FWC, SJRWMD, FDOT, Altamonte Springs, Rep. Murphy's office, and Audubon to discuss the project scope, permitting, and funding.

The County is seeking matching funds for the LWRRP through cost shares with the local and state partners, FDEP and SJRWMD grants, and local sales tax funding.

The Florida Senate

BILL ANALYSIS AND FISCAL IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: The Professional Staff of the Committee on Environment and Natural Resources

BILL:	CS/SB 976
INTRODUCER:	Environment and Natural Resources Committee and Senator Brodeur
SUBJECT:	Study of the Little Wekiva River
DATE:	March 2, 2021 REVISED:

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Anderson	Rogers	EN	**Fav/CS**
2.			AEG	
3.			AP	

Please see Section IX. for Additional Information:

COMMITTEE SUBSTITUTE - Substantial Changes

I. Summary:

CS/SB 976 requires the Department of Environmental Protection (DEP), in consultation with the St. Johns River Water Management District, Seminole County, the Fish and Wildlife Conservation Commission, and the Department of Transportation, to conduct a study and issue a report by December 31, 2021, to identify the source of sediment accumulation in the Little Wekiva River and detail improvements to the water quality and ecology of the area which might be achieved by efforts to remove accumulated sediments by appropriate means, restore the natural river channel, remove invasive plants, and implement protective measures. The report must include an estimated cost for each improvement and potential funding sources. The bill authorizes local or state agencies or their contractors to conduct restoration efforts during the study period.

The bill requires DEP and the St. Johns River Water Management District to review any permits north of State Road 436 where the Little Wekiva River is identified as the "receiving waters" to assess whether a permittee is in violation of permit conditions, take appropriate action to resolve compliance issues, and remediate any impacts related to sedimentation in the Little Wekiva River and its adjacent wetland habitat.

The bill requires permitting agencies to levy all fines authorized by law commensurate with restoration costs if a permittee or their contractors is found to be in violation of a permit condition for a project that has had an accumulation of sediments or caused ecological harm to the Little Wekiva River.

II. Present Situation:

Wekiva River System

The Wekiva River begins at the junction of Wekiwa Spring Run and Rock Springs Run and runs north for 15 miles.[1] It is a Florida and National Scenic and Wild River,[2] an Outstanding Florida Water,[3] and a state designated paddling trail.[4] The Little Wekiva River, Blackwater Creek, and more than 30 springs contribute their waters to the Wekiva River as it winds its way north.[5] The Wekiva River Basin is a complex ecological system of rivers, springs, seepage areas, lakes, streams, sinkholes, wetland prairies, hardwood hammocks, pine flatwoods, and sand pine scrub communities.[6] The superb ecological condition of the Wekiva River Basin supports many species of plant and animal life, some of which are endangered, threatened, or of special concern.[7]

The Little Wekiva River is a tributary to the Wekiva River. It is approximately 15 miles long, and its main stem flows northward from Lake Lawne in Orlando.[8] Its stream course consists of a combination of channelized ditches, lakes, incised channel reaches and meandering wetland flow until its confluence with the Wekiva River.[9] According to the 2005 Little Wekiva River Watershed Management Plan, the Little Wekiva River has experienced chronic occurrences of sedimentation from the urbanization of the river's watershed which has overtaxed the conveyance and sediment transport capacity of the river.[10]

Wekiva River Protection Act

In 1988, the Florida Legislature passed the Wekiva River Protection Act and declared the Wekiva River Protection Area as a natural resource of state and regional importance.[11] The act requires the river's surrounding counties to amend their comprehensive plans and land development rules to deter wetlands losses, promote protection of wildlife and their habitats, and provide long-term protection for the area.[12] A small portion of the Little Wekiva River Basin is

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[1] DEP, *Wekiva River Aquatic Preserve*, https://floridadep.gov/rcp/aquatic-preserve/locations/wekiva-river-aquatic-preserve (last visited Feb. 18, 2021).
[2] National Wild and Scenic Rivers System, *Florida*, https://www.rivers.gov/florida.php (last visited Feb. 18, 2021).
[3] Section 258.39(30), F.S; Fla. Admin. Code. R. 62-302.700.
[4] DEP, *Florida's Designated Paddling Trails*, https://floridadep.gov/PaddlingTrails (last visited Feb. 18, 2021).
[5] DEP, *Wekiva River Aquatic Preserve*, https://floridadep.gov/rcp/aquatic-preserve/locations/wekiva-river-aquatic-preserve (last visited Feb. 18, 2021).
[6] National Wild and Scenic Rivers System, *Wekiva River, Florida*, https://www.rivers.gov/wekiva.php (last visited Feb. 18, 2021).
[7] *Id*.
[8] Seminole County, *Seminole County Water Atlas*, http://www.seminole.wateratlas.usf.edu/macro/waterbody.aspx?wbodyid=1013 (last visited Feb. 18, 2021).
[9] St. John's WMD, *Little Wekiva River Watershed Management Plan* (Nov. 2005), *available at* http://www.orange.wateratlas.usf.edu/upload/documents/Basinreport_LittleWekiva_ExecSumm.pdf.
[10] *Id*. at ES-3.
[11] Sections 369.301-369.309, F.S. *See* 369.307(3), F.S.
[12] Sections 369.301-369.309, F.S. *See* St. John's WMD, *Little Wekiva River Watershed Management Plan* (Nov. 2005), *available at* http://www.orange.wateratlas.usf.edu/upload/documents/Basinreport_LittleWekiva_ExecSumm.pdf.

within this protection area, namely the area of the basin that is to the north of S.R. 434 and to the west of Markham Woods Road.[13] The map below shows the Wekiva River Protection Area.[14]

Seminole County Little Wekiva River Restoration Project

Seminole County has proposed a project to maintain and restore the Little Wekiva River in a proposed area that is approximately 7,000 linear feet in length and 20 acres.[15] The proposed area is shown in the map below. The project is intended to address excess accumulated sediments and vegetation that are causing the river to expand into the flood plain. Proposed project activities include harvesting invasive plant islands, removing deposited sediments within the river, re-contouring historic meanders, and replanting with beneficial native plant species.[16]

Seminole County is leading the project and coordinating with local residents, the St. Johns River Water Management District, the Department of Environmental Protection (DEP), the Fish and Wildlife Conservation Commission, the Department of Transportation, Orange County, the City of Altamonte Springs, United States Representative Stephanie Murphy, Florida Audubon, and the Friends of the Wekiva River.[17]

Seminole County estimates that the project will cost $1,650,000 and is seeking matching funds for the restoration project with local and state partners, DEP and water management district grants, and local sales tax funding.[18]

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[13] *Id*.
[14] St. Johns WMD, *Wekiva River Protection Area*, https://data-floridaswater.opendata.arcgis.com/maps/edit?content=floridaswater%3A%3Awekiva-river-protection-area-sjrwmd (last visited Feb. 18, 2021).
[15] *Seminole County*, Little Wekiva River Restoration Project (undated memo) (on file with the Senate Committee on Environment and Natural Resources).
[16] *Id*.
[17] *Id*.
[18] *Id*.

Environmental Resource Permits

Florida's environmental resource permit (ERP) program regulates activities involving the alteration of surface water flows.[19] An ERP authorizes new development or construction activities to occur in a manner that will prevent flooding, manage surface water, and protect water quality, wetlands, and other surface waters from stormwater pollution.[20] Unless specifically exempt or below permitting thresholds, anyone proposing construction of new facilities such as residential, commercial, governmental or institutional, or anyone proposing work in, on, or over wetlands or other surface waters, must obtain an ERP prior to beginning construction.[21] Construction requiring an ERP includes dredging or filling; dams, impoundments, docks or other structures; and stormwater management systems.[22]

The ERP program is implemented by DEP, the water management districts, and certain delegated local government programs. The ERP rule criteria are designed to protect water quantity, water quality, and wetland functions. An applicant must:

- Provide reasonable assurance that state water quality standards will not be violated and the activity is not contrary to public interest;
- Demonstrate that the development is not harmful to the water resources or inconsistent with the overall objectives of the appropriate water management district or DEP; and

[19] DEP, *Environmental Resource Permitting Online Help*, https://floridadep.gov/water/submerged-lands-environmental-resources-coordination/content/environmental-resource-0 (last visited Mar. 2, 2021).
[20] St. Johns River Water Management District, *Permitting*, https://www.sjrwmd.com/permitting/#about-erps (last visited Mar. 2, 2021).
[21] *Id*.
[22] MyFlorida.com, *Florida's Water Permitting Portal*, http://flwaterpermits.com/typesofpermits.html (last visited Mar. 2, 2021).

- Have a plan for implementing performance-based erosion and sediment control BMPs, which must be installed and maintained in accordance with specified manuals.[23]

If wetland or other surface water impacts will occur, mitigation is usually required to offset adverse impacts to wetland or other surface water functions.[24] DEP is authorized to issue administrative penalties under s. 403.121, F.S., for violations of the ERP permitting process.

III. Effect of Proposed Changes:

The bill requires the Department of Environmental Protection (DEP), in consultation with the St. Johns River Water Management District, Seminole County, the Fish and Wildlife Conservation Commission, and the Department of Transportation, to conduct a study and issue a report by December 31, 2021, to identify the source of sediment accumulation in the Little Wekiva River and detail improvements to the water quality and ecology of the area which might be achieved by efforts to remove accumulated sediments by appropriate means, restore the natural river channel, remove invasive plants, and implement protective measures. The report must include an estimated cost for each improvement and potential funding sources.

The bill authorizes local or state agencies or their contractors to conduct restoration efforts during the study period.

The bill requires DEP and the St. Johns River Water Management District to review any permits north of State Road 436 where the Little Wekiva River is identified as the "receiving waters" to assess whether any permittee is in violation of permit conditions, take appropriate action to resolve compliance issues, and remediate any impacts related to sedimentation in the Little Wekiva River and its adjacent wetland habitat.

The bill requires permitting agencies to levy all fines authorized by law commensurate with restoration costs if a permittee or their contractors is found to be in violation of a permit condition for a project that has had an accumulation of sediments or caused ecological harm to the Little Wekiva River.

The bill takes effect on July 1, 2021.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

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[23] Fla. Admin. Code R. 62-330.301 and 62-330.302; *see also* DEP, *Environmental Resource Permit Applicant's Handbook Volume 1 (General and Environmental)* (eff. June 1, 2018), *available at* https://www.swfwmd.state.fl.us/sites/default/files/medias/documents/Appliicant_Hanbook_I_-_Combined.pd_0.pdf.

[24] St. Johns River Water Management District, *Permitting*, https://www.sjrwmd.com/permitting/#about-erps (last visited Mar. 2, 2021).

C. Trust Funds Restrictions:

None.

D. State Tax or Fee Increases:

None.

E. Other Constitutional Issues:

None.

V. Fiscal Impact Statement:

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

C. None.Government Sector Impact:

The agencies charged with completing the study required under the bill may incur increased costs associated with conducting the study and issuing the report.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Statutes Affected:

This bill creates an undesignated section of law.

IX. Additional Information:

A. Committee Substitute – Statement of Substantial Changes:
(Summarizing differences between the Committee Substitute and the prior version of the bill.)

CS by Environment and Natural Resources on March 2, 2021:

- Revises the purpose of the study required under the bill to detail improvements to the water quality and ecology of the Little Wekiva River area which might be achieved by certain efforts.
- Authorizes local or state agencies or their contractors to conduct restoration efforts during the time the study is being completed.
- Requires DEP and the water management districts to review permits north of SR 436 where the Little Wekiva River is identified as the receiving waters to assess whether

the permittee is in violation of any permit conditions, take appropriate action to resolve compliance issues, and remediate any impacts from sedimentation.

- Authorizes permitting agencies to levy all fines authorized by law commensurate with restoration costs on a permittee or contractors found to be in violation of a permit condition for a project that has had an accumulation of sediments or caused ecological harm to the Little Wekiva River.

B. Amendments:

None.

This Senate Bill Analysis does not reflect the intent or official position of the bill's introducer or the Florida Senate.

130930

LEGISLATIVE ACTION

Senate	.	House
Comm: RCS	.	
03/02/2021	.	
	.	
	.	
	.	

The Committee on Environment and Natural Resources (Brodeur) recommended the following:

Senate Amendment (with title amendment)

Delete lines 25 - 41

and insert:

might be achieved by efforts to remove accumulated sediments by appropriate means, restore the natural river channel, remove invasive plants, and implement protective measures. The report must include an estimated cost for each improvement and potential funding sources. Local or state agencies or their contractors may conduct restoration efforts during the study

130930

period. The department and the water management district shall immediately review any permits north of SR 436 where the Little Wekiva River is identified as the "receiving waters" to assess whether any permittee is in violation of any permit conditions, take appropriate action to resolve any compliance issues, and remediate any impacts related to sedimentation in the Little Wekiva River and its adjacent wetland habitat. If a permittee or their contractors are found to be in violation of any permit condition associated with a project that has had an accumulation of sediments or has been found to have caused ecological harm to the Little Wekiva River, the permitting agencies shall levy all fines authorized by law commensurate with restoration costs.

================ T I T L E A M E N D M E N T ================

And the title is amended as follows:

Delete lines 9 - 13

and insert:

the Little Wekiva River by a specified date; providing requirements for the report; authorizing local and state entities or their contractors to conduct restoration efforts during the study period; requiring the department and the water management district to review certain permits along the Little Wekiva River; requiring certain enforcement actions to be taken for permittees found to not be in compliance; providing an

By Senator Brodeur

9-01021-21 2021976__

A bill to be entitled

An act relating to a study of the Little Wekiva River; requiring the Department of Environmental Protection, in consultation with the St. Johns River Water Management District, Seminole County, the Fish and Wildlife Conservation Commission, and the Department of Transportation, to conduct a study and issue a report on sediment accumulation and water quality in the Little Wekiva River by a specified date; amending s. 369.307, F.S.; requiring a permit application for a development located partially or wholly within the Wekiva River Protection Area to include a study of the potential impacts to the Wekiva River; providing an effective date.

Be It Enacted by the Legislature of the State of Florida:

Section 1. The Department of Environmental Protection, in consultation with the St. Johns River Water Management District, Seminole County, the Fish and Wildlife Conservation Commission, and the Department of Transportation, shall conduct a study and issue a report by December 31, 2021, to identify the source of sediment accumulation in the Little Wekiva River and detail improvements to the water quality and ecology of the area which might be achieved by efforts to dredge the river channel and remove invasive plants. The report must include an estimated cost for each improvement and potential funding sources.

Section 2. Subsection (1) of section 369.307, Florida Statutes, is amended to read:

CODING: Words ~~stricken~~ are deletions; words underlined are additions.

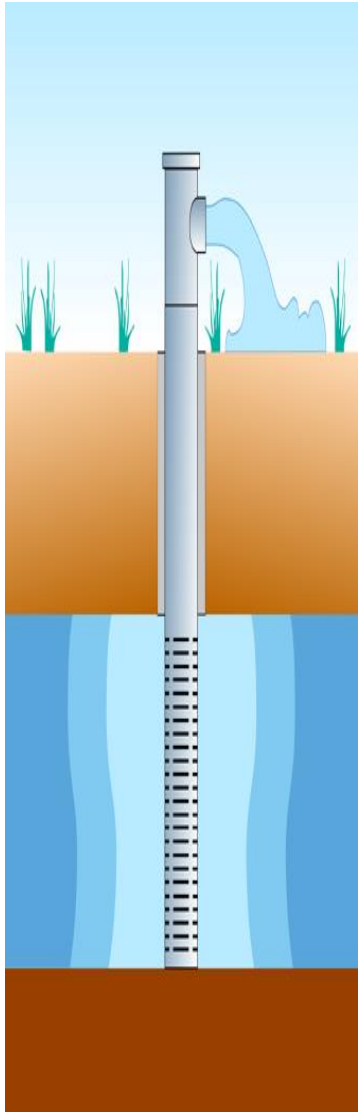
369.307 Developments of regional impact in the Wekiva River Protection Area; land acquisition.—

(1) Notwithstanding s. 380.06(4), the counties shall consider and issue the development permits applicable to a proposed development of regional impact which is located partially or wholly within the Wekiva River Protection Area at the same time as the development order approving, approving with conditions, or denying a development of regional impact. A permit application for a development that is located partially or wholly within the Wekiva River Protection Area must include a study of the potential impacts to the Wekiva River from the proposed development project.

Section 3. This act shall take effect July 1, 2021.

CODING: Words ~~stricken~~ are deletions; words underlined are additions.

Aquifer Storage Recovery (ASR)



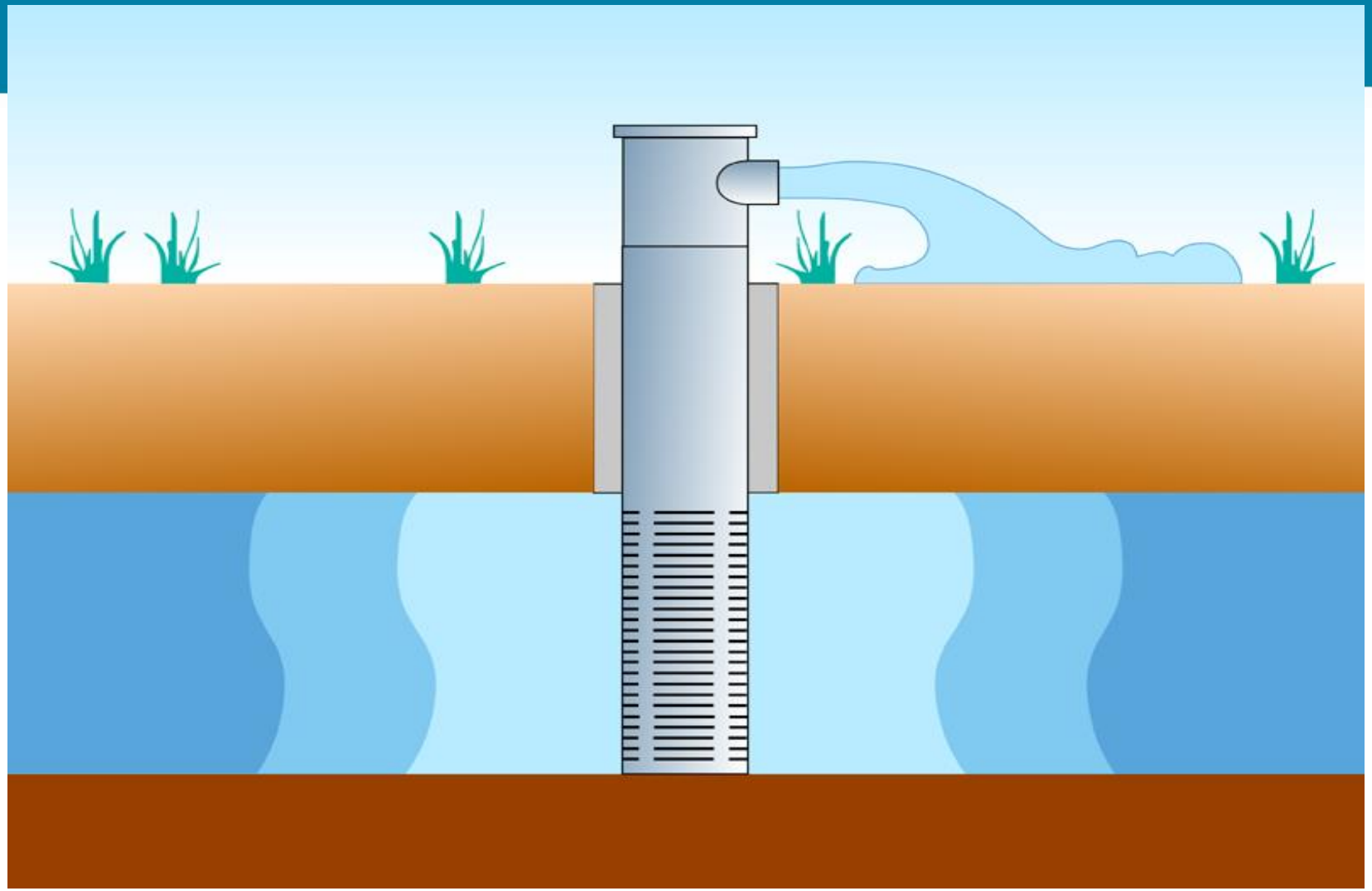
Presentation to Florida Senate Environment & Natural Resources Committee

March 2, 2021

R. David G. Pyne, P.E.
ASR Systems LLC
Gainesville, Florida
(cell) 352-215-0319
dpyne@asrsystems.ws

Mark B. McNeal, P.G.
ASRus, LLC
Tampa, FL
(cell) 813-765-7942
www.ASRus.net

Aquifer Storage Recovery



Storage of water through a well in a suitable aquifer during times when the water is available, and recovery of the stored water from the same well when needed

What ASR is not….

- “Deep well injection of sewage” (1983)
- “Raw sewage and HIV virus injected into our drinking water supplies” (2001)
- Inadequate due to low flow rate (2020)
- Unproven (despite 40 years of Florida ASR experience)
- Arsenic easily controlled with buffer zone formation

Orange County Utilities ASR-1
2010

Florida Leads the World in ASR

February 2021: About 25 States;
Over 160 ASR Wellfields; Over 560 ASR wells

	Wellfields	Wells
• **Florida**	**51**	123
• New Jersey	24	27
• California	18	68
• Arizona	14	52
• Oregon	11	37
• South Carolina	8	41
• Colorado	6	45
• Nevada	5	91
• Iowa	4	4
• Texas	5	45
• Washington	3	7
• Idaho	2	7
• North Carolina	2	2
• Delaware	2	2
• VA, NM, SD, UT, ME, MN, KS, MS	1 each	9

Global implementation of ASR since 1985 to achieve water supply sustainability and reliability

- Australia
- India
- Israel
- Canada
- England
- Netherlands
- Spain
- South Africa
- Namibia
- United Arab Emirates
- Bangladesh
- And others in development (Kuwait, Taiwan, Indonesia, Qatar, Serbia, Iran)

Adelaide, Australia ASR Well

Florida's stringent ASR regulations are protecting Florida's groundwater

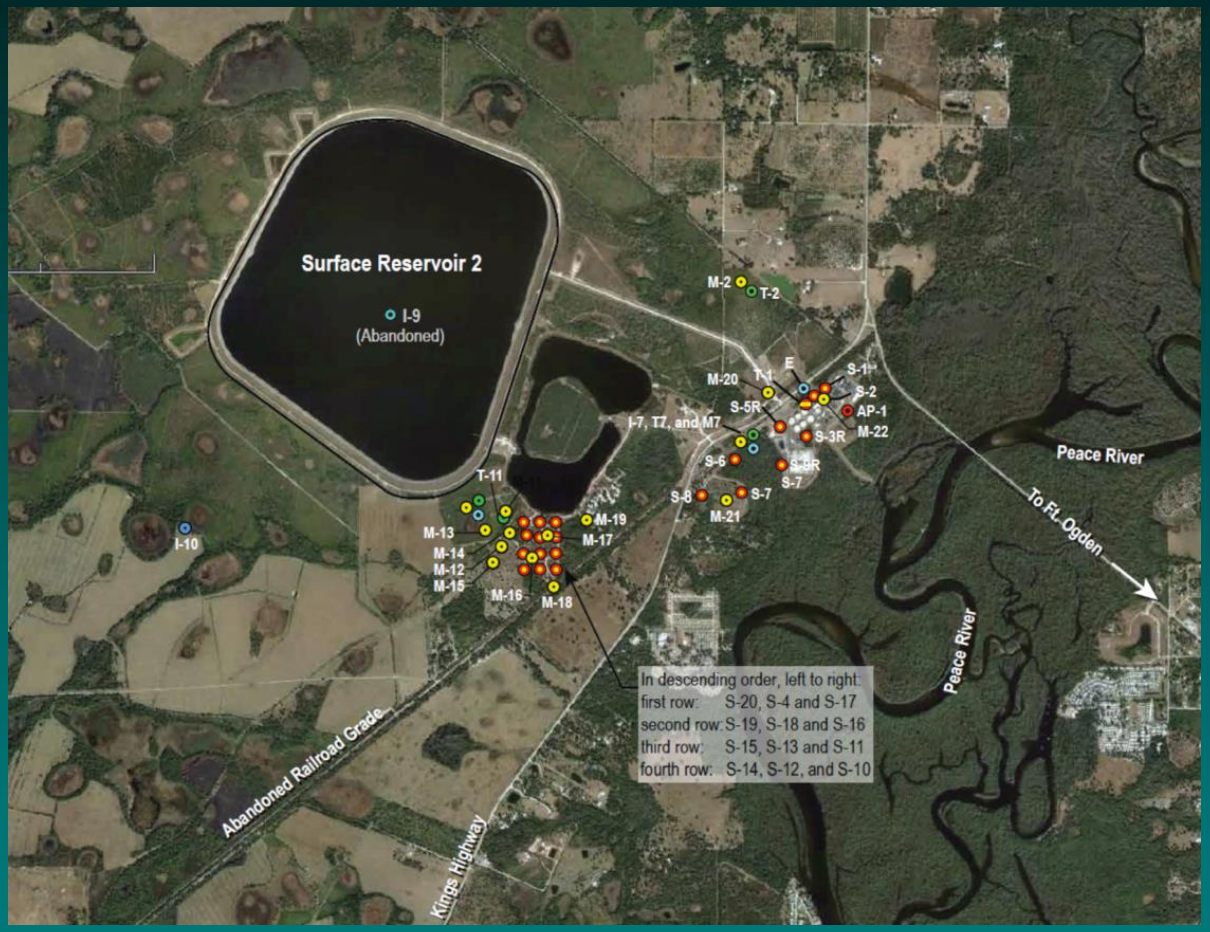
- ASR wells are regulated under Florida's Underground Injection Control (UIC) program administered by FDEP
- Florida's UIC program is more stringent than the Federal UIC program implemented under the Safe Drinking Water Act and is one of the most protective regulatory programs nationwide
- Regulations do not allow for any ASR activities to cause a violation of a Primary Drinking Water Standard within the aquifer
- Stringent design and construction standards are in place for ASR wells
- Construction oversight by qualified personnel
- Comprehensive groundwater monitoring programs are in place at each ASR site

Treated Surface Water ASR

- Examples: Peace River, Tampa, Bradenton, Manatee Co
- Used when excess surface water supply and excess WTP capacity are seasonally available
- Provides peaking ability above existing WTP capacity
- Can be used to defer treatment plant expansions

Example: Peace River ASR

- ASR is a proven, cost-effective alternative water supply
- 21 wells/21 mgd
- More than 35 years of successful operation (1985-present)
- 9 BG; 27,000 AF
- Has provided critical water supplies during drought conditions
- Excellent example of ASR supporting 6 BG surface storage system



Peace River Manasota Regional Water Supply Authority ASR System

Example: City of West Palm Beach

- Largest known ASR well (8 mgd)
- Water Quality Criteria Exemption (WQCE) was issued
  - Allows storage of raw surface water
  - Establishes coliform compliance in aquifer
  - Color removal not necessary
  - Aquifer must contain >3,000 mg/L TDS
  - Demonstrated no long-term water supply reasonably expected in area
- Coliform die-off in the aquifer has been well documented during operation of this system

Lake Okeechobee ASR

- Each circle represents a cluster of about 8 ASR wells
- Ten well clusters
- Phased Implementation

Area – 400 acres

Ie: 80 wells @ 5 acres/well

80 wells @5 MGD/well

Storage = 448,000 AF

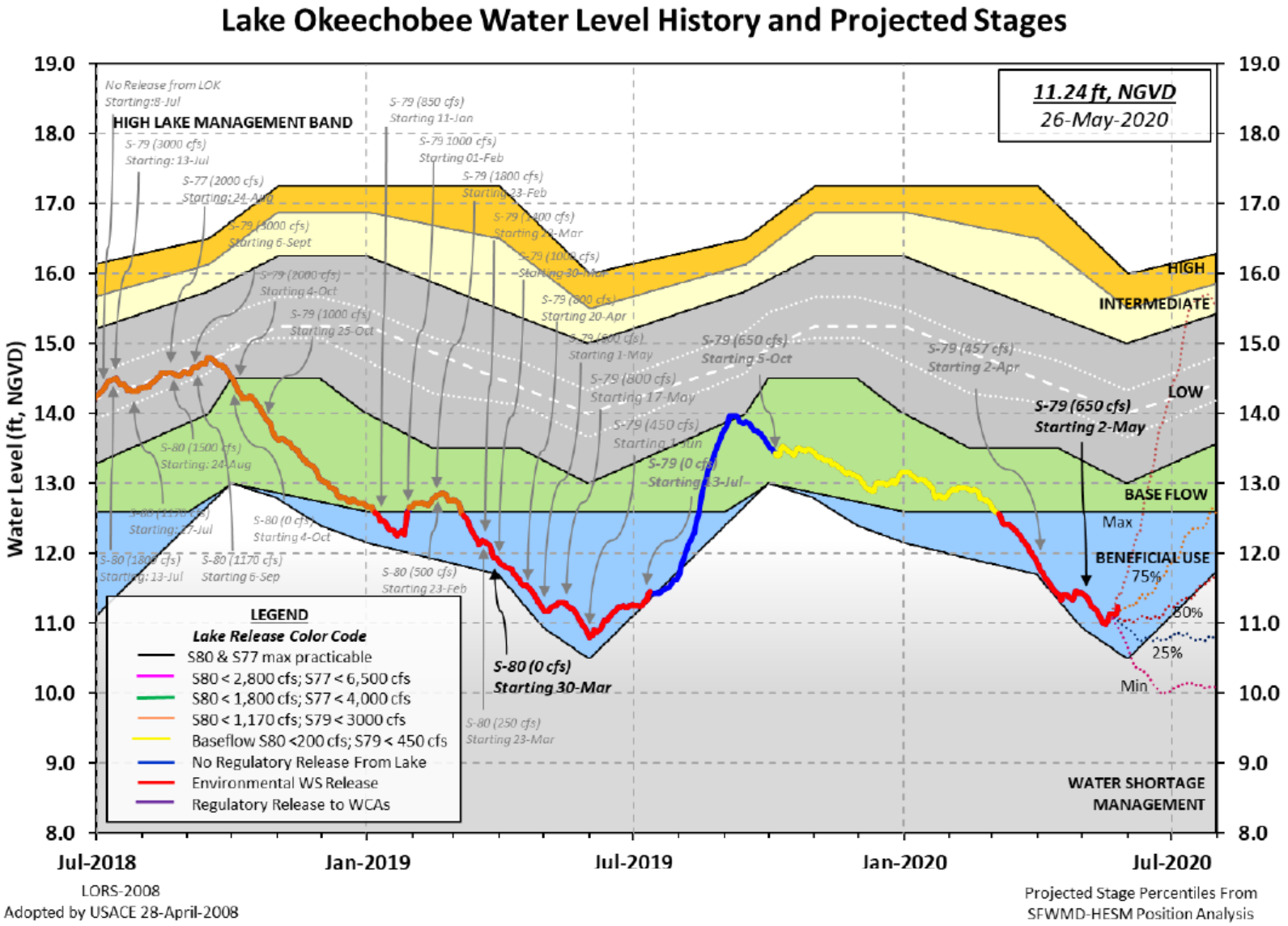
80 ASR wells; +/- 5,600 AF/well

Cost (Stantec)

Wells - $0.4B

Treatment - $0.8B

Average 1 ft water level change = 467,000 AF



Area –
730 sq miles

Average
Depth –
8.83 ft

ASR is Cost-Effective

	Acre-Feet, AF	$/ AF
• C-43 Reservoir	170,000	19,250
• EAA Reservoir	240,000	14,170
• ASR at North L.O.	448,000	2,680
Total Storage Volume =	858,000 AF	

Equivalent to about 1.8 ft on L.O.

ASR is a Proven Technology

- Widely implemented in Florida, the U.S.A and globally
- Store more water during wet periods and floods
- Recover and release more water during dry periods and droughts
- Add more ASR wells to provide more storage volume
- The planned size and scale of L.O. ASR storage is not extraordinary compared to other existing sites

ASR is Safe for the Environment

- Begins with treatment to Drinking Water Standards
- Then…
  - >90% Phosphorus and Nitrogen reduction
  - Control of Arsenic
  - Inactivation of bacteria, viruses, protozoa
  - Subsurface microbial and geochemical processes are effective
- The SFWMD “Science Plan” will reinforce our current understanding of these processes

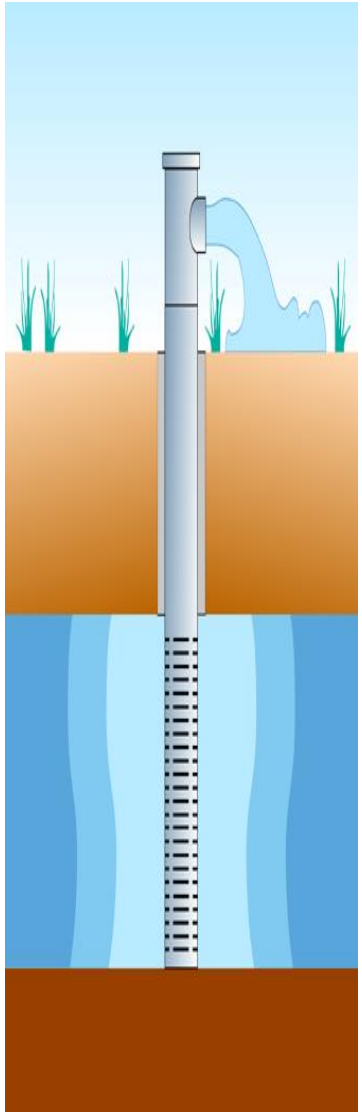
Slow the Flow…
…and Achieve Everglades Restoration

- Of the four main strategies to reduce harmful discharges (ASR, reservoirs, deep well injection and lake regulation), ASR and corresponding changes to the lake regulation schedule can be quickly, safely and economically implemented

- We have the opportunity to effectively integrate water storage in ASR wells, C-43 Reservoir, EAA Reservoir, STA's and storage in Lake Okeechobee

- When added to existing authorized CERP projects, frequency of harmful discharges from L.O. to the estuaries will be reduced by 80%

Aquifer Storage Recovery (ASR)



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dpyne@asrsystems.ws

Mark B. McNeal, P.G.
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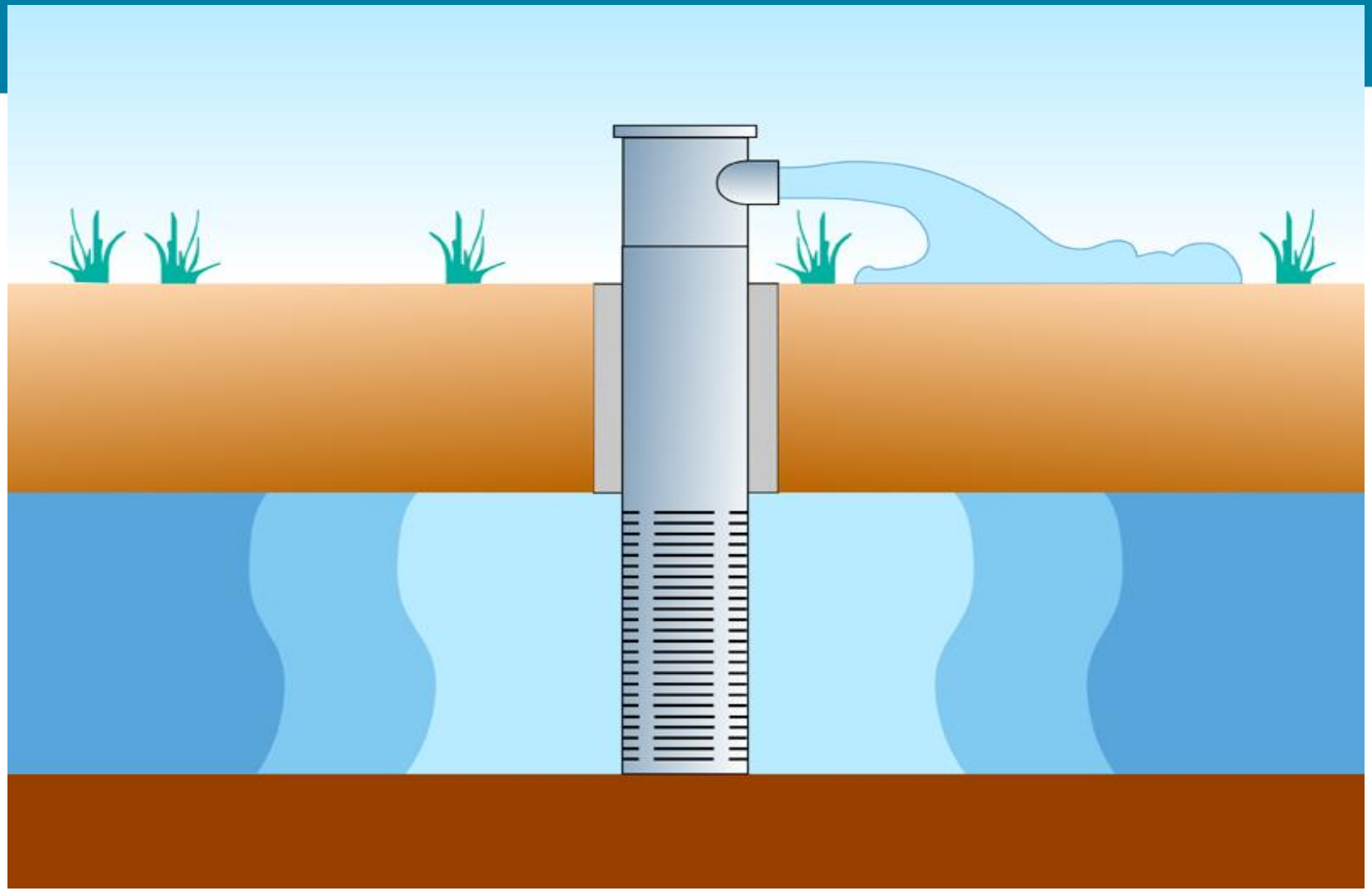
(cell) 813-765-7942
www.ASRus.net

Aquifer Storage Recovery



Storage of water through a well in a suitable aquifer during times when the water is available, and recovery of the stored water from the same well when needed

Several factors have contributed to ASR global implementation

- Economics
  - Typically less than half the capital cost of alternative water supply sources
  - Phased implementation
- Proven Success
  - About 160 wellfields in 25 states with over 560 operating, fully permitted ASR wells
- Environmental and Water Quality Benefits
  - Small storage footprint compared to surface reservoirs
- Adaptability to Different Situations
  - Fresh, brackish or saline storage aquifers
  - Drinking water, reclaimed water, stormwater or groundwater storage

West Palm Beach, Florida
ASR Well – 8 MGD Capacity
Largest ASR Well in the World

ASR has 30 applications (to date) to meet local & regional needs

- Seasonal storage
- Peak, diurnal and emergency water needs
- Water banking, or long-term storage
- Improve water quality
- Prevent seawater intrusion
- Protect endangered species
- Agricultural water supply
- Defer expansion of water facilities
- Disinfection Byproduct reduction
- Temperature control
- Hydraulic control of contaminant plumes
- Restore groundwater levels
- Reduce subsidence
- Maintain distribution system flows and pressures
- ….several other applications to date

Manatee County, Florida ASR Well, 1983

ACEC Grand Award, 1984

Identifying and prioritizing these applications is a logical first step in ASR planning

What ASR is not….

- “Deep well injection of sewage” (1983)
- “Raw sewage and HIV virus injected into our drinking water supplies” (2001)
- Inadequate due to low flow rate (2020)
- Unproven (despite 40 years of Florida ASR experience)
- Arsenic easily controlled with buffer zone formation

Orange County Utilities ASR-1
2010

Global implementation of ASR since 1985 to achieve water supply sustainability and reliability

- Australia
- India
- Israel
- Canada
- England
- Netherlands
- Spain
- South Africa
- Namibia
- United Arab Emirates
- Bangladesh
- And others in development (Kuwait, Taiwan, Indonesia, Qatar, Serbia, Iran)

Adelaide, Australia ASR Well

February 2021: About 25 States; Over 160 ASR Wellfields; Over 560 ASR wells

	Wellfields	Wells
• **Florida**	**51**	123
• New Jersey	24	27
• California	18	68
• Arizona	14	52
• Oregon	11	37
• South Carolina	8	41
• Colorado	6	45
• Nevada	5	91
• Iowa	4	4
• Texas	5	45
• Washington	3	7
• Idaho	2	7
• North Carolina	2	2
• Delaware	2	2
• VA, NM, SD, UT, ME, MN, KS, MS	1 each	9

Florida's stringent ASR regulations are protecting Florida's groundwater

- ASR wells are regulated under Florida's Underground Injection Control (UIC) program administered by FDEP
- Florida's UIC program is more stringent than the Federal UIC program implemented under the Safe Drinking Water Act and is one of the most protective regulatory programs nationwide
- Regulations do not allow for any ASR activities to cause a violation of a Primary Drinking Water Standard within the aquifer
- Stringent design and construction standards are in place for ASR wells
- Construction oversight by qualified personnel
- Comprehensive groundwater monitoring programs are in place at each ASR site

ASR variations are under development in Florida to better manage our water resources

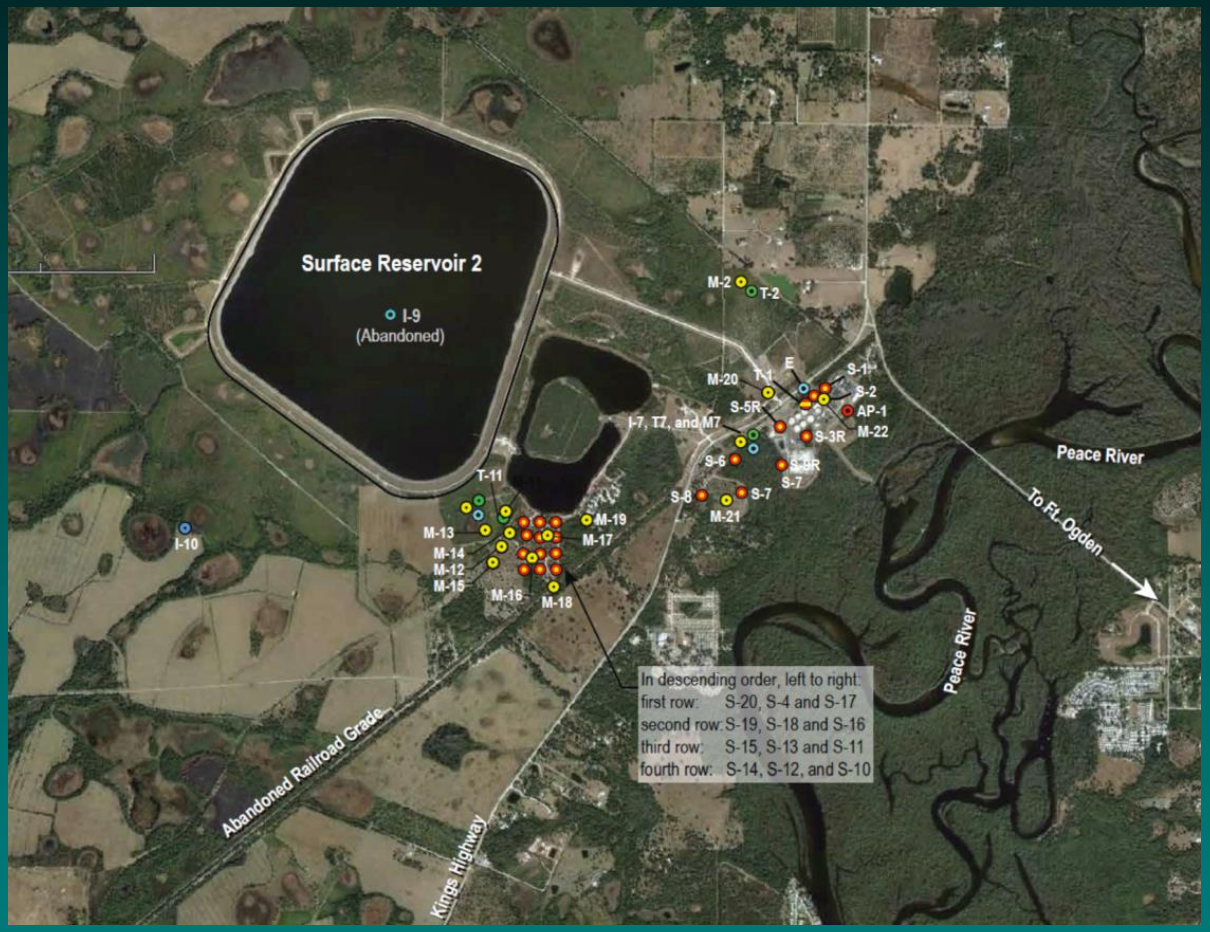
- Fully treated surface water ASR
- Partially treated surface water ASR
- Untreated surface water ASR
  - Stormwater ASR
- Fully treated groundwater ASR
- Untreated groundwater ASR
- Reclaimed water ASR

ASR Variations – Fully Treated Surface Water ASR

- Examples: Peace River, Tampa, Bradenton, Manatee Co
- Used when excess surface water supply and excess WTP capacity are seasonally available
- Provides peaking ability above existing WTP capacity
- Can be used to defer treatment plant expansions

Example: Peace River ASR

- ASR is a proven, cost-effective alternative water supply
- 21 wells/21 mgd
- More than 35 years of successful operation (1985-present)
- 9 BG; 27,000 AF
- Has provided critical water supplies during drought conditions
- Excellent example of ASR supporting 6 BG surface storage system

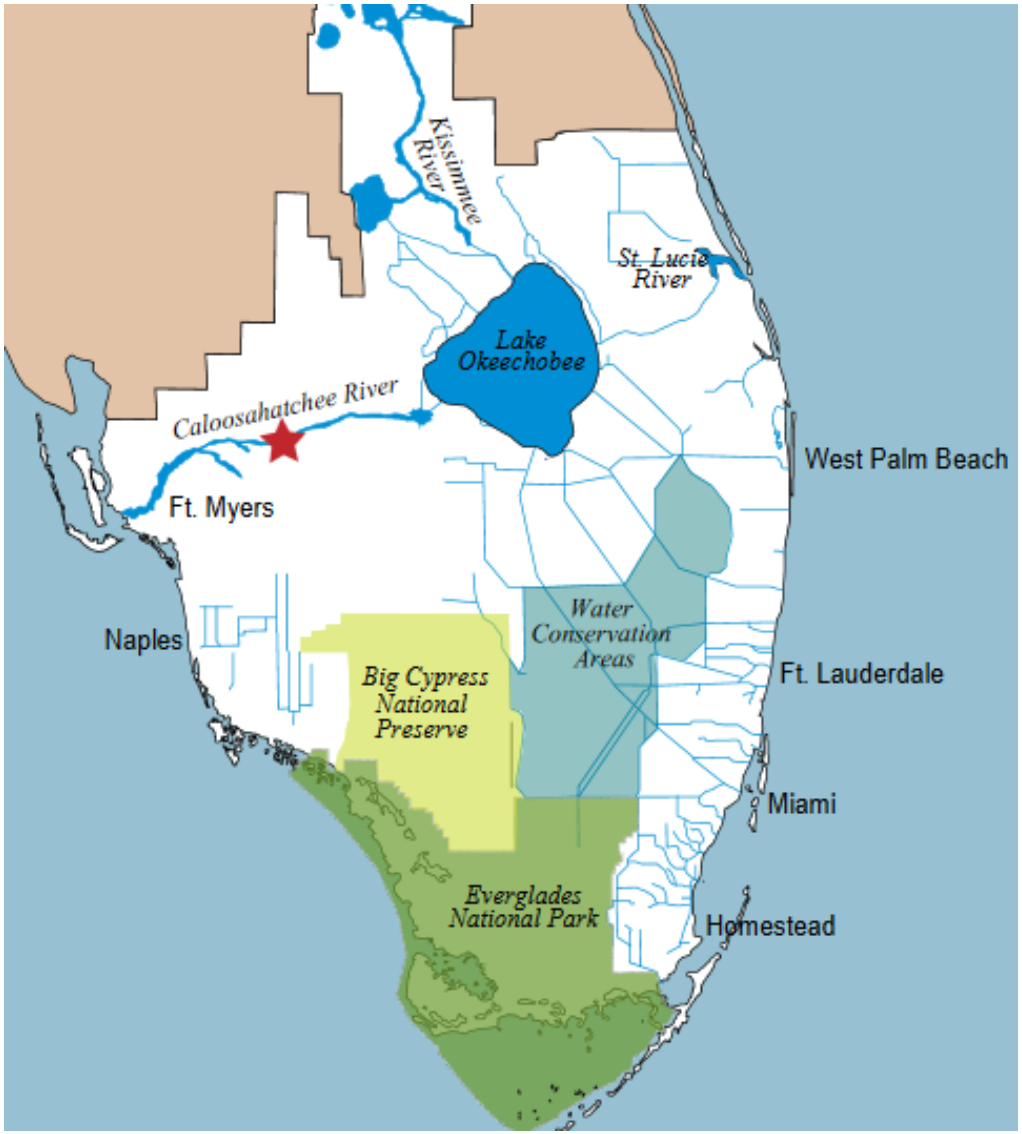


Peace River Manasota Regional Water Supply Authority ASR System

Example: City of West Palm Beach

- Largest known ASR well (8 mgd)
- Water Quality Criteria Exemption (WQCE) was issued
  - Allows storage of raw surface water
  - Establishes coliform compliance in aquifer
  - Color removal not necessary
  - Aquifer must contain >3,000 mg/L TDS
  - Demonstrated no long-term water supply reasonably expected in area
- Coliform die-off in the aquifer has been well documented during operation of this system

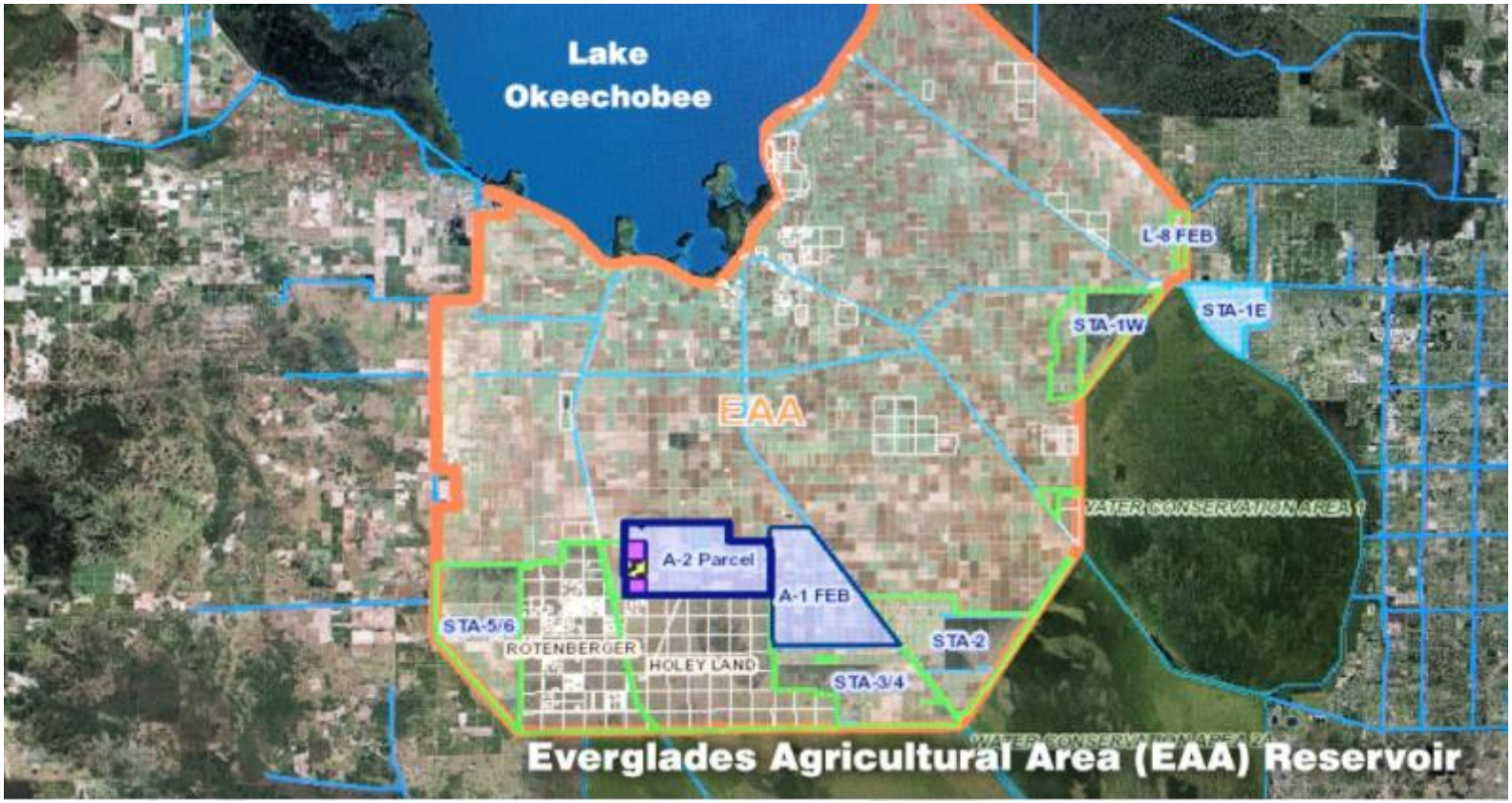
C-43 Reservoir



- Area 10,500 acres
- Storage Volume: 170,000 acre-ft
- $1.1B estimated construction cost

(USACE)

EAA Reservoir



AREA – 17,000 ACRES (INCLUDING RESERVOIR & STA)
STORAGE VOLUME – 240,000 AF
ESTIMATED COST - $3.4B (USACE)

Lake Okeechobee ASR

- Each circle represents a cluster of about 8 ASR wells
- Ten well clusters
- Phased Implementation

Area – 400 acres

Ie: 80 wells @ 5 acres/well

80 wells @5 MGD/well

Storage = 448,000 AF

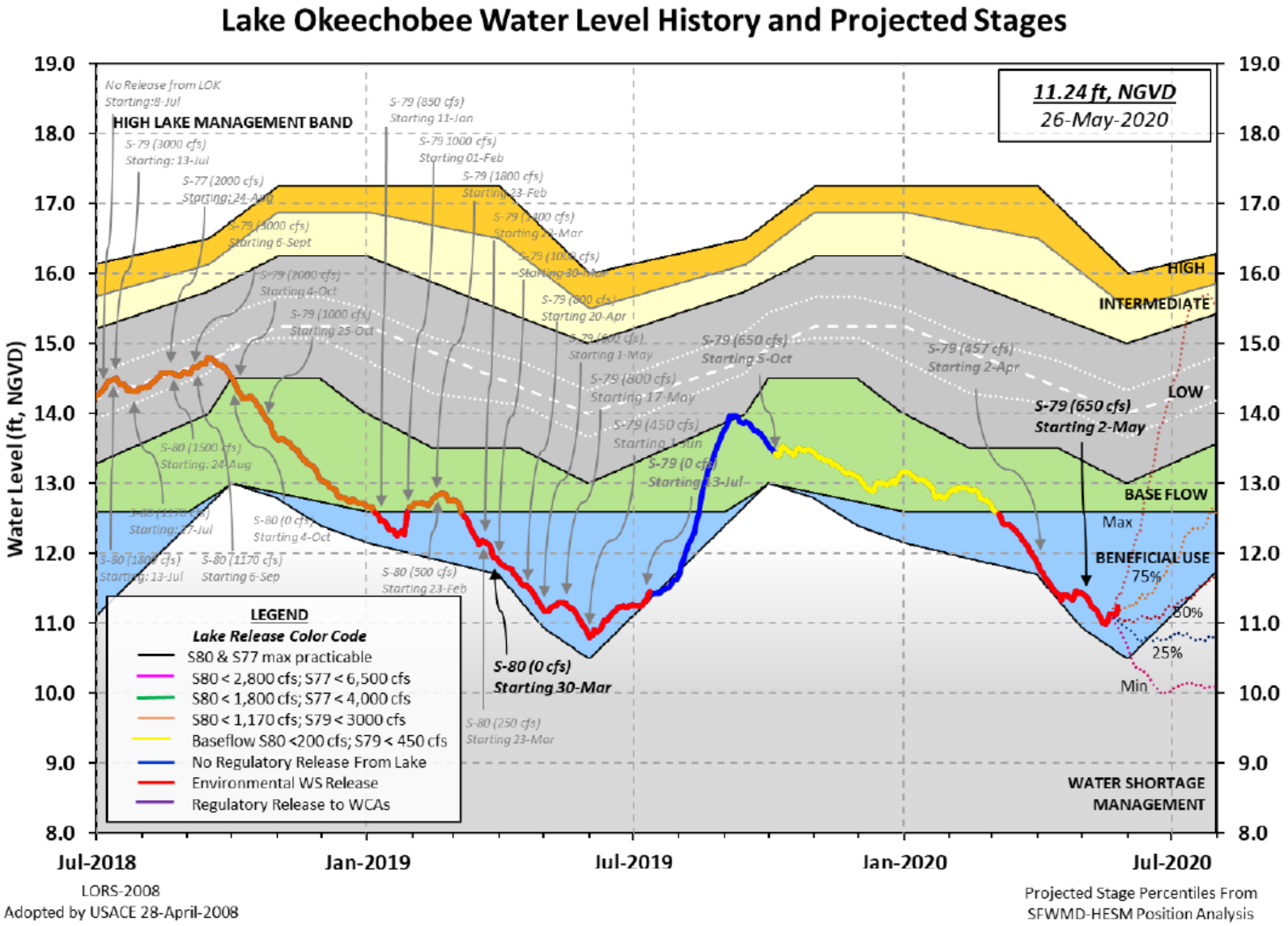
80 ASR wells; +/- 5,600 AF/well

Cost (Stantec)

Wells - $0.4B

Treatment - $0.8B

Average 1 ft water level change = 467,000 AF



Area –
730 sq miles

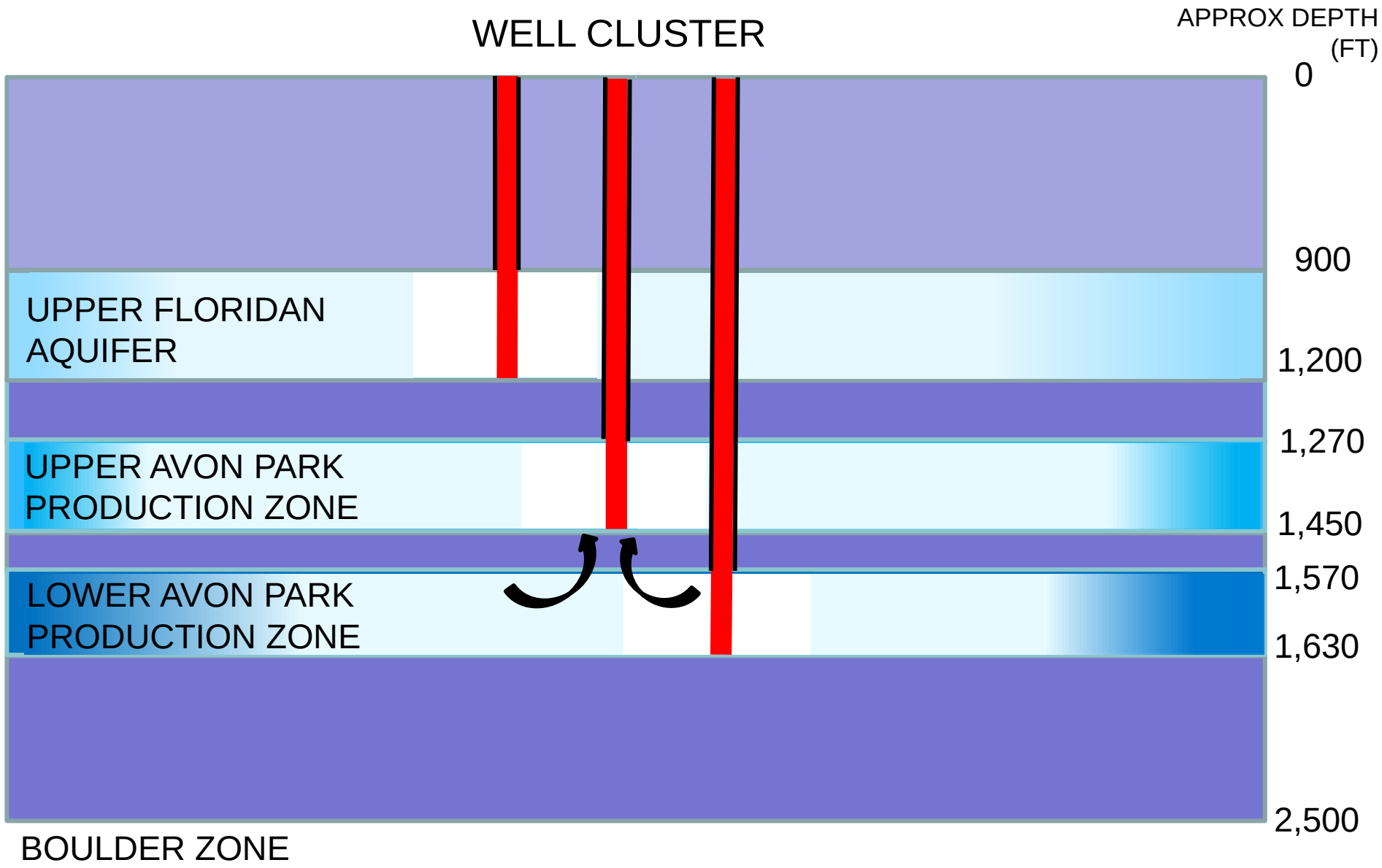
Average
Depth –
8.83 ft

ASR is Cost-Effective

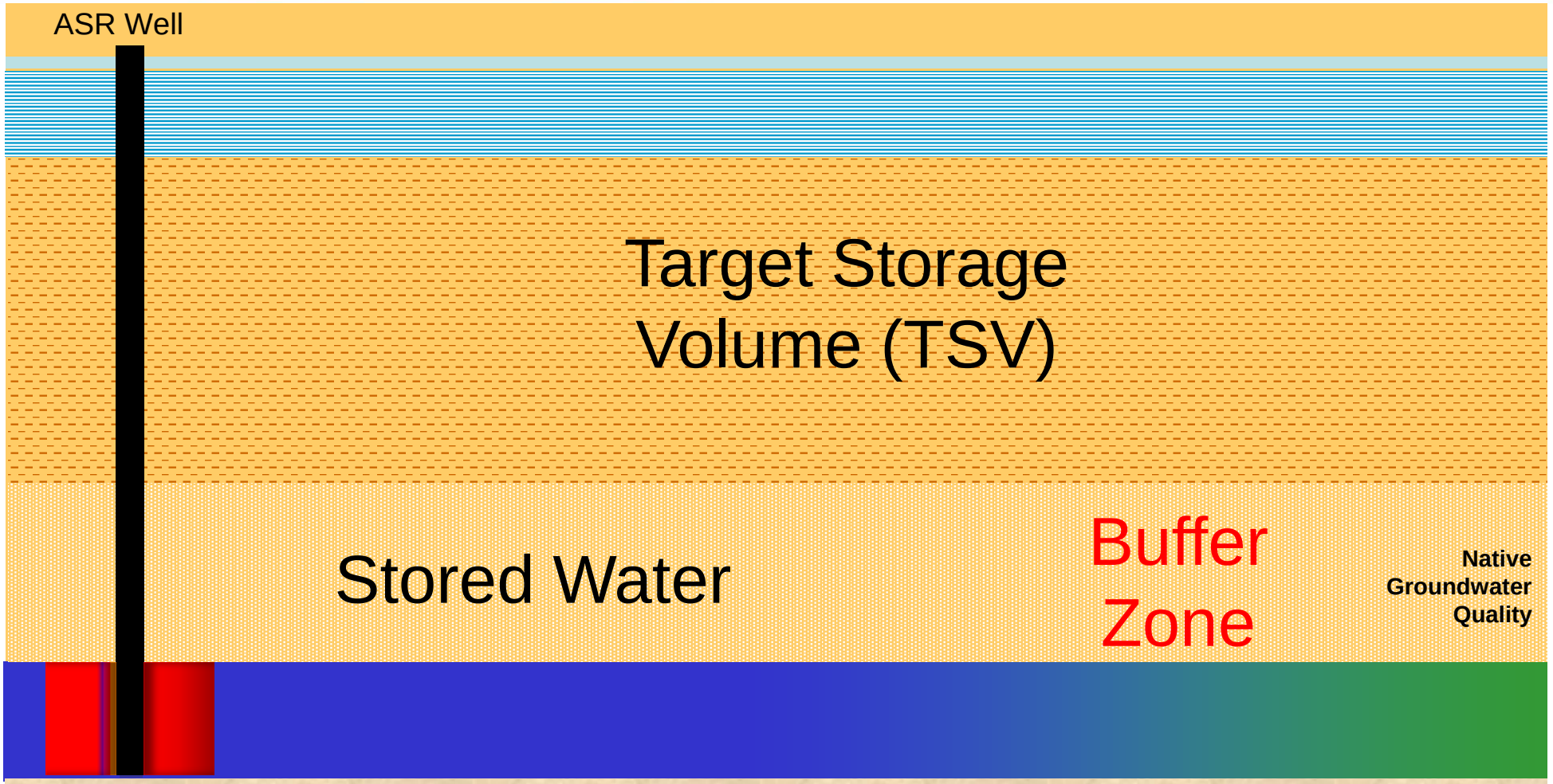
	Acre-Feet, AF	$/ AF
• C-43 Reservoir	170,000	19,250
• EAA Reservoir	240,000	14,170
• ASR at North L.O.	448,000	2,680
Total Storage Volume =	858,000 AF	

Equivalent to about 1.8 ft on L.O.

“Stacking:” ASR Proposed Conceptual Design at Lake Okeechobee, Florida



Formation and Maintenance of a Buffer Zone usually achieves recovered water quality goals…including arsenic attenuation



TSV is the sum of the stored water volume and the buffer zone volume. It is expressed in MG/MGD of recovery capacity, or in “days”

ASR projects are getting larger

- San Antonio Water System – 60 MGD ASR wellfield, operating since 2001
- Ten L.O. well clusters, spread over a wide area, each planned for 40 MGD
- California Central Valley – 400 conversions of agricultural wells to ASR, underway
- Texas proposed ecosystem ASR – 350 MGD for achievement of estuarine attainment goals
- Qatar – 400 MGD ASR wellfield planned for water supply reliability

ASR is a Proven Technology

- Widely implemented in Florida, USA and globally
- Store more water during wet periods and floods
- Recover and release more water during dry periods and droughts
- Add more ASR wells to provide more storage volume
- The planned size and scale of L.O. ASR storage is not extraordinary compared to other existing sites
- Consider future possible adjustment of the L.O. Regulation Schedule to provide for more efficient use of total available storage volume

ASR is Safe for the Environment

- Begins with treatment to Drinking Water Standards
- Then…
  - >90% Phosphorus and Nitrogen reduction
  - Control of Arsenic
  - Inactivation of bacteria, viruses, protozoa
  - Subsurface microbial and geochemical processes are effective
- The SFWMD “Science Plan” will reinforce our current understanding of these processes

Slow the Flow…
…and Achieve Everglades Restoration

- Of the four main strategies to reduce harmful discharges (ASR, reservoirs, deep well injection and lake regulation), ASR and corresponding changes to the lake regulation schedule can be quickly, safely and economically implemented

- We have the opportunity to effectively integrate water storage in ASR wells, C-43 Reservoir, EAA Reservoir, STA's and storage in Lake Okeechobee

- When added to existing authorized CERP projects, frequency of harmful discharges from L.O. to the estuaries will be reduced by 80%

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

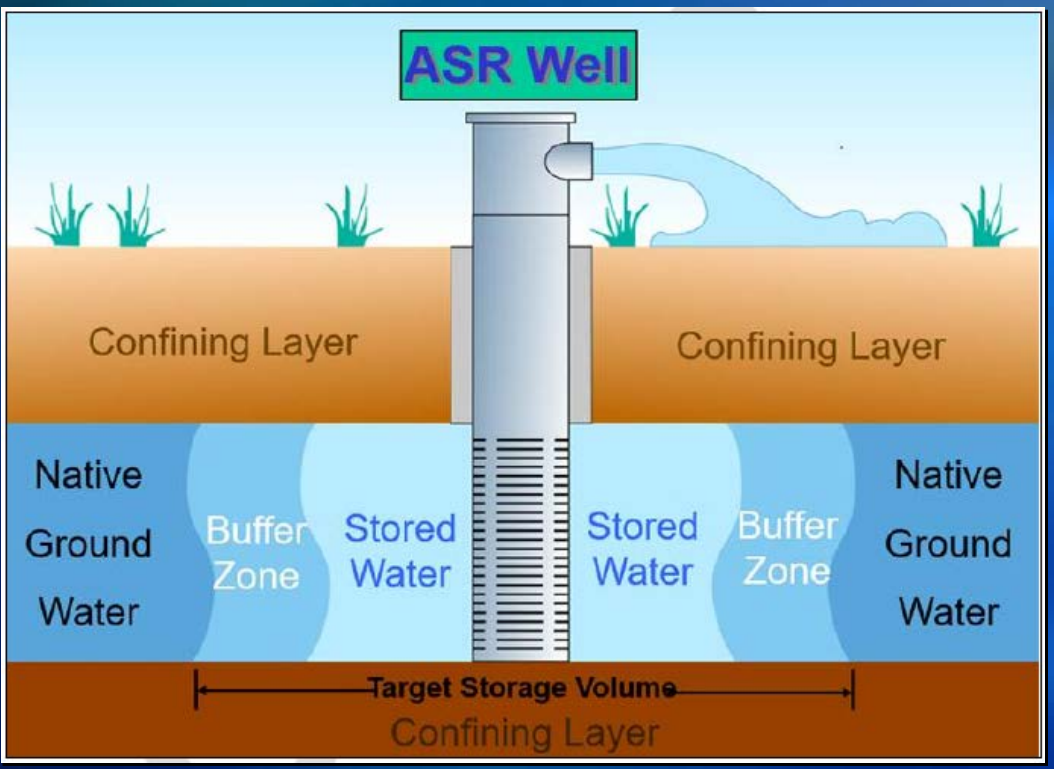
South Florida Water Management District
Senate Committee on Environment and Natural Resources

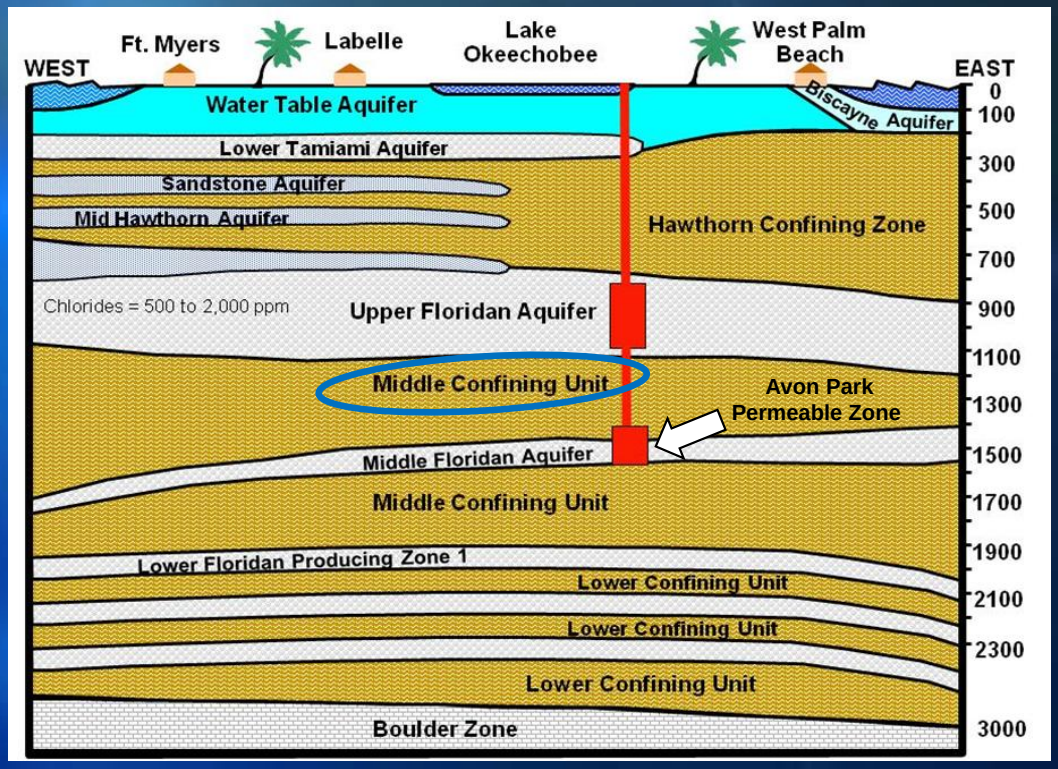
Drew Bartlett, Executive Director

March 2, 2021

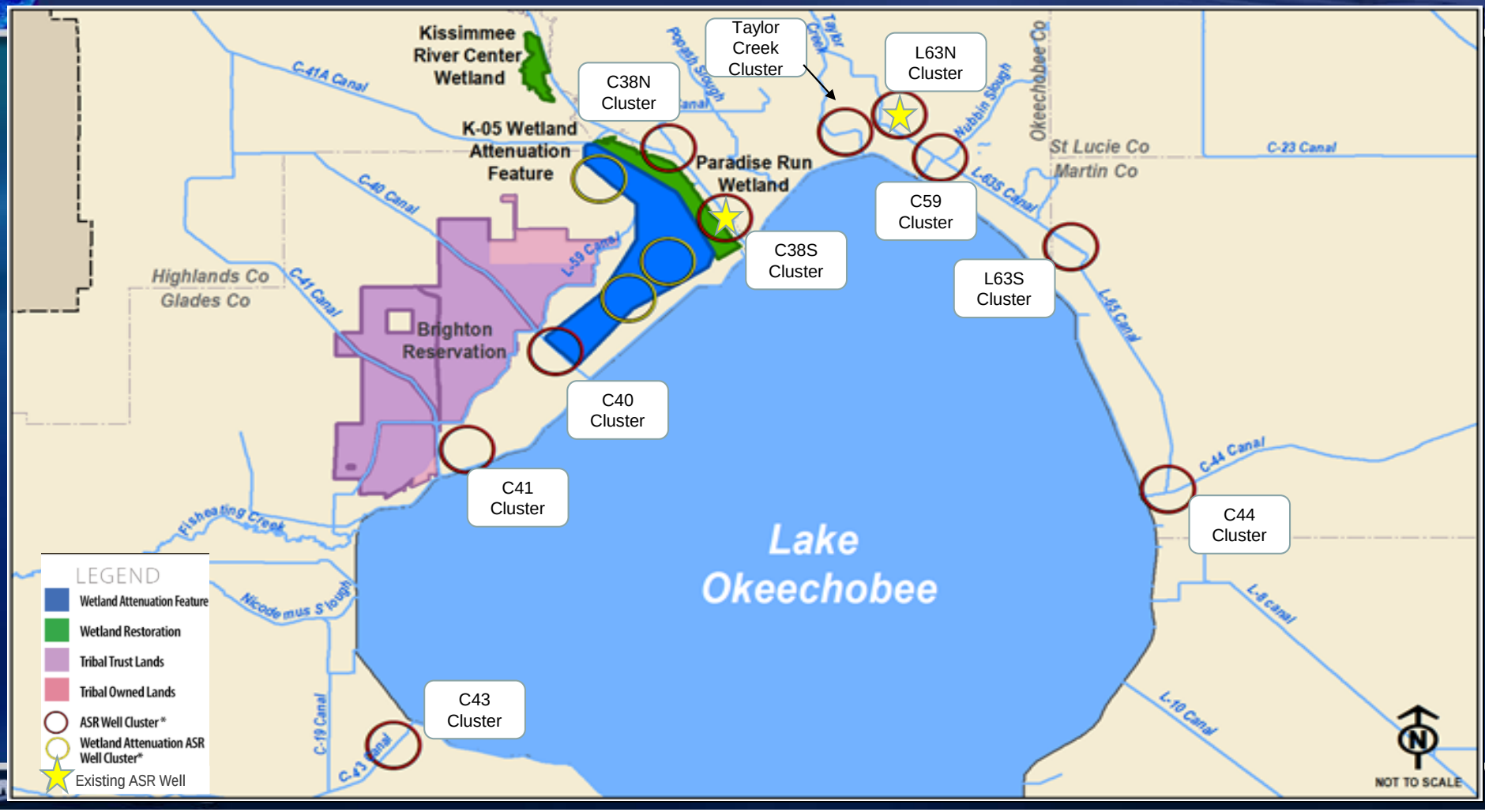
sfwmd.gov

Aquifer Storage & Recovery (ASR) Wells





Lake Okeechobee Watershed Restoration Project



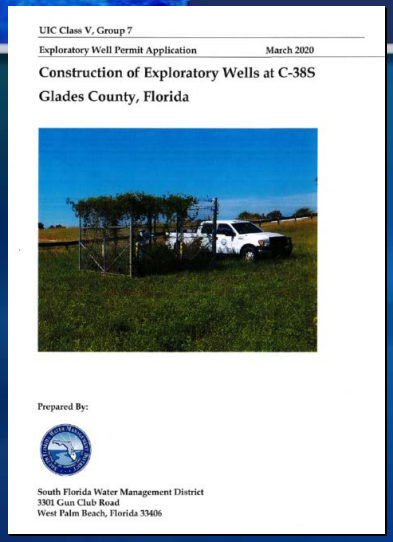
ASR Well Implementation – Determine Feasibility

Site Evaluation and Selection

Core and Data Collection

Exploratory/Test Well Drilling

ASR Well Implementation

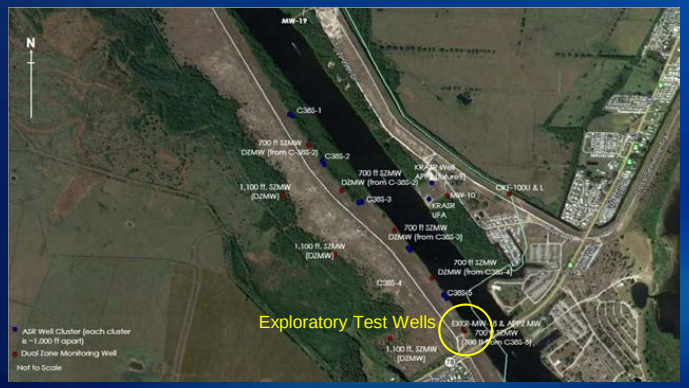

UIC Class V, Group 7

Exploratory Well Permit Application March 2020

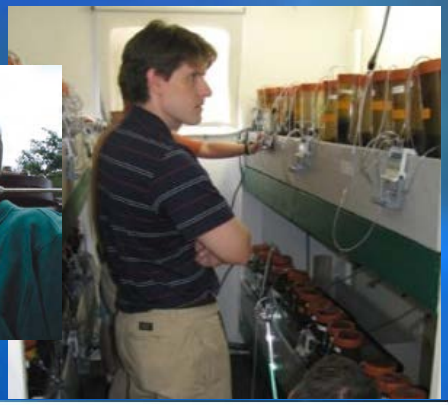
Construction of Exploratory Wells at C-38S
Glades County, Florida

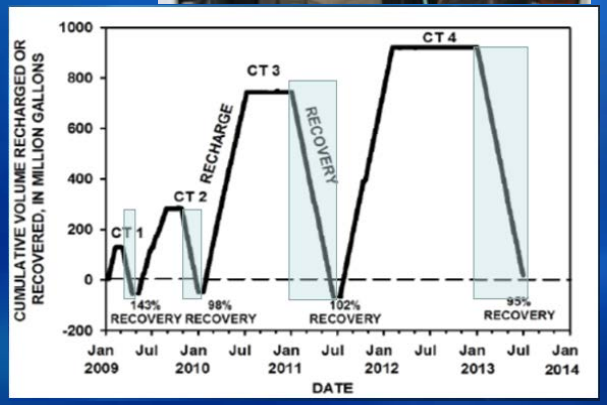
Prepared By:

South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406



Design, Permitting, & Construction



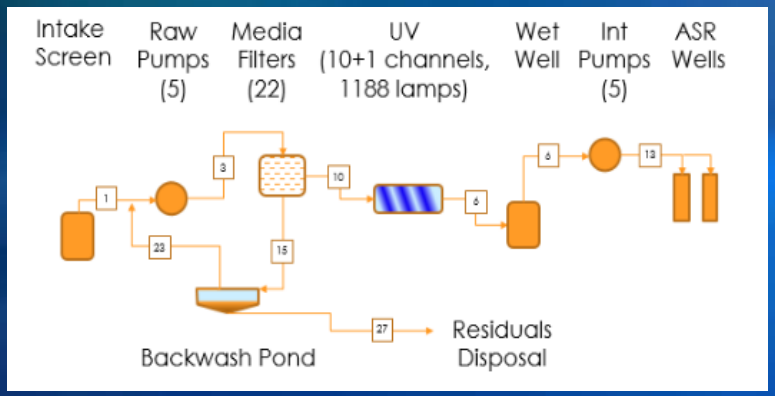


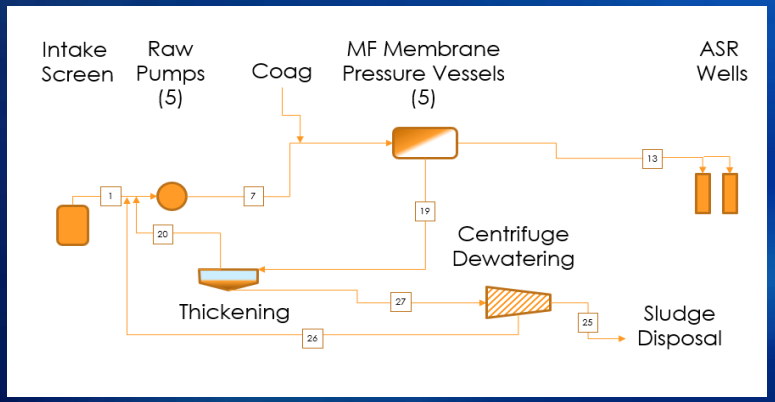
Cycle Testing

Operations & Maintenance

Operations and Treatment

Treatment Technology Trains

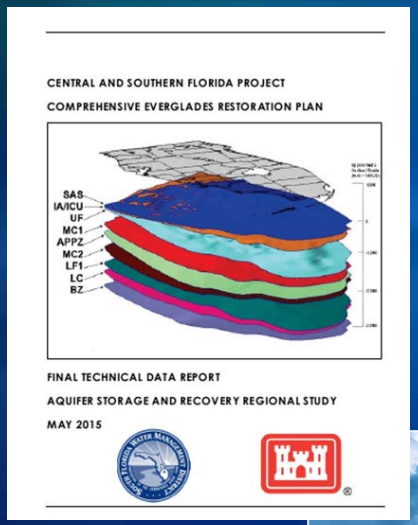




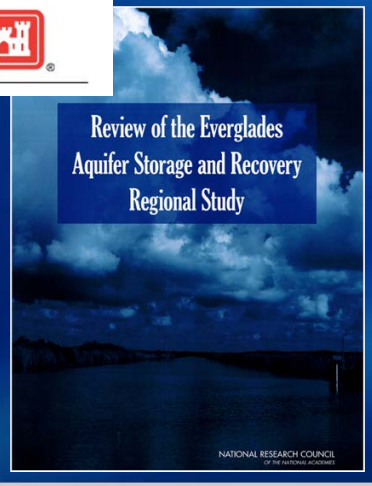
Ceramic Membrane for Ultrafiltration/ Multi-Element Vessel Modular Design

ASR Science Plan

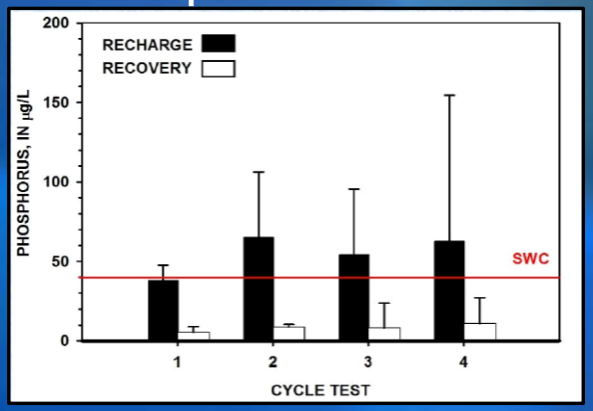
Ecological Risk Assessment, Treatment Technology, Operations, Water Quality



ASR Regional Study and NRC Review

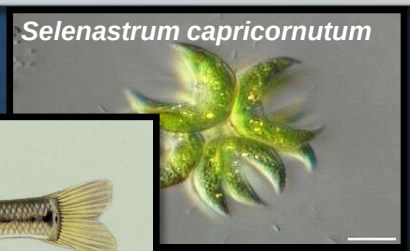


Phosphorus Reduction



Water Quality and Arsenic Mobilization

Ecotoxicology Studies and Ecological Risk Assessment



Current Activities and Next Steps

Thank You

Drew Bartlett, Executive Director
Drew.Bartlett@sfwmd.gov

sfwmd.gov

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-8175

Programs and Project Management

Drew Bartlett
Executive Director
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33406

Dear Mr. Bartlett:

The U.S. Army Corps of Engineers (Corps) recognizes the essential nature of water storage north of Lake Okeechobee to meet the goals of the Comprehensive Everglades Restoration Plan (CERP), and to provide flexibility in managing the water resources of the Central and South Florida system. To that end, the Corps and the South Florida Water Management District (SFWMD) kicked off the Lake Okeechobee Water Restoration Project (LOWRP) in July 2016. Since then, our agencies have put a great deal of effort into development of the Recommended Plan documented in the Final Integrated Project Implementation Report and Environmental Impact Statement (PIR/EIS), dated August 2020. Federal, state, local, and tribal governments, the United States Congress, the Florida Legislature, stakeholder groups, and members of the public have taken concrete, collaborative steps to move key restoration programs and plans forward, including storage north, south, east and west of Lake Okeechobee.

In response to comments received during State and Agency Review of the Draft Report of the Chief of Engineers in October 2020, and the Corps policy review of the Final PIR/EIS, the Corps would like to evaluate the potential benefits of the LOWRP Recommended Plan without the Wetland Attenuation Feature. With this letter, I am requesting SFWMD technical assistance with preparation of this supplemental information including the development of the scope, schedule, and budget to perform the required work to update the PIR/EIS.

The Corps looks forward to continued development of the plan for storage north of Lake Okeechobee and continuing our long-standing partnership to get the water right for America’s Everglades through implementation of CERP.

If you have any questions regarding the status of the Corps review please feel free contact me or the LOWRP Project Manager, Mr. E. Timothy Gysan, at (904) 232-3272 or by e-mail at earl.t.gysan@usace.army.mil.

Sincerely,

Andrew D Kelly, Jr.
Colonel, U.S. Army
District Commander

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

BY: _____
Andrew D. Kelly
Colonel, U.S. Army
District Engineer

Date: 1/27/21

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

BY: _____
Drew Bartlett
Executive Director

Date: _____

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 _____ day of _____ 20___.

_____
Carolyn S. Ansay
General Counsel
South Florida Water Management District

The Florida Senate

BILL ANALYSIS AND FISCAL IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: The Professional Staff of the Committee on Environment and Natural Resources

BILL:	SB 94
INTRODUCER:	Senator Brodeur
SUBJECT:	Water Storage North of Lake Okeechobee
DATE:	March 2, 2021
REVISED:	

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Schreiber	Rogers	EN	**Favorable**
2.			AP	

I. Summary:

SB 94 requires the South Florida Water Management District (SFWMD), in partnership with the U.S. Army Corps of Engineers (USACE), to expedite implementation of the Lake Okeechobee Watershed Restoration Project (LOWRP). The LOWRP is a project in the Comprehensive Everglades Restoration Plan that provides water storage north of Lake Okeechobee. The bill requires the SFWMD to:

- Request that the USACE seek expedited congressional approval of the LOWRP.
- Execute a project partnership agreement with the USACE immediately following approval.
- Expedite implementation of the aquifer storage and recovery (ASR) Science Plan developed by the SFWMD and the USACE.
- Expedite implementation of the watershed ASR feature of the LOWRP:
  - By August 1, 2021, construct or contract for exploratory and monitoring wells to evaluate site suitability for ASR in the Kissimmee River and Taylor Creek/Nubbin Slough Basins.
  - By January 30, 2022, reactivate the existing ASR system in the Kissimmee River Basin.
  - By December 31, 2022, contract for exploratory and monitoring wells to evaluate site suitability for ASR on all other feasible LOWRP watershed ASR sites.
  - By March 30, 2027, ensure that, on all currently or subsequently proposed sites determined to be suitable for LOWRP ASR, all feasible ASR systems are operational.
- Pursue expeditious implementation of the LOWRP wetland restoration features.
- By November 1, 2021, submit a report to the Legislature describing the SFWMD's compliance with the bill, including steps taken, plans for ongoing compliance, and specified updates related to LOWRP implementation.

To ensure health and safety, technical feasibility, and achievement of environmental benefits, the bill requires that the implementation of LOWRP ASR wells use a phased approach that confirms feasibility and site suitability and addresses uncertainties identified in the ASR Science Plan.

II. Present Situation:

Everglades Restoration

The Everglades is a diverse and geographically extensive ecosystem, stretching from just south of Orlando down to the Florida Keys.[1] Historically, the Everglades covered almost 11,000 square miles of South Florida, and water generally flowed down the Kissimmee River into Lake Okeechobee, then overflowed the southern rim of the lake and flowed south in sheet flow through the vast Everglades down to Florida Bay at the southern tip of the peninsula.[2] The Everglades includes sawgrass marshes, freshwater ponds, prairies, and forested uplands supporting a high diversity of plant and animal habitats.[3] Development of the Everglades wilderness began in the 1800s, and, following devastating flooding from hurricanes in the 1920s and 1940s, the public demanded improved agricultural production and improved flood management for expanding population centers on Florida's southeastern coast.[4]

Central and Southern Florida Project (C&SF Project)

In 1948, Congress authorized the Central and Southern Florida Project (C&SF Project).[5] The purposes of the project included flood control, regional water supply, prevention of saltwater intrusion, water supply to Everglades National Park, wildlife preservation, recreation, and navigation.[6] To achieve these purposes, in a partnership between the U.S. Army Corps of Engineers (USACE) and the state, the C&SF Project initially involved the following actions: channelizing the meandering Kissimmee River, diking the lake to prevent uncontrolled overflows, constructing a drainage system in the lower east coast to support development, establishing the 700,000-acre Everglades Agricultural Area south of Lake Okeechobee, and diking portions of the central Everglades to create a series of Water Conservation Areas[7] for water supply storage for human and ecological needs.[8] Decades of related water management projects ensued. Today, the C&SF Project is operated by the South Florida Water Management District (SFWMD) and the USACE.[9] It includes 1,000 miles of canals, 720 miles of levees, and

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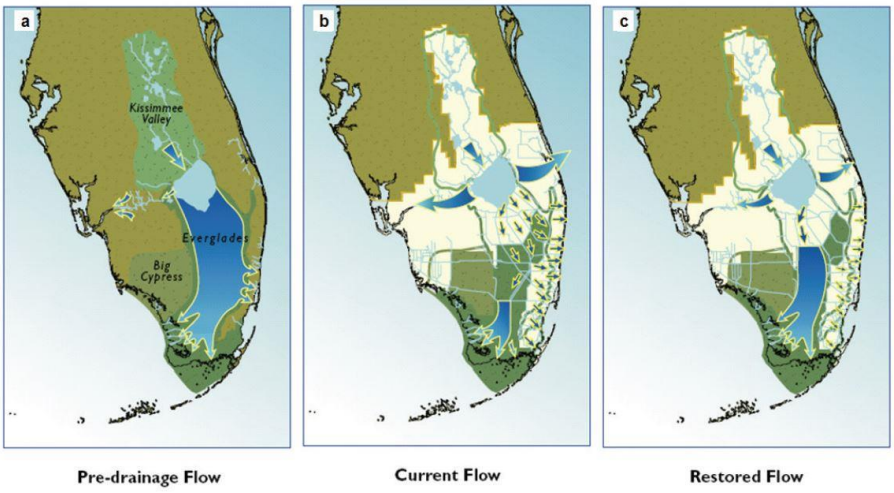
[1] National Academies of Sciences, Engineering, and Medicine, *Progress Toward Restoring the Everglades: The Seventh Biennial Review*, xi, 13 (2018)[hereinafter *Seventh Biennial Review*], *available at* https://www.nap.edu/catalog/25198/progress-toward-restoring-the-everglades-the-seventh-biennial-review-2018 (last visited Jan. 18, 2021).
[2] SFWMD, *Everglades*, https://www.sfwmd.gov/our-work/everglades (last visited Jan. 17, 2021).
[3] *Id.*; *Seventh Biennial Review*, at 13.
[4] *Seventh Biennial Review*, at 21-22; SFWMD, *History*, https://www.sfwmd.gov/who-we-are/history (last visited Jan. 18, 2021).
[5] The Flood Control Act of 1948 (Pub. L. No. 858, s. 203, 62 Stat. 1176).
[6] USACE and SFWMD, *Central and Southern Florida Project Comprehensive Review Study, Final Integrated Feasibility Report and Programmatic Environmental Impact Statement*, 1-1 (April 1999) [hereinafter *Restudy*], *available at* https://www.sfwmd.gov/sites/default/files/documents/CENTRAL_AND_SOUTHERN_FLORIDA_PROJECT_COMPREHENSIVE_REVIEW_STUDY.pdf (last visited Jan. 18, 2020).
[7] USACE and DOI, *2015-2020 Momentum, Report to Congress, Comprehensive Everglades Restoration Plan, Central and Southern Florida Project*, 4 (Dec. 2020)[hereinafter *2020 Report to Congress*], *available at* https://issuu.com/usace_saj/docs/final_2020_report_to_congress_on_cerp_progress_hig (last visited Jan. 18, 2021). Water Conservation Areas are described as "vast tracts of remnant Everglades sawgrass that serve multiple water resource and environmental purposes including flood control, water supply, and deliveries of water to Everglades National Park."
[8] *Seventh Biennial Review*, at 22; *Restudy*, at 1-1.
[9] *Restudy*, at 1-28.

several hundred water control structures providing a wide range of services to south Florida's growing population.[10]

The Comprehensive Everglades Restoration Plan (CERP)

While the C&SF Project performed its intended flood control purposes well for around 50 years, the project had unintended adverse effects on the unique natural environment of the Everglades and South Florida system.[11] Beginning in the 1970's, concerns began to mount about environmental impacts in the region, including: significant reduction of natural water storage capacity, water quality degradation, extreme fluctuations in high and low lake levels, excessive or inadequate fresh water discharged to the estuaries, substantial impacts to wildlife habitat and biodiversity, and unsuitable freshwater flows within the system.[12] The resulting lack of water storage leads to ecological damage to Lake Okeechobee and damaging regulatory releases to the St. Lucie and Caloosahatchee estuaries during wet periods, and water supply shortages for both humans and the natural environment during dry periods.[13]



In the federal Water Resources Development Acts (WRDAs) of 1992 and 1996, Congress directed the USACE to conduct a comprehensive review study of the C&SF Project (known as the "Restudy").[14] In 1999, the Restudy recommended a comprehensive restoration plan.[15]

In WRDA 2000, Congress authorized the Comprehensive Everglades Restoration Plan (CERP).[16] CERP is a framework for modifications and operational changes to the C&SF Project necessary to restore, preserve, and protect the south Florida ecosystem while providing for other water-related needs of the region, including water supply and flood protection.[17] CERP contains over 68 individual components comprising more than 50 projects.[18] These components improve

[10] *2020 Report to Congress*, at xviii, 4-6.
[11] *Restudy*, at 1-1, *available at* https://www.sfwmd.gov/sites/default/files/documents/CENTRAL_AND_SOUTHERN_FLORIDA_PROJECT_COMPREHENSIVE_REVIEW_STUDY.pdf (last visited Feb. 21, 2021).
[12] *Id*. at iii, 1-2; *2020 Report to Congress*, at 5-6; *Seventh Biennial Review*, at 23.
[13] *Restudy*, at 1-2.
[14] *Id*. at 1-3–1-7; *see* Pub. L. No. 102-580, s. 309(l), (1992) and Pub. L. No. 104-303, s. 528 (1996).
[15] *Restudy*, at i-ii.
[16] Water Resources Development Act of 2000, Pub. L. No. 106-541, s. 601, 114 Stat. 2680 (2000).
[17] *2020 Report to Congress*, at 6.
[18] *Id*. at 6-7; *see generally Restudy*. The April 1999 "Central and Southern Florida Project Comprehensive Review Study Final Integrated Feasibility Report and Programmatic Environmental Impact Statement," commonly known as the "Yellow

Book," contains the original CERP plan authorized by Congress. The plan identifies CERP components using a code of letters.

delivery and timing within the Everglades system by increasing the size of natural areas, improving water quality, releasing water to mimic historical flow patterns, and storing and distributing water for urban, agricultural, and ecological uses.[19] CERP covers around 18,000 square miles, including all or part of 16 counties in central and southern Florida.[20]

For a CERP project to receive federal authorization for implementation, and to receive federal appropriations, it must be included in a "project implementation report" that has received congressional approval.[21] The USACE has developed Programmatic Regulations for CERP to ensure that the Plan's goals and purposes are achieved.[22] The federal regulations specify the requirements for developing project implementation reports, involving public review and comment and detailed technical analyses necessary for project planning and implementation.[23] The reports formulate and evaluate alternative plans for the CERP project, and then identify a selected plan.

The federal legislation provides the framework for CERP as a 50/50 cost-share program between the state and federal government.[24] The USACE is the federal sponsor for the partnership and the SFWMD is the lead non-federal sponsor.[25] The agencies track the cost-sharing based on their total respective spending on CERP initiatives. In 2009, the USACE and the SFWMD executed a Master Agreement, an umbrella agreement for CERP projects that established conditions for cost-sharing and for project partnership agreements.[26] Project partnership agreements establish project-specific responsibilities for the implementing agencies, and provide project-specific credit to the SFWMD for its land acquisition and project construction efforts completed prior to the agreement.[27]

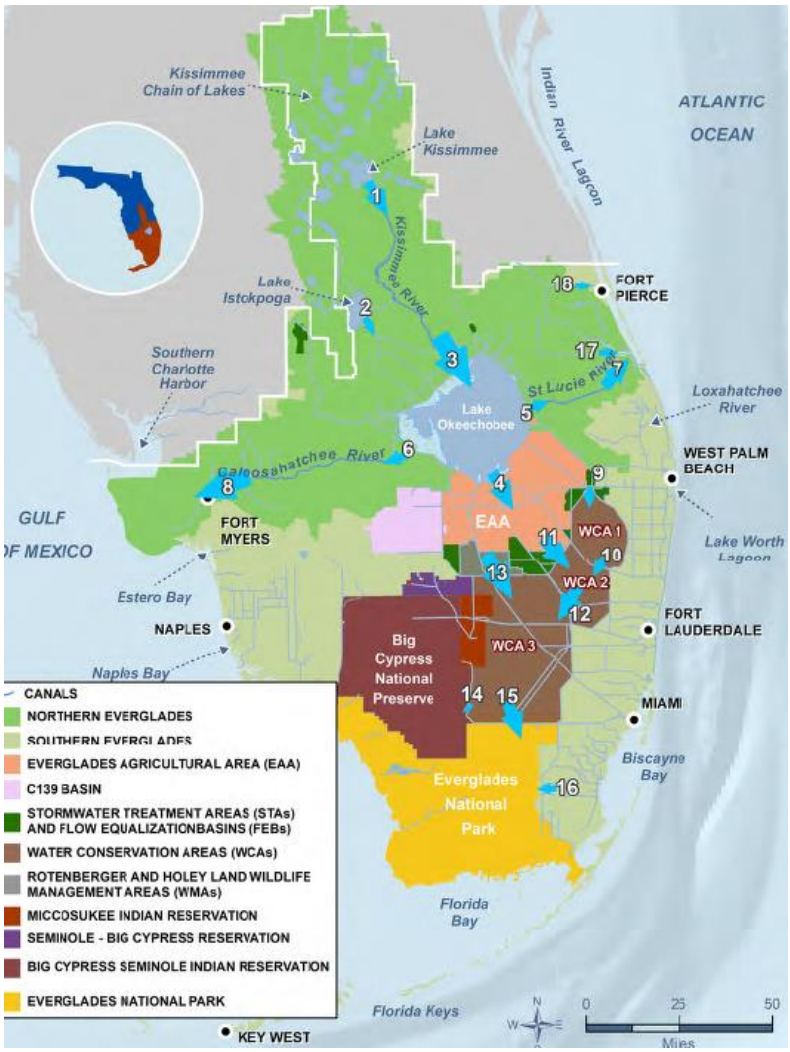
Lake Okeechobee

Lake Okeechobee is the largest freshwater lake in the southeastern United States, with a surface area of 730 square miles and a volume in excess of 4 million acre-feet.[28] It is the largest component of water storage in the South Florida ecosystem: one foot of water in Lake

[19] *Restudy*, at vii-x.
[20] U.S. House of Representatives, Committee on Transportation and Infrastructure, *Subcommittee Hearing on "The Comprehensive Everglades Restoration Plan and Water Management in Florida"* (Sept. 21, 2020), *available at* https://www.congress.gov/116/meeting/house/111019/documents/HHRG-116-PW02-20200924-SD001.pdf (last visited Jan. 19, 2021).
[21] Water Resources Development Act of 2000, Pub. L. No. 106-541, s. 601(a)(2)(D)(i), (f), (h), 114 Stat. 2683 (2000).
[22] 33 C.F.R. pt. 385.
[23] 33 C.F.R. s. 385.26; *see Restudy*, at 10-17–10-20.
[24] Water Resources Development Act of 2000, Pub. L. No. 106-541, s. 601(e), 114 Stat. 2684 (2000).
[25] *2020 Report to Congress*, at 3.
[26] *See* SFWMD, *News Release: Momentum for Everglades Restoration Continues with Historic State-Federal Agreements* (August 13, 2009), *available at* https://www.sfwmd.gov/sites/default/files/documents/nr_2009_0813_master_agreement.pdf (last visited Feb. 21, 2021).
[27] *Id*.
[28] *Seventh Biennial Review*, at 133; SFWMD, *How Much is an Acre-Foot of Water?*, *available at* https://www.sfwmd.gov/sites/default/files/documents/graphic_acrefoot.pdf (last visited Jan. 25, 2021). An acre-foot is the volume of water needed to cover 1 acre of land with 1 foot of water. It is equal to 325,851 gallons.

Okeechobee equals around 450,000 acre-feet of storage.[29] The lake is managed as a multi-purpose reservoir for navigation, water supply, flood control, and recreation.[30]

Around 40 percent of the water that comes into the lake is from direct rainfall, and of the surface water that flows into the lake the largest source is the Kissimmee River, contributing about 60 percent of inflows.[31] About 95 percent of the surface water inflows into the lake come from the six subwatersheds north (or northwest) of the lake.[32] Lake Okeechobee and its watershed have been subjected to hydrologic, land use, and other anthropogenic modifications over the past century that have degraded its water quality and affected the water quality of the connected Caloosahatchee and St. Lucie Rivers and Estuaries.[33]



[29] *Seventh Biennial Review*, at 133; SFWMD, *News Release, South Florida Water Managers Take Steps to Increase Water Storage* (Oct. 14, 2011), https://www.sfwmd.gov/sites/default/files/documents/nr_2011_1014_dispersed_water_storage.pdf (last visited Jan. 19, 2021).
[30] *Restudy*, at 1-13.
[31] Karl E. havens & Alan D. Steinman, *Ecological Responses of a Large Shallow Lake (Okeechobee, Florida) to Climate Change and Potential Future Hydrologic Regimes*, ENVIRONMENTAL MANAGEMENT, Vol. 52, No. 5 (2013), *available at* https://pubmed.ncbi.nlm.nih.gov/24178125/ (last visited Jan. 19, 2021); USACE, *Lake Okeechobee: Following the Flow*, https://www.saj.usace.army.mil/Media/News-Stories/Article/479659/lake-okeechobee-following-the-flow/ (last visited Jan. 19, 2021).
[32] SFWMD, *South Florida Environmental Report, Chapter 8B: Lake Okeechobee Watershed Annual Report*, 8B-21 (2020), *available at* https://apps.sfwmd.gov/sfwmd/SFER/2020_sfer_final/v1/chapters/v1_ch8b.pdf (last visited Jan. 19, 2021).
[33] DEP, *Lake Okeechobee Basin Management Action Plan*, 14 (Jan. 2020), *available at* http://publicfiles.dep.state.fl.us/DEAR/DEARweb/BMAP/NEEP_2020_Updates/Lake%20Okeechobee%20BMAP_01-31-20.pdf (last visited Jan. 19, 2021).

(C-43) to the Gulf of Mexico.[34] Additionally, when storage and discharge capacity are available, water flows out of the lake through the four agricultural canals.[35] See the map above for lake inflows and outflows.[36]

The Herbert Hoover Dike is a 143-mile earthen dam surrounding Lake Okeechobee, which was completed in the 1960s.[37] Internal erosion of earthen dams occurs when water seeps through the embankment and erodes the soil.[38] Past scientific studies led the USACE to rank the dike as being at high levels of risk for failure.[39] The erosion and the likelihood of failure of the structure are dependent on lake levels.[40] The capacity of water to flow out into the lake greatly exceeds the capacity to flow out, so if lake levels exceed certain boundaries water must be released to reduce the risk of dike failure.[41] Due to the safety concerns, major rehabilitation efforts on the dike are currently underway, with work expected to be complete by 2022.[42]

The USACE regulates water levels in Lake Okeechobee based on a regulation schedule that guides lake operations. The 2008 Lake Okeechobee Regulation Schedule (LORS) is the current regulation schedule.[43] This revised schedule lowered the maximum stage of the lake as a protective measure during dike rehabilitation, and which can remove between 460,000 and 800,000 acre-feet from the regional system at any given time compared to the previous lake regulation schedule.[44] The USACE is currently developing the Lake Okeechobee System Operating Manual (LOSOM) to replace the LORS as the operating criteria for the lake.[45]

In WRDA 2018, Congress required the USACE to expedite completion of the LOSOM to coincide with the completion of the Herbert Hoover Dike rehabilitation project, and so the LOSOM is expected to be completed in 2022.[46] WRDA 2020 requires the USACE, in carrying

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[34] *Restudy*, at 1-13; USACE, *Moore Haven Lock & Dam*, https://www.saj.usace.army.mil/Missions/Civil-Works/Navigation/Navigation-Locks/Moore-Haven-Lock/ (last visited Jan. 19, 2021); USACE, *Port Mayaca Lock & Dam*, https://www.saj.usace.army.mil/Missions/Civil-Works/Navigation/Navigation-Locks/Port-Mayaca-Lock/ (last visited Jan. 19, 2021).
[35] *Restudy*, at 1-13.
[36] SFWMD, *South Florida Environmental Report, Highlights*, 19-20 (2020), *available at* https://www.sfwmd.gov/sites/default/files/documents/2020_SFER_highlights.pdf (last visited Feb. 24, 2021).
[37] USACE, *About Herbert Hoover Dike*, https://www.saj.usace.army.mil/HHD/ (last visited Jan. 19, 2021).
[38] USACE, *Herbert Hoover Dike Dam Safety Modification Study, Environmental Impact Statement*, 1-1 (June 2016), *available at* http://www.saj.usace.army.mil/Portals/44/docs/Planning/EnvironmentalBranch/EnvironmentalDocs/Multiple%20Counties/Herbert_Hoover_Dike_Dam_Safety_Modification%20Study_FEIS_Main_Report.pdf?ver=2016-05-31-131919-377 (last visited Jan. 19, 2021).
[39] *Id*. at 1-5.
[40] *Id*. at 1-1.
[41] *Seventh Biennial Review*, at 137-138; USACE, *Integrated Delivery Schedule*, https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll11/id/4831 (last visited Feb. 24, 2021).
[42] *2020 Report to Congress*, at 32-33.
[43] *See* Central and Southern Florida Project, *Water Control Plan for Lake Okeechobee and Everglades Agricultural Area* (2008), *available at* https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/8423 (last visited Jan. 19, 2021).
[44] *Seventh Biennial Review*, at 139-141.
[45] USACE, *Lake Okeechobee System Operating Manual (LOSOM), A Component of the Central & Southern Florida (C&SF) System Operating Plan*, https://www.saj.usace.army.mil/LOSOM/ (last visited Jan. 19, 2021); *see Seventh Biennial Review*, at 173. It is unknown how much, if any, of the lost lake storage will be regained under the new schedule, which will also consider the adverse effects of increased water levels on the lake ecosystem.
[46] The Water Resources Development Act of 2018 (Pub. L. No. 115-270, s. 1106, 114 Stat. 2680).

out the review of the regulation schedule, to evaluate prohibiting certain releases from Lake Okeechobee.[47] The USACE also must provide a monthly report disclosing discharge volumes.[48]

Damaging Discharges from Lake Okeechobee to the Estuaries

Due to the lack of operational flexibility within the system, the LORS requires lake levels to be kept low before the wet season, to account for additional inflow and ensure that lake levels do not rise to dangerous levels where the dike could be breached.[49] During rainfall events, water entering the lake from direct rainfall, large basins, and other sources can cause water levels in the lake to rise six times faster than can be discharged from the lake.[50] The only outlets with adequate capacity to quickly release the necessary volumes of water from the lake are the C-44 and C-43 canals that discharge east and west, respectively, to the St. Lucie and Caloosahatchee estuaries.[51]

High volume freshwater discharges have significant effects on the estuaries. The releases from the lake along with other local basin inflows cause large fluctuations in salinity, which can expose animal and plant life in the estuaries to salinities outside of their tolerance ranges.[52] When the duration of high flow events increases substantially, impacts can be more severe.[53] Species such as oysters and seagrasses, which serve as indicator species for estuary health, become more susceptible to disease and predation as the duration of high volume discharge events increase.[54]

Harmful algal blooms in Lake Okeechobee exacerbate the damage of regulatory releases from the lake.[55] In 2016 and 2018, cyanobacteria (blue-green algae) blooms in Lake Okeechobee, followed by regulatory releases from the lake, resulted in emergency situations with algae-laden waters that harm the environment and create ecological and human health concerns.[56] Cyanobacteria produce toxins presenting health risks to wildlife, pets, and humans.[57]

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[47] The Water Resources Development Act of 2020 (Pub. L. No. 116-260, Div. AA, s. 210 (2020)).
[48] *Id*.
[49] The National Academies of Sciences, Engineering, and Medicine, *Progress Toward Restoring the Everglades: The Sixth Biennial Review*, 161 (2016)[hereinafter *Sixth Biennial Review*], *available at* https://www.nap.edu/catalog/23672/progress-toward-restoring-the-everglades-the-sixth-biennial-review-2016 (last visited Jan. 20, 2021).
[50] USACE, *Lake Okeechobee: Following the Flow*, http://www.saj.usace.army.mil/Media/News-Stories/Article/479659/lake-okeechobee-following-the-flow/ (last visited Feb. 25, 2021).
[51] University of Florida Water Institute, *Options to Reduce High Volume Freshwater Flows to the St. Lucie and Caloosahatchee Estuaries and Move More Water from Lake Okeechobee to the Southern Everglades*, 17 (2015) [hereinafter *UF Study*], *available at* https://waterinstitute.ufl.edu/faculty/graham/wp-content/uploads/UF-Water-Institute-Final-Report-March-2015.pdf (last visited Feb. 22, 2021).
[52] USACE, *Lake Okeechobee Regulation Schedule, Final Supplemental Environmental Impact Statement*, 147 (Nov. 2007), *available at* http://www.saj.usace.army.mil/Portals/44/docs/h2omgmt/LORSdocs/ACOE_STATEMENT_APPENDICES_A-G.pdf (last visited Feb. 24, 2021).
[53] *Id*. at 149.
[54] *Id*. at 147-151.
[55] *See generally* DEP, *Freshwater Algal Blooms, Frequently Asked Questions*, https://floridadep.gov/sites/default/files/freshwater-algal-bloom-faqs_2019.pdf (last visited Feb. 22, 2021).
[56] *The Sixth Biennial Review*, at 39-40; DEP, *Emergency Authorizations Implement Measures To Address South Florida Algal Blooms*, https://floridadep.gov/dear/algal-bloom/content/emergency-authorizations-implement-measures-address-south-florida-algal (last visited Feb. 22, 2021).
[57] *See generally* FWC, *Cyanobacteria (Blue-Green Algae)*, https://myfwc.com/research/wildlife/health/other-wildlife/cyanobacteria/ (last visited Feb. 22, 2021).

In addition to ecological and health issues, regulatory releases from Lake Okeechobee impact life in the communities around the northern Everglades ecosystems. The excessive discharges can impact the quality of life for residents, regional property values, revenues of area businesses, and local economies in general.[58]

In 2017, the Florida Legislature declared that an emergency exists regarding the St. Lucie and Caloosahatchee estuaries due to the high-volume freshwater discharges to the east and west of the lake, and that such discharges have manifested in widespread algae blooms, public health impacts, and extensive environmental harm.[59] WRDA 2020 requires the USACE to carry out a demonstration program to determine the causes of, and implement measures to effectively detect and eliminate, harmful algal blooms associated with water resources development projects, with Lake Okeechobee as a focus area.[60]

Identifying the Need for Additional Storage

The original CERP plan involved increasing regional storage capacity and flexibility through water storage components north, south, east, and west of Lake Okeechobee; underground storage; using natural areas for storage; and storing water in the lake itself.[61] Since the original CERP plan was authorized, certain projects were substantially reduced in magnitude, representing substantial reductions in storage compared to what was originally proposed.[62]

In 2015, a University of Florida Water Institute report concluded that existing and authorized projects were insufficient to provide relief to the estuaries and send water south.[63] To achieve these goals, the study stated that enormous increases in storage and treatment of water are necessary both north and south of Lake Okeechobee.[64] The regional storage estimated to be necessary for reducing discharges to the estuaries included approximately 1,000,000 acre-feet distributed north and south of the lake.[65] The study discussed two configurations that would provide a 90% reduction in lake-triggered discharges, with one scenario requiring 750,000 acre-feet of northern storage and 132,000 acre-feet of southern storage, and the other requiring 300,000 acre-feet of northern storage and 507,000 acre-feet of southern storage.[66]

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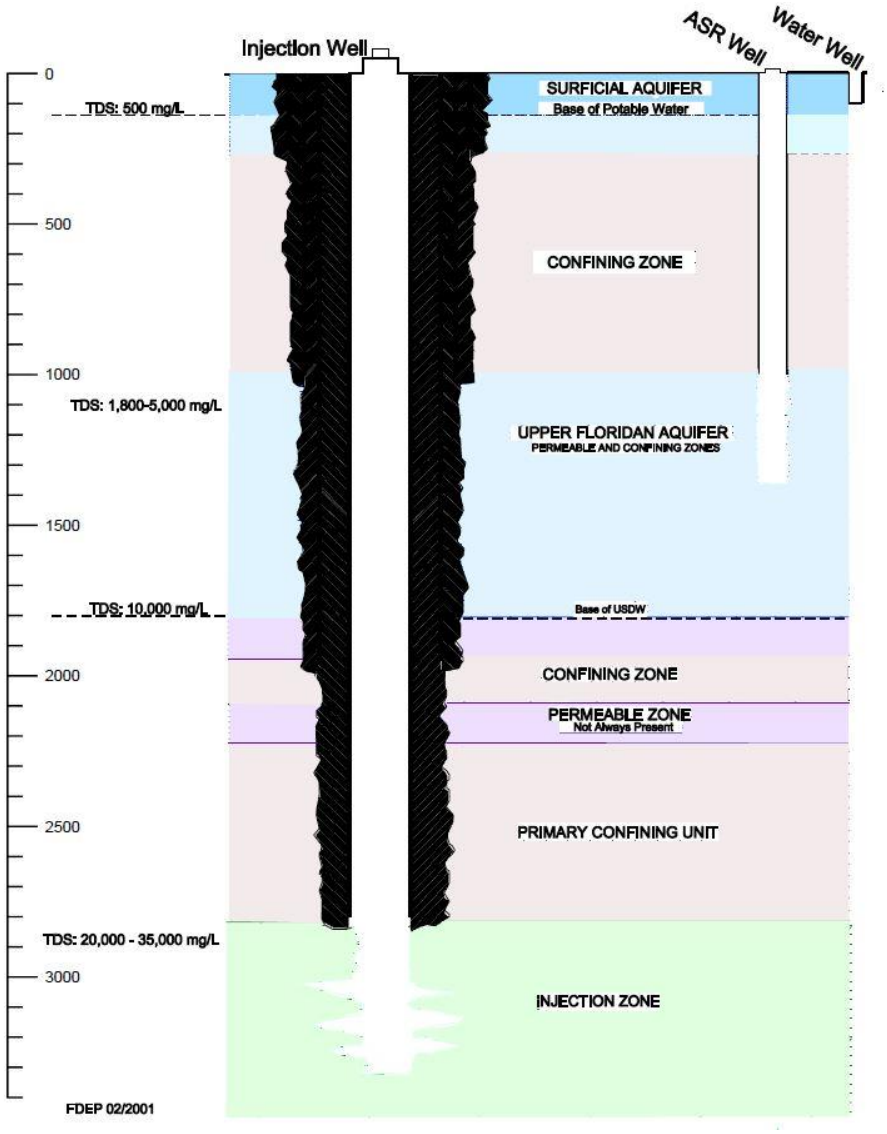
[58] *See* Caloosahatchee Watershed Regional Management Issues, *Storage and Treatment Progress Summary*, 1 (July 1, 2016), *available at* https://chnep.wateratlas.usf.edu/upload/documents/CaloosahatcheeWatershedRegionalWaterManagementIssuesJune2016.pdf (last visited Feb. 24, 2021).
[59] Section 373.4598(1), F.S.
[60] The Water Resources Development Act of 2020 (Pub. L. No. 116-260, Div. AA, s. 128 (2020)).
[61] *Restudy*, at vii-x, 9-1–9-34.
[62] *Seventh Biennial Review*, at 173-175, *available at* https://www.nap.edu/catalog/25198/progress-toward-restoring-the-everglades-the-seventh-biennial-review-2018 (last visited Feb. 25, 2021).
[63] *UF Study*, at 6, 85, *available at* https://waterinstitute.ufl.edu/faculty/graham/wp-content/uploads/UF-Water-Institute-Final-Report-March-2015.pdf (last visited Feb. 22, 2021).
[64] *Id*. at 130.
[65] *Id*.
[66] *Id*. at 85-86, 101.

Aquifer Storage and Recovery (ASR)



Aquifer Storage and Recovery (ASR) is a process of collecting surplus fresh surface water (typically during the wet season), treating it to meet water quality standards, and pumping it through a dual-purpose well underground into the aquifer for storage and subsequent withdrawal.[67] ASR technology offers the potential to store and supply large volumes of water beneath a relatively small surface footprint without loss to evaporation.[68]

ASR technology has been successfully utilized in Florida since 1983.[69] Currently, there are over 30 ASR systems operating in Florida utilizing around 100 wells for recharge, storage, and recovery.[70] ASR wells are permitted by the Department of Environmental Protection (DEP), under DEP's

[67] SFWMD, *Aquifer Storage and Recovery*, https://www.sfwmd.gov/our-work/alternative-water-supply/asr (Jan. 30, 2021).
[68] *Id*.; USACE, *Aquifer Storage and Recovery (ASR) Regional Study*, https://www.saj.usace.army.mil/Missions/Environmental/Ecosystem-Restoration/Aquifer-Storage-and-Recovery-ASR-Regional-Study/ (last visited Jan. 20, 2021).
[69] SFWMD and USACE, *Central and Southern Florida Project, Comprehensive Everglades Restoration Plan, Final Technical Data Report, Aquifer Storage and Recovery Regional Study*, 1-2–1-3 (May 2015)[hereinafter *2015 ASR Regional Study*], *available at* https://www.sfwmd.gov/sites/default/files/documents/ASR_Regional_Study_Main_Report_Final_2015.pdf (last visited Jan. 20, 2021).
[70] SFWMD, *Aquifer Storage and Recovery*, https://www.sfwmd.gov/our-work/alternative-water-supply/asr (Jan. 30, 2021); *see* DEP, *Underground Injection Control Monitoring Wells*, https://ca.dep.state.fl.us/mapdirect/?focus=uic (last visited Jan. 20, 2021). Select the layer with Class V ASR wells.

underground injection control program, which maintains applicable federal standards.[71] As opposed to deep well injection of waste (see image above),[72] water injected into ASR wells must meet Florida's water quality standards, and the level of treatment required after storage depends on the use of the water.[73]

Of CERP's original 68 components, seven involved ASR wells, combining for up to 333 ASR wells originally contemplated for storage in CERP.[74] Since use of ASR technology on this scale is unprecedented, the original CERP plan recommended pilot demonstration projects and a regional evaluation of the effects of large-scale use of ASR in south Florida.[75] Accordingly, the USACE and SFWMD spent more than a decade collaborating on in-depth scientific analyses regarding ASR in south Florida. In 2013, the final report was published for the CERP ASR pilot project, which included two ASR systems that successfully confirmed the feasibility of large capacity (5 million gallons per day (MGD)) ASR system operation in south Florida.[76]

In 2015, the final report was published for the CERP ASR Regional Study, an 11-year, multidisciplinary effort to assess the regional feasibility of ASR wells in south Florida as a CERP component, including analyses focusing on hydrogeology, water quality, ecology, and regional capacity.[77] The Regional Study generally found that large-capacity ASR can be built and operated in south Florida, and that no "fatal flaws" have been uncovered that might hinder the implementation of CERP ASR.[78] However, the study suggested the overall number of CERP ASR wells should be reduced from 333, and a scenario with 131 ASR wells (including 80 constructed in the vicinity of Lake Okeechobee) met performance criteria satisfactorily.[79]

Also in 2015, at the request of the USACE, the National Academy of Sciences' National Research Council convened a committee to review the Regional Study and assess progress

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[71] Fla. Admin. Code R. 62-610.466; Fla. Admin. Code Ch. 62-528; *see* U.S. Environmental Protection Agency, *Underground Injection Control Regulations and Safe Drinking Water Act Provisions*, https://www.epa.gov/uic/underground-injection-control-regulations-and-safe-drinking-water-act-provisions (last visited Feb. 18, 2021).

[72] DEP, *UIC Wells Classification*, https://floridadep.gov/water/aquifer-protection/content/uic-wells-classification (last visited Jan. 20, 2021). There are six classes of underground injection wells. Class I wells are used to inject waste below the lowest drinking water source, and this is commonly referred to as "deep well injection." Class V wells are a broad group which includes ASR wells, and these are generally used for injection of nonhazardous fluids into or above a drinking water source; *see* Fla. Admin. Code Rules 62-528.300 and 62-528.600.

[73] DEP, *UIC Wells Classification*, https://floridadep.gov/water/aquifer-protection/content/uic-wells-classification (last visited Jan. 20, 2021).

[74] SFWMD, *Aquifer Storage and Recovery Program, Interim Report 2008*, 4 (2008), *available at* https://www.sfwmd.gov/sites/default/files/documents/ASR_Interim_Report_2008.pdf (last visited Jan. 20, 2021).

[75] SFWMD, *Final Draft 2021 Aquifer Storage and Recovery Science Plan*, 5 (2021)[hereinafter *ASR Science Plan*], *available at* https://www.sfwmd.gov/sites/default/files/2021_draft_asr_science_report_main.pdf (last visited Feb. 17, 2021); *see Restudy*, at 9-6, 9-32, 10-50.

[76] USACE and SFWMD, *Comprehensive Everglades Restoration Plan Aquifer Storage and Recovery Pilot Project, Final Technical Data Report*, 2-1 (Dec. 2013), *available at* https://www.sfwmd.gov/sites/default/files/documents/Main%20Report_Final_2013.pdf (last visited Feb. 17, 2021).

[77] *See 2015 ASR Regional Study*, *available at* https://www.sfwmd.gov/sites/default/files/documents/ASR_Regional_Study_Main_Report_Final_2015.pdf (last visited Feb. 25, 2021).

[78] *Id*. at xx.

[79] *Id*.; *ASR Science Plan*, at 1.

towards reducing uncertainties related to full-scale CERP ASR implementation.[80] The committee agreed with the findings of the Regional Study that no "fatal flaws" exist, but stated that uncertainties remain that merit additional study before large-scale ASR implementation.[81]

The committee concluded that phased implementation of ASR would provide opportunities to address uncertainties while providing early restoration benefits.[82] The 2015 review listed the highest-priority remaining uncertainties, involving recommended steps to address them:

- Develop operations to maximize recovery and reduce water quality impacts;
- Conduct longer-term ecotoxicological studies and develop an updated quantitative ecological risk assessment;
- Understand the mechanisms of phosphorus reduction;
- Evaluate treatment technologies for optimal water quality during recharge, storage, and recovery; and
- Compare costs with other water storage alternatives.[83]

To address the uncertainties identified by the National Research Council's 2015 review of the Regional Study, the SFWMD and the USACE have developed an ASR Science Plan.[84] The intent of the Science Plan, first published in February of 2021, is to identify potential studies to address remaining uncertainties as ASR wells are constructed in a phased approach.[85] An independent peer-review panel of scientists was assembled to provide review and guidance during the development of the Science Plan, and the panel will convene annually throughout implementation of the ASR program to review the progress of the scientific investigations and recommend future tasks.[86] The plan is subject to change as the ASR program progresses.[87] The plan may be used for CERP and also more broadly wherever ASR wells are proposed.[88]

The 2021 Science Plan includes a schedule of many scientific investigations to address uncertainties for ASR implementation.[89] The current plan involves reactivation and utilization of existing systems.[90] During 2021 and 2022, the plan includes constructing continuous cores, where boreholes are drilled down into the aquifer to produce 3.5 inch-diameter core samples for scientific study.[91] Also during 2021 and 2022, the plan includes constructing 24-inch exploratory test wells at two potential ASR cluster locations just north of the lake along the C-38 Canal

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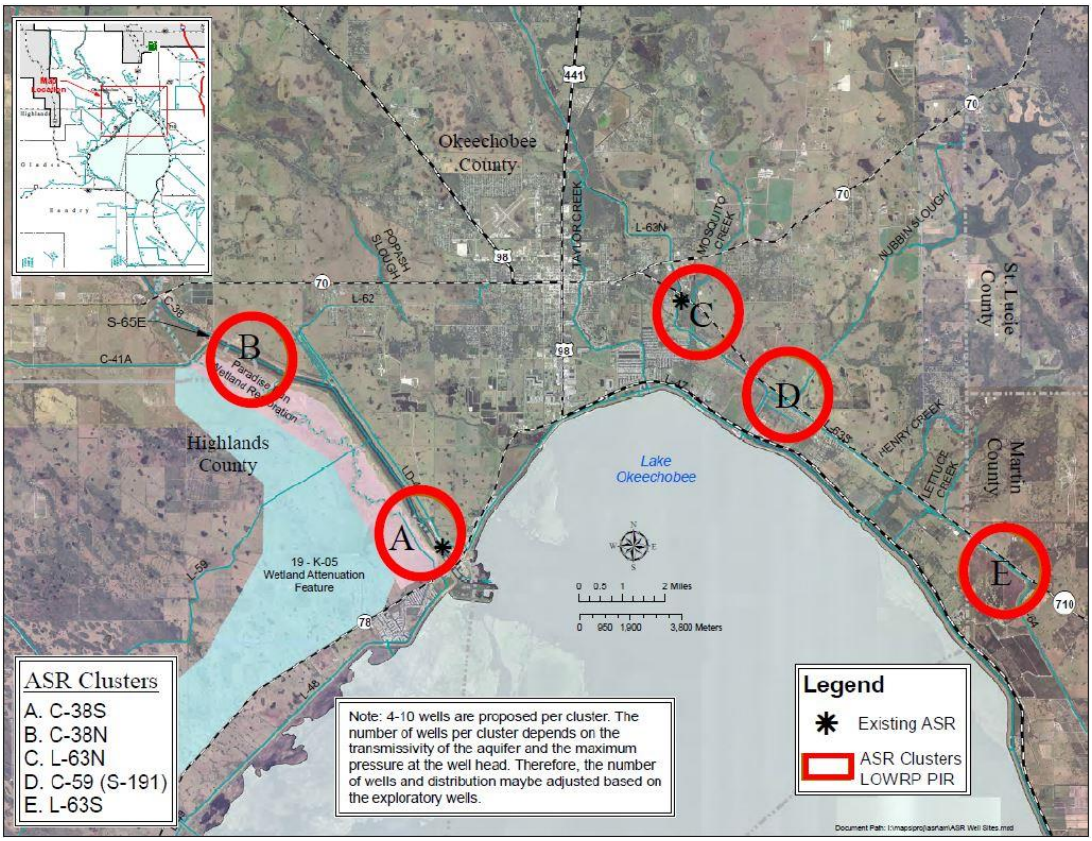
[80] *See* National Research Council of the National Academies, *Review of the Everglades Aquifer Storage and Regional Study*, 1 (2015), *available at* https://www.sfwmd.gov/sites/default/files/documents/National_Academies_Of_Science_Review_2015.pdf (last visited Jan. 20, 2021).
[81] *Id*. at 2.
[82] *Id*. at 3, 44.
[83] *Id*. at 2-3; *ASR Science Plan*, at 2.
[84] *See* SFWMD, *Aquifer Storage and Recovery*, https://www.sfwmd.gov/our-work/alternative-water-supply/asr (Jan. 30, 2021).
[85] *ASR Science Plan*, at 2.
[86] *Id*. at ES-1, 4.
[87] *Id*. at 5.
[88] *Id*. at 5-6.
[89] *Id*. at 7-10.
[90] *Id*. at 6.
[91] *Id*. at 5, 15-16. Boreholes can be widened and turned into monitoring wells.

(designated as sites "A" and "B" on the map below), and these test wells would be used for studying a broad range of scientific topics regarding ASR implementation.[92]



The Lake Okeechobee Watershed Restoration Project (LOWRP)

The Lake Okeechobee Watershed Restoration Project (LOWRP) is a CERP project that is generally located immediately north of Lake Okeechobee.[93] In August of 2020, the USACE published a final project implementation report for the LOWRP.[94] The project implementation report is awaiting congressional approval and may be subject to change. The report contains a "Recommended Plan" that constitutes the current version of the project.[95]

The Recommended Plan consists of the three following features:

- A Wetland Attenuation Feature: a flow-through wetland used for surface water storage. Although a wetland attenuation feature provides aboveground storage like a reservoir, water levels may be suitable for growth of wetland vegetation. The footprint would be approximately 13,600 acres, with a storage capacity of approximately 46,000 acre-feet.

[92] *Id*. at 18.
[93] USACE, *Lake Okeechobee Watershed Restoration Project Final Integrated EIS and PIR*, https://www.saj.usace.army.mil/LOWRP/ (last visited Feb. 18, 2021).
[94] USACE and SFWMD, *Comprehensive Everglades Restoration Plan, Lake Okeechobee Watershed Restoration Project, Final Integrated Project Implementation Report and Environmental Impact Statement* (Aug. 2020)[hereinafter *LOWRP PIR*], *available at* https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/15175 (last visited Feb. 18, 2021).
[95] *See id*., at 6-1–6-84.

- 80 Total ASR Wells: 5 MGD wells are proposed in various clusters.[96] Proposed cluster locations are based on the 2015 Regional Study, although the locations are conceptual and may be adjusted based on the results of exploratory testing. The theoretical maximum storage capacity of the 80 wells continuously recharging year-round would be 448,000 acre-feet per year. The LOWRP ASR wells are separated into two categories:
  - 55 "Watershed" ASR Wells: These wells will be located throughout the watershed in clusters around the lake.
  - 25 "Co-located" ASR Wells: These wells will be co-located with the wetland attenuation feature, withdrawing water from it when it is full to provide additional storage capacity and combining with it to provide dynamic aboveground and belowground storage.
- Wetland Restoration: two projects on the west bank of the Kissimmee River, working in conjunction with the Kissimmee River Restoration Project,[97] that restore the hydrology of riverine wetlands and increase the functionality of aquatic and wildlife habitat:
  - The Paradise Run wetland restoration site is approximately 3,600 acres.
  - The Kissimmee River-Center wetland restoration site is approximately 1,200 acres.[98]

[96] *Id.* at 3-4, 3-22. The LOWRP ASR wells will be a combination of wells using either of two layers of the Floridan Aquifer System for storage and recovery: the Upper Floridan Aquifer (UFA) composed of porous limestone lying 900-1,200 feet below land surface, or the Avon Park Permeable Zone (APPZ) composed of porous dolomite found 1,600-2,000 feet below land surface.

[97] USACE, *Kissimmee River Restoration Project*, https://www.saj.usace.army.mil/Missions/Environmental/Ecosystem-Restoration/Kissimmee-River-Restoration/ (last visited Jan. 18, 2021); *2020 Report to Congress*, at 33-34.

[98] *LOWRP PIR*, at ES-2, ES-6, 6-1–6-4. These three components are known, respectively, in the Yellow Book as CERP components A, GG, and OPE. The LOWRP also includes recreational sites on the levee top around the wetland attenuation feature and around the wetland restoration sites.

The project area covers a portion of the Lake Okeechobee watershed, including four major drainage basins, totaling approximately 920,000 acres.[99] The objectives of the LOWRP are to: improve quantity, timing, and distribution of flows into the lake to benefit ecology; reduce large freshwater flows from the lake to benefit the estuaries; increase the spatial extent and functionality of aquatic and wildlife habitat within the lake and surrounding watershed; and increase water supply while improving lake ecology.[100]

By creating additional water storage north of Lake Okeechobee, the Recommended Plan would improve flexibility in the timing and distribution of water into the lake, to the northern estuaries, and throughout the watershed.[101] Water could be stored during wet times to reduce damaging high lake stages, and later be released into the lake to reduce the impacts of low stages during dry times.[102] The LOWRP would increase the amount of time that lake levels are in the range of elevations most beneficial to lake ecology: 12.5–15.5 feet.[103] It would provide a 30% reduction in total flows from Lake Okeechobee to the northern estuaries, and may also reduce phosphorus loadings to the lake by 8-11%.[104]

The total estimated cost of the LOWRP is $1.96 billion.[105] The total estimated cost for real estate acquisition necessary for project implementation is around $139 million, and the SFWMD will perform the land acquisition as the non-federal sponsor.[106] Generally, it is anticipated that land acquisition will not be necessary for the LOWRP watershed ASR wells because those wells will be located within existing SFWMD-owned rights-of-way.[107] However, fee title will be required for the project footprint of the wetland attenuation feature, Paradise Run wetland, and Kissimmee River-Center wetland.[108] The 13,600-acre wetland attenuation feature project footprint includes around 73 privately-owned parcels encompassing approximately 9,3000 acres.[109] Of the 4,800 total acres for the two wetland restoration projects, private landowners own around 33 parcels encompassing approximately 2,600 acres.[110]

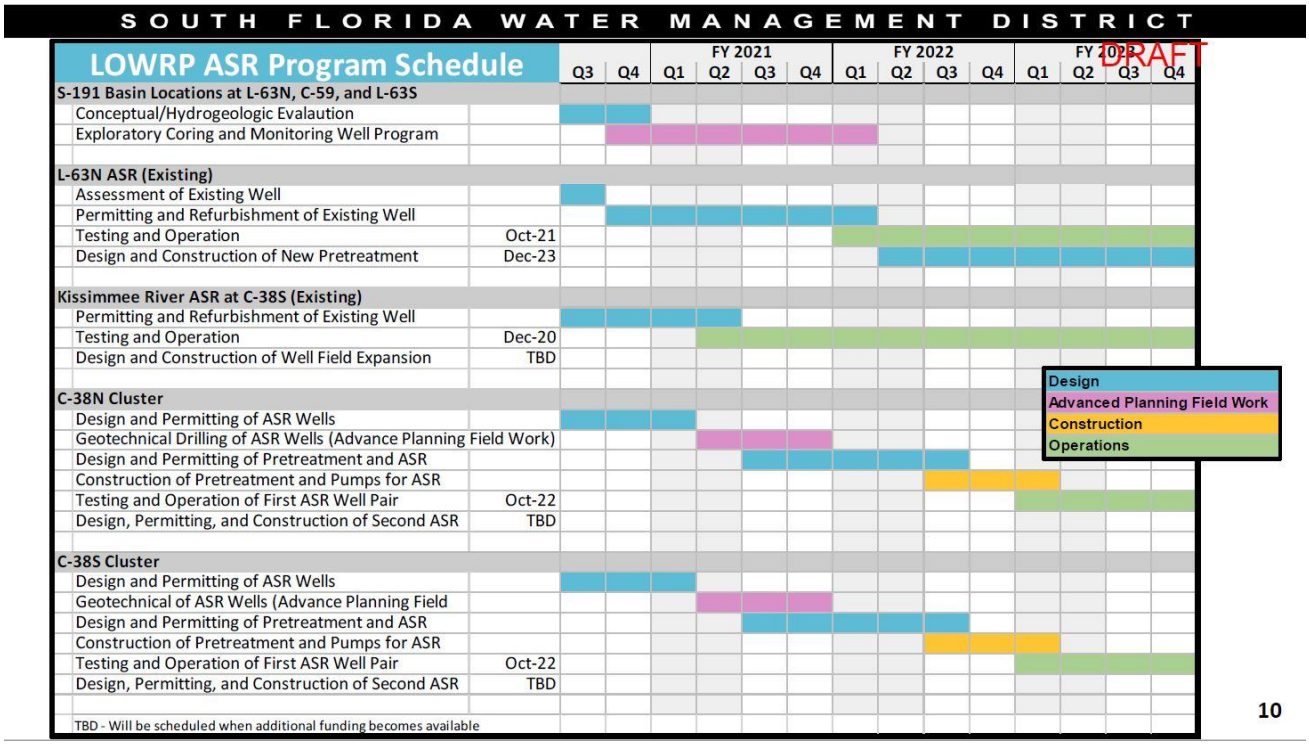
The LOWRP project implementation report includes a proposed, but not mandatory, sequencing that begins with the 55 watershed ASR features, based on the conceptual locations for well clusters.[111] Design and construction would begin with the Kissimmee River Basin ASR and

[99] *Id*. at 1-6.
[100] *Id*. at ES-3.
[101] *Id*. at 3-3, 6-33. Analyses performed by the LOWRP team confirmed that storage is needed both north and south of the lake to achieve the restoration purposes of CERP.
[102] *Id*.
[103] *Id*. at ES-8, 2-6, 6-24.
[104] *Id*. at ES-9, 6-21, 6-68.
[105] *Id*. at ES-13.
[106] *Id*. at 6-47–6-48; USACE and SFWMD, *Comprehensive Everglades Restoration Plan, Lake Okeechobee Watershed Restoration Project, Final Integrated Project Implementation Report and Environmental Impact Statement, Appendix D: Real Estate*, D-8–D-10 (Aug. 2020)[hereinafter *LOWRP PIR Real Estate*], *available at* https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/15182 (last visited Feb. 19, 2021).
[107] *LOWRP PIR*, at ES-14, 6-44. Co-located ASR wells are anticipated to be located on lands adjacent and internal to the wetland attenuation feature; *LOWRP PIR Real Estate*, at D-5. It is estimated that the watershed ASR wells will require 1.5 acres of land per well.
[108] *LOWRP PIR*, at 6-44.
[109] *LOWRP PIR Real Estate*, at D-5.
[110] *Id*. at D-6.
[111] *Id*. at 6-51–6-53.

Taylor Creek/Nubbin Slough ASR, initially with sites which have existing infrastructure that can be utilized.[112] Generally, this is followed by design and construction of ASR systems at Port Mayaca, Moore Haven, and Indian Prairie.[113] Each ASR system in the Recommended Plan is independent, and final siting will be determined during preconstruction engineering and design.[114] The proposed sequence ends with the wetland restoration features and the wetland attenuation feature. The design and construction of the 25 co-located wells may be done concurrently with the construction of the wetland attenuation feature, but may not be constructed before then.[115]

In both the 2019 and 2020 legislative sessions, the Florida Legislature appropriated $50 million to the SFWMD to design and construct the LOWRP components designed to achieve the greatest reductions in harmful discharges to the Caloosahatchee and St. Lucie estuaries.[116] In 2019, the SFWMD and the USACE determined that the watershed ASR component of the LOWRP would provide the greatest benefits to the estuaries.[117] In August of 2020, the Governing Board of the SFWMD authorized a contract for drilling as part of the Florida Aquifer System Exploratory Coring and Monitoring Well Construction Program.[118] The sites under evaluation through that program include five of the six sites in the Kissimmee River and Taylor Creek/Nubbin Slough Basins shown in the LOWRP project implementation report.[119] Below is a schedule, from the presentation to the Governing Board, for implementing LOWRP ASR on those sites.[120]

[112] *Id*. at 6-53.
[113] *Id*.
[114] *Id.* at 6-2, 6-53.
[115] *Id*. at 6-58.
[116] Chapter 2019-115, Specific Appropriation 1642A, Laws of Fla.; ch. 2020-111, Specific Appropriation 1622A, Laws of Fla.
[117] SFWMD, Governing Board Meeting Presentation, *Floridan Aquifer System Exploratory Coring and Monitoring Well Construction Program*, begins at around 5:09:00 (Aug. 13, 2020), http://sfwmd.iqm2.com/Citizens/SplitView.aspx?Mode=Video&MeetingID=2014&Format=Agenda (last visited Feb. 20, 2021).
[118] SFWMD, *Governing Board Monthly Meeting Agenda, Final - Revised*, Packet Pg. 122-126 (Aug. 13, 2020), *available at* https://apps.sfwmd.gov/ci/publicmeetings/viewFile/26661 (last visited Feb. 21, 2021).
[119] SFWMD, Governing Board Meeting Presentation, *Floridan Aquifer System Exploratory Coring and Monitoring Well Construction Program*, begins at around 5:09:00 (Aug. 13, 2020), http://sfwmd.iqm2.com/Citizens/SplitView.aspx?Mode=Video&MeetingID=2014&Format=Agenda (last visited Feb. 20, 2021); *LOWRP PIR*, at 6-52.
[120] SFWMD, Governing Board Meeting Presentation Slides, *Floridan Aquifer System Exploratory Coring and Monitoring Well Construction Program*, slide 10 (Aug. 13, 2020), *available at* https://apps.sfwmd.gov/ci/publicmeetings/viewFile/26666 (last visited Feb. 20, 2021).



On January 27, 2021, the USACE and SFWMD executed a pre-partnership credit agreement for the LOWRP.[121] This agreement makes the costs of the SFWMD's work on the LOWRP, occurring prior to congressional authorization and execution of a project partnership agreement, eligible for credit towards CERP cost-sharing following authorization.[122] Under the agreement, the SFWMD proposes to carry out construction of no more than 55 watershed ASR systems and wetland restoration for the Paradise Run and Kissimmee River-Center sites.[123] The pre-partnership credit agreement states that ASR system construction will be phased based on certain factors, including findings of exploratory testing, cluster feasibility, and realizing benefits at the earliest opportunity.[124]

On February 24, 2021, the USACE sent a letter to the SFWMD stating that the USACE would like to evaluate the potential benefits of the LOWRP Recommended Plan without the wetland attenuation feature.[125] In the letter, the USACE requested the SFWMD's technical assistance with the process of updating the project implementation report.[126]

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[121] USACE and SFWMD, *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*, 6 (Jan. 27, 2021)(on file with the Florida Senate Environment and Natural Resources Committee).

[122] *Id*. at 1. For the costs of the SFWMD's proposed work to be eligible for cost-sharing credit following project authorization, the USACE must determine that the proposed work is integral to the authorized project, including any modifications to the project.

[123] *Id*. at 1-3.

[124] *Id*. at 2.

[125] USACE, Programs and Project Management, *Letter to Drew Bartlett, Executive Director of the South Florida Water Management District*, 1 (Feb. 24, 2021)(on file with the Florida Senate Environment and Natural Resources Committee).

[126] *Id*.

III. Effect of Proposed Changes:

Section 1 creates s. 373.4599, F.S., entitled "Water storage north of Lake Okeechobee." The bill provides a definition section. The U.S. Army Corps of Engineers (USACE) and the South Florida Water Management District (SFWMD) are defined as the "corps" and the "district," respectively. The bill defines the Lake Okeechobee Watershed Restoration Project (LOWRP) as the recommended plan contained within the LOWRP project implementation report. This definition applies to the existing project implementation report dated August 2020 or any amended project implementation report in the future, any of which will require congressional authorization.

Upon the effective date of the bill, the SFWMD must request that the USACE seek congressional approval of a project implementation report for the LOWRP before passage of the Water Resources Development Act of 2022. Immediately following congressional approval of the LOWRP, the SFWMD is directed to execute with the USACE a project partnership agreement for the LOWRP that is consistent with the bill.

The SFWMD is directed to expedite the development and implementation of the LOWRP aquifer storage and recovery (ASR) wells, in partnership with the USACE, pursuant to the following schedule:

- By August 1, 2021: for all feasible cluster sites in the Kissimmee River Basin and Taylor Creek/Nubbin Slough Basin that are not the site of the existing Kissimmee River ASR system – construct or execute contracts for any necessary exploratory and monitoring wells on each site, in addition to any other necessary evaluations, to evaluate or confirm site suitability for well clusters.
- By November 1, 2021: submit to the Legislature a report describing the SFWMD's compliance with the bill, including steps taken and any plans necessary for ongoing compliance. The report must include updates on congressional approval for the LOWRP project implementation report; the ASR Science Plan; any scientific investigations; and designs, construction, and operations.
- By January 30, 2022: reactivate the existing ASR system on the site of the Kissimmee River Aquifer Storage and Recovery pilot project.
- By December 31, 2022: for any other currently or subsequently proposed sites for LOWRP watershed ASR that are not in the Kissimmee River Basin or Taylor Creek/Nubbin Slough Basin and that are not co-located with the wetland attenuation feature – execute contracts for the construction of any necessary exploratory and monitoring wells on each site, in addition to any other necessary evaluations, to evaluate site suitability for well clusters.
- By March 30, 2027: ensure that all feasible or existing ASR systems on those currently or subsequently proposed LOWRP watershed ASR sites with suitable locations are operational.

The bill requires the SFWMD to perform any necessary scientific investigation and monitoring concurrently with the implementation of the LOWRP ASR wells. To ensure public health and safety, technical feasibility, and achievement of environmental benefits, LOWRP ASR must use a phased approach that confirms feasibility and site suitability, and that addresses uncertainties identified in the ASR Science Plan. The bill requires the SFWMD to expedite implementation of the ASR Science Plan.

The bill requires the SFWMD to pursue, in partnership with the USACE, expeditious implementation of the Paradise Run wetland restoration project and Kissimmee River-Center wetland restoration project.

The bill requires that LOWRP implementation under the bill must comply with all applicable federal and state laws and rules, including the Department of Environmental Protection's underground injection control program. It also specifies that all projects, locations, or structures referred to in the bill's subsection on project implementation mean those described in the LOWRP project implementation report, dated August 2020 or as subsequently amended.

Section 2 requires the Division of Law Revision to replace the phrase "the effective date of this act," wherever it occurs in the bill, with the date the bill becomes a law.

Section 3 states that the bill shall take effect upon becoming a law.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

D. State Tax or Fee Increases:

None.

E. Other Constitutional Issues:

None.

V. Fiscal Impact Statement:

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

None.

C. Government Sector Impact:

The bill requires the SFWMD to expedite a number of projects, including scientific investigation, planning, design, and construction. Compliance with the bill may increase costs for the SFWMD during the timeline specified in the bill.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Statutes Affected:

This bill creates section 373.4599 of the Florida Statutes.

IX. Additional Information:

A. Committee Substitute – Statement of Changes:
(Summarizing differences between the Committee Substitute and the prior version of the bill.)

None.

B. Amendments:

None.

This Senate Bill Analysis does not reflect the intent or official position of the bill's introducer or the Florida Senate.

By Senator Brodeur

9-02212-21 202194__

A bill to be entitled

An act relating to water storage north of Lake Okeechobee; creating s. 373.4599, F.S.; defining terms; requiring the South Florida Water Management District to request that the United States Army Corps of Engineers seek congressional approval of a project implementation report for the Lake Okeechobee Watershed Restoration Project by a specified date; requiring the district to seek a project partnership agreement with the corps upon such approval; requiring the district, in partnership with the corps, to expedite the development and implementation of aquifer storage and recovery wells; requiring the district to perform necessary scientific investigation and monitoring with implementation of such storage and recovery; requiring the district to expedite implementation of the aquifer storage and recovery science plan developed by the district and the corps; providing an implementation schedule for project sites; requiring the district, in partnership with the corps, to pursue expeditious implementation of certain wetland restoration projects; requiring the district to submit a report to the Legislature by a specified date; providing requirements for the report; providing a directive to the Division of Law Revision; providing an effective date.

Be It Enacted by the Legislature of the State of Florida:

CODING: Words ~~stricken~~ are deletions; words underlined are additions.

Section 1. Section 373.4599, Florida Statutes, is created to read:

373.4599 Water storage north of Lake Okeechobee.—

(1) DEFINITIONS.—As used in this section, the term:

(a) "Corps" means the United States Army Corps of Engineers.

(b) "District" means the South Florida Water Management District.

(c) "Lake Okeechobee Watershed Restoration Project" or "LOWRP" means the recommended plan contained within the Lake Okeechobee Watershed Restoration Project Final Integrated Project Implementation Report and Environmental Impact Statement dated August 2020 or as amended by the district and corps.

(2) PROJECT IMPLEMENTATION REPORT.—Upon the effective date of this act, the district shall request that the corps seek congressional approval of a project implementation report for the LOWRP before passage of the Water Resources Development Act of 2022.

(3) AGREEMENTS.—Immediately following congressional approval of the LOWRP, the district shall seek to execute with the corps a project partnership agreement for the LOWRP. The project partnership agreement must be consistent with this section.

(4) PROJECT IMPLEMENTATION.—

(a) *Projects, locations, or structures*.—Projects, locations, or structures referred to in this subsection shall mean those described in the Lake Okeechobee Watershed Restoration Project Final Integrated Project Implementation Report and Environmental Impact Statement dated August 2020 or

as amended by the district and the corps.

(b) *Aquifer storage and recovery.*—

1. Expedition of the LOWRP.—The district, in partnership with the corps, shall expedite the development and implementation of the LOWRP aquifer storage and recovery wells. Implementation of this subsection must comply with all applicable federal and state laws and rules, including the department's underground injection control program.

2. Investigation and monitoring.—The district shall perform any necessary scientific investigation and monitoring concurrently with the implementation of the LOWRP aquifer storage and recovery wells. To ensure public health and safety, technical feasibility, and achievement of environmental benefits, implementation of the LOWRP aquifer storage and recovery wells must use a phased approach that confirms feasibility and site suitability and addresses uncertainties identified in the aquifer storage and recovery science plan developed by the district and the corps.

3. Aquifer storage and recovery science plan.—The district shall expedite implementation of the aquifer storage and recovery science plan developed by the district and the corps.

4. LOWRP watershed aquifer storage and recovery wells.—

a. For the Kissimmee River Basin site with the existing Kissimmee River Aquifer Storage and Recovery Pilot Project system, the district shall, by January 30, 2022, reactivate the existing aquifer storage and recovery system on the site, including any necessary testing. By March 30, 2027, the district shall ensure that all other feasible aquifer storage and recovery wells on the site are operational.

CODING: Words ~~stricken~~ are deletions; words underlined are additions.

b. For all remaining feasible cluster sites in the Kissimmee River Basin and Taylor Creek/Nubbin Slough Basin, the district shall, by August 1, 2021, construct or execute contracts for any necessary exploratory and monitoring wells on each site, in addition to any other necessary evaluations, to evaluate or confirm site suitability for well clusters. By March 30, 2027, the district shall ensure that all feasible aquifer storage and recovery wells on those sites with suitable locations are operational.

c. For all other feasible LOWRP watershed aquifer storage and recovery cluster sites not colocated with the wetland attenuation feature, the district shall, by December 31, 2022, for any other currently or subsequently proposed site for LOWRP watershed aquifer storage and recovery, execute contracts for the construction of any necessary exploratory and monitoring wells on each site, in addition to any other necessary evaluations, to evaluate site suitability for well clusters. By March 30, 2027, the district shall ensure that all feasible aquifer storage and recovery wells on those sites with suitable locations are operational.

(c) *Wetland restoration.*—The district, in partnership with the corps, shall pursue expeditious implementation of the Paradise Run wetland restoration project and Kissimmee River Center wetland restoration project.

(5) REPORT.—By November 1, 2021, the district shall submit to the Legislature a report describing the district's compliance with this section, including steps taken and any plans necessary for ongoing compliance. The report must include updates on congressional approval for the LOWRP project implementation

CODING: Words ~~stricken~~ are deletions; words underlined are additions.

report; the aquifer storage and recovery science plan; any scientific investigations; and designs, construction, and operations.

Section 2. The Division of Law Revision is directed to replace the phrase "the effective date of this act" wherever it occurs in this act with the date this act becomes a law.

Section 3. This act shall take effect upon becoming a law.

CODING: Words ~~stricken~~ are deletions; words underlined are additions.

THE FLORIDA SENATE

Tallahassee, Florida 32399-1100

COMMITTEES:
Appropriations Subcommittee on Health and Human Services, *Chair*
Appropriations, *Vice Chair*
Environment and Natural Resources
Health Policy
Rules

JOINT COMMITTEE:
Joint Legislative Budget Commission

SENATOR AARON BEAN
President Pro Tempore
4th District

March 2, 2021

Senator Jason Brodeur
Chair, Environmental and Natural Resources
311 Senate Building
404 South Monroe Street
Tallahassee, Florida 32399

Dear Senator Brodeur:

I am writing to request approval to be excused from the Environmental and Natural Resources meeting scheduled for today, Tuesday, March 2, 2021, due to testing positive for COVID -19.

I appreciate your consideration in this matter.

Sincerely,

Aaron Bean

Aaron Bean
Senator | 4th District

REPLY TO:
❒ Duval Station, 13453 North Main Street, Suite 301, Jacksonville, Florida 32218 (904) 757-5039 FAX: (888) 263-1578
❒ 404 Senate Building, 404 South Monroe Street, Tallahassee, Florida 32399-1100 (850) 487-5004 FAX: (850) 410-4805

Senate's Website: *www.flsenate.gov*

WILTON SIMPSON
President of the Senate

AARON BEAN
President Pro Tempore

THE FLORIDA SENATE

APPEARANCE RECORD

(Deliver BOTH copies of this form to the Senator or Senate Professional Staff conducting the meeting)

March 2 2021
Meeting Date

ASR (94)
Bill Number (if applicable)

Topic Aquifer Storage Recovery (ASR)

Amendment Barcode (if applicable)

Name DAVID PYNE

Job Title PRESIDENT, ASR SYSTEMS LLC

Address 540 NE 5th AVE
Street

Phone 352-215-0319 (cell)

GAINESVILLE FL
City *State* *Zip*

Email dpyne@asrsystems.us

Speaking: ☑ For ☐ Against ☐ Information

Waive Speaking: ☐ In Support ☐ Against
(The Chair will read this information into the record.)

Representing FES (Florida Engineering Society)

Appearing at request of Chair: ☐ Yes ☑ No

Lobbyist registered with Legislature: ☐ Yes ☑ No

While it is a Senate tradition to encourage public testimony, time may not permit all persons wishing to speak to be heard at this meeting. Those who do speak may be asked to limit their remarks so that as many persons as possible can be heard.

This form is part of the public record for this meeting.

S-001 (10/14/14)

THE FLORIDA SENATE

APPEARANCE RECORD

(Deliver BOTH copies of this form to the Senator or Senate Professional Staff conducting the meeting)

3-2-2021
Meeting Date

ASR (94)
Bill Number (if applicable)

Amendment Barcode (if applicable)

Topic Aquifer Storage Recovery (ASR)

Name Mark B. McNeal

Job Title CEO, ASRUS, LLC

Address 13329 N. Armenia Ave
Street

Tampa FL 33613
City *State* *Zip*

Phone 813-765-1942

Email mmcneal@ASRUS.net

Speaking: [X] For [ ] Against [ ] Information

Waive Speaking: [ ] In Support [ ] Against
(The Chair will read this information into the record.)

Representing FGWA (Florida Ground Water Association)

Appearing at request of Chair: [ ] Yes [X] No

Lobbyist registered with Legislature: [ ] Yes [X] No

While it is a Senate tradition to encourage public testimony, time may not permit all persons wishing to speak to be heard at this meeting. Those who do speak may be asked to limit their remarks so that as many persons as possible can be heard.

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S-001 (10/14/14)

THE FLORIDA SENATE

APPEARANCE RECORD

(Deliver BOTH copies of this form to the Senator or Senate Professional Staff conducting the meeting)

March 2, 2021
Meeting Date

Bill Number (if applicable)

Amendment Barcode (if applicable)

Topic Aquifer Storage + Recovery

Name Drew Bartleff

Job Title Executive Director, SFWMD

Address 3301 Gun Club Rd.
Street
W. Palm Beach FL 33406
City *State* *Zip*

Phone 5616826993

Email dbartleff@sfwmd.gov

Speaking: ☐ For ☐ Against ☒ Information

Waive Speaking: ☐ In Support ☐ Against
(The Chair will read this information into the record.)

Representing SFWMD

Appearing at request of Chair: ☒ Yes ☐ No

Lobbyist registered with Legislature: ☐ Yes ☒ No

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S-001 (10/14/14)

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THE FLORIDA SENATE

APPEARANCE RECORD

3/2/2021
Meeting Date

SB 94
Bill Number (if applicable)

Topic SB 94 Concerning water Storage

Amendment Barcode (if applicable)

Name Ryder Rudd

Job Title Svp at McGuireWoods

Address 115 E Park Ave Suite 1
Street

Phone 850-294-3767

Tallahassee FL 32301
City *State* *Zip*

Email RRudd@mwcllc.com

Speaking: ☒ For ☐ Against ☐ Information

Waive Speaking: ☐ In Support ☐ Against
(The Chair will read this information into the record.)

Representing The Nature Conservancy

Appearing at request of Chair: ☐ Yes ☒ No

Lobbyist registered with Legislature: ☒ Yes ☐ No

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S-001 (10/14/14)

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THE FLORIDA SENATE

APPEARANCE RECORD

3/2/21 A2 1:30
Meeting Date

94
Bill Number (if applicable)

Topic Water Storage North of Lake Okeechobee

Amendment Barcode (if applicable)

Name David Cullen

Job Title

Address 1934 Shelby Ct
Street

Phone 941-323-2404

Tallahassee FL 32308
City *State* *Zip*

Email cullenasea@gmail.com

Speaking: ☐ For ☑ Against ☐ Information

Waive Speaking: ☐ In Support ☐ Against
(The Chair will read this information into the record.)

Representing Sierra Club Florida

Appearing at request of Chair: ☐ Yes ☑ No

Lobbyist registered with Legislature: ☑ Yes ☐ No

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S-001 (10/14/14)

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THE FLORIDA SENATE

APPEARANCE RECORD

3/2/2021
Meeting Date

94
Bill Number (if applicable)

Amendment Barcode (if applicable)

Topic Water Storage

Name Christopher Emmanuel

Job Title Policy Director

Address 136 S Bronough St
Street

Tallahassee FL 32301
City *State* *Zip*

Phone

Email cemmanuel@flchamber.com

Speaking: ☐ For ☐ Against ☐ Information

Waive Speaking: ☑ In Support ☐ Against
(The Chair will read this information into the record.)

Representing The Florida Chamber of Commerce

Appearing at request of Chair: ☐ Yes ☐ No

Lobbyist registered with Legislature: ☑ Yes ☐ No

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S-001 (10/14/14)

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THE FLORIDA SENATE

APPEARANCE RECORD

3/2/21
Meeting Date

SB 94
Bill Number (if applicable)

Topic Water Storage North Lake Okeechobee

Amendment Barcode (if applicable)

Name Lauren Gallo

Job Title

Address 106 E College Ave Suite 1110
Street
Tallahassee FL 32301
City *State* *Zip*

Phone (850) 224-1660

Email lngallocag@gmail.com

Speaking: ☐ For ☐ Against ☐ Information

Waive Speaking: ☐ In Support ☒ Against
(The Chair will read this information into the record.)

Representing League of Women Voters FL

Appearing at request of Chair: ☐ Yes ☐ No

Lobbyist registered with Legislature: ☐ Yes ☐ No

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S-001 (10/14/14)

THE FLORIDA SENATE

APPEARANCE RECORD

(Deliver BOTH copies of this form to the Senator or Senate Professional Staff conducting the meeting)

3/2/21
Meeting Date

0094
Bill Number (if applicable)

Topic WATER STORAGE North of LAKE OKEECHOBEE
Amendment Barcode (if applicable)

Name Jim Spratt

Job Title

Address 119 S Monroe St
Street

Phone

TALLAHASSEE FL 32301
City *State* *Zip*

Email

Speaking: ☐ For ☐ Against ☐ Information

Waive Speaking: ☒ In Support ☐ Against
(The Chair will read this information into the record.)

Representing Associated Industries of Florida

Appearing at request of Chair: ☐ Yes ☐ No

Lobbyist registered with Legislature: ☒ Yes ☐ No

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S-001 (10/14/14)

THE FLORIDA SENATE

APPEARANCE RECORD

(Deliver BOTH copies of this form to the Senator or Senate Professional Staff conducting the meeting)

TRP 1, S. Gruters

3/2/21
Meeting Date

776
Bill Number (if applicable)

Amendment Barcode (if applicable)

Topic Racketeering - Wildlife trafficking

Name Kate MacFall

Job Title State director

Address 1624 Metropolitan Circle
Street
Tallahassee
City *State* *Zip*

Phone 850 508-1001

Email kmacfall@hsus.org

Speaking: ☐ For ☐ Against ☐ Information

Waive Speaking: ☒ In Support ☐ Against
(The Chair will read this information into the record.)

Representing Humane Society of the United States

Appearing at request of Chair: ☐ Yes ☑ No

Lobbyist registered with Legislature: ☑ Yes ☐ No

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S-001 (10/14/14)

THE FLORIDA SENATE

APPEARANCE RECORD

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3/2/21
Meeting Date

776
Bill Number (if applicable)

Amendment Barcode (if applicable)

Topic Racketeering

Name Travis Moore

Job Title

Address P.O. Box 2020
Street

St. Petersburg FL
City *State* *Zip*

Phone 727.421.6902

Email travis@moore-relations.com

Speaking: ☐ For ☐ Against ☐ Information

Waive Speaking: ☑ In Support ☐ Against
(The Chair will read this information into the record.)

Representing Defenders of Wildlife

Appearing at request of Chair: ☐ Yes ☑ No

Lobbyist registered with Legislature: ☑ Yes ☐ No

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S-001 (10/14/14)

THE FLORIDA SENATE

APPEARANCE RECORD

(Deliver BOTH copies of this form to the Senator or Senate Professional Staff conducting the meeting)

8/2/21
Meeting Date

SB 776
Bill Number (if applicable)

Amendment Barcode (if applicable)

Topic Racketeering

Name Jessica Crawford

Job Title Legislative Affairs Director

Address 620 S. Meridian St.
Street

Phone 850-251-7754

Tallahassee FL 32399
City *State* *Zip*

Email Jessica.Crawford@myfwc.com

Speaking: ☐ For ☐ Against ☐ Information

Waive Speaking: ☑ In Support ☐ Against
(The Chair will read this information into the record.)

Representing Florida Fish & Wildlife Conservation Commission

Appearing at request of Chair: ☐ Yes ☑ No

Lobbyist registered with Legislature: ☑ Yes ☐ No

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S-001 (10/14/14)

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THE FLORIDA SENATE

APPEARANCE RECORD

3/2/21 A2 1:30
Meeting Date

776
Bill Number (if applicable)

Topic Racketeering

Amendment Barcode (if applicable)

Name David Cullen

Job Title

Address 1934 Shelby Ct
Street

Phone 941-323-2404

Tallahassee FL 32308
City *State* *Zip*

Email cullenasea@gmail.com

Speaking: ☐ For ☐ Against ☐ Information

Waive Speaking: ☑ In Support ☐ Against
(The Chair will read this information into the record.)

Representing Sierra Club Florida

Appearing at request of Chair: ☐ Yes ☑ No

Lobbyist registered with Legislature: ☑ Yes ☐ No

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S-001 (10/14/14)

THE FLORIDA SENATE

APPEARANCE RECORD

(Deliver BOTH copies of this form to the Senator or Senate Professional Staff conducting the meeting)

March 2 2021
Meeting Date

SB 9??
Bill Number (if applicable)

Amendment Barcode (if applicable)

Topic: DEP & ST Johns RWD STUDY

Name: David Serdan

Job Title: Statesman Environmentalist

Address: 66 Wintergreen Dr
Street

Phone: 3528056597

Fru
City State Zip

Email: golfendme4955@gmail.com

Speaking: [ ] For [ ] Against [x] Information

Waive Speaking: [ ] In Support [ ] Against
(The Chair will read this information into the record.)

Representing: Self

Appearing at request of Chair: [ ] Yes [x] No

Lobbyist registered with Legislature: [ ] Yes [x] No

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S-001 (10/14/14)

CourtSmart Tag Report

Room: SB 37 **Case No.:** **Type:**
Caption: Senate Comittee on Environment and Natural Resources **Judge:**

Started: 3/2/2021 1:31:39 PM
Ends: 3/2/2021 2:27:24 PM Length: 00:55:46

1:31:38 PM	Meeting called to order
1:31:50 PM	Roll call and Pledge of Allegiance
1:32:55 PM	Quorum is present
1:32:58 PM	CS/SB 776 by Criminal Justice/ Gainer- Racketeering
1:33:08 PM	Senator Gainer explains CS/SB 776
1:34:47 PM	Senator Gainer waives close
1:35:01 PM	CS/SB 776 reported favorably
1:35:13 PM	Presentation by Daivd Pyne and Mark McNeal on Aquifer Storage and Recovery
1:36:20 PM	David Pyne, president of Aquifer Storage and Recovery speaking
1:37:33 PM	Mark McNeal, CEO Aquifer Storage and Recovery speaking
1:41:47 PM	David Pyne speaking
1:48:12 PM	Senator Stewart ask question to presenter
1:48:39 PM	Presenter answers question
1:49:33 PM	Senator Albritton ask question to presenter
1:49:53 PM	Presenter answers question
1:51:42 PM	Aquifer Storage and Recovery concludes presentation
1:51:57 PM	Presenter Drew Bartlett from the South Florida Water Management District presents
2:07:21 PM	Senator Stewart makes a comment
2:08:05 PM	Chair Brodeur makes a statement
2:08:26 PM	Presentation is concluded
2:08:36 PM	Chair Brodeur turns chair shift to Senator Stewart
2:08:58 PM	Take up SB 94 by Senator Brodeur
2:09:14 PM	Senator Brodeur explains bill
2:10:22 PM	Jim Spratt waives in support
2:10:28 PM	Lauren Galio waives against SB 94
2:10:54 PM	Christopher Emmanuel waives in support of SB 94
2:11:06 PM	David Cullen speaking against SB 94
2:13:38 PM	Ryder Rudd speaking in favor of SB 94
2:15:32 PM	Senator Albritton is recognized in debate
2:17:36 PM	Senator Perry is recognized in debate
2:17:57 PM	Senator Stewart is recognized in debate
2:19:15 PM	Chair Brodeur closes on SB 94
2:20:09 PM	SB 94 is reported favorably
2:20:30 PM	Take up SB 976 by Senator Brodeur
2:20:53 PM	Senator Brodeur explains SB 976
2:21:55 PM	Amendment 130930 by Senator Brodeur
2:22:09 PM	Senator Brodeur explains amendment 130930
2:23:53 PM	David Serdar speaking on Amendment 130930
2:25:19 PM	Chair Brodeur waives close on Amendment 130930
2:25:28 PM	Amendment is adopted
2:26:14 PM	Chair Brodeur closes on Billl as amended
2:26:36 PM	CS/SB 976 is reported favorably
2:26:51 PM	Senator Stewart turns chair back to Chair Brodeur
2:27:10 PM	Meeting has adjourned