

# 2024 Lower Kissimmee Basin Water Supply Plan Update



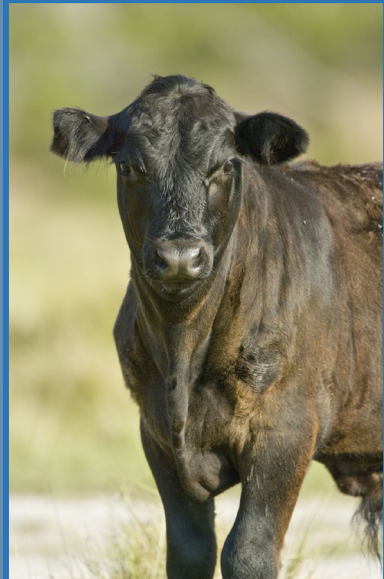
Stakeholder Kickoff Meeting  
April 30, 2024



# Agenda

- **Welcome and Opening Remarks**
  - *Tom Colios, SFWMD*
- **2024 LKB Plan Update Process and Summary of 2019 LKB Plan**
  - *Tom Colios, SFWMD*
- **2024 LKB Plan Goal and Objectives and Progress Since 2019**
  - *Chad Brcka, SFWMD*
- **Comprehensive Everglades Restoration Projects Update**
  - *Leslye Waugh, SFWMD*
- **Draft Demand Estimates and Projections**
  - *Rebecca May, SFWMD*
- **Next Steps**
  - *Chad Brcka, SFWMD*
- **Adjourn**

# 2024 LKB Plan Update Process Summary of 2019 LKB Plan



Tom Colios  
Section Leader, Water Supply Planning  
2024 LKB Stakeholder Meeting  
April 30, 2024



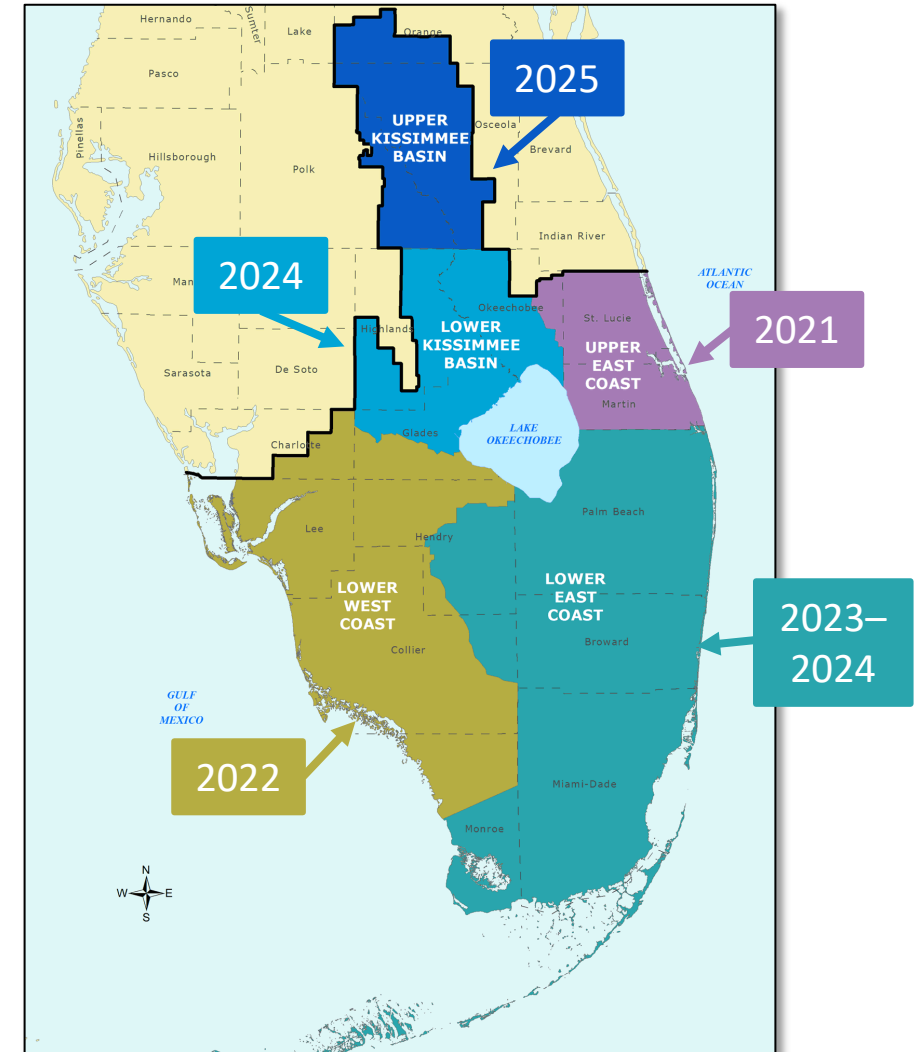
# Statutory Goal of Water Supply Plans (Section 373.709, Florida Statutes)

*To identify sufficient water supply sources and future projects to meet existing and future reasonable-beneficial uses during 1-in-10-year drought conditions through **2045** while sustaining water resources and related natural systems.*



# Water Supply Plan Requirements

- 20-year planning period
- Demand estimates and projections
- Resource analyses
- Issue identification
- Evaluation of water source options
- Water resource development
  - Responsibility of water management district
- Water supply development
  - Responsibility of water users
- Environmental protective and restoration strategies
  - Review/update prevention and recovery strategies for minimum flows and minimum water levels (MFLs)



# Regional Water Supply Plan

## What It Does

- Provides a road map to meet future water needs while protecting water resources and natural systems
- Conducts a planning-level approach
- Projects future water demands
- Identifies and evaluates water source options

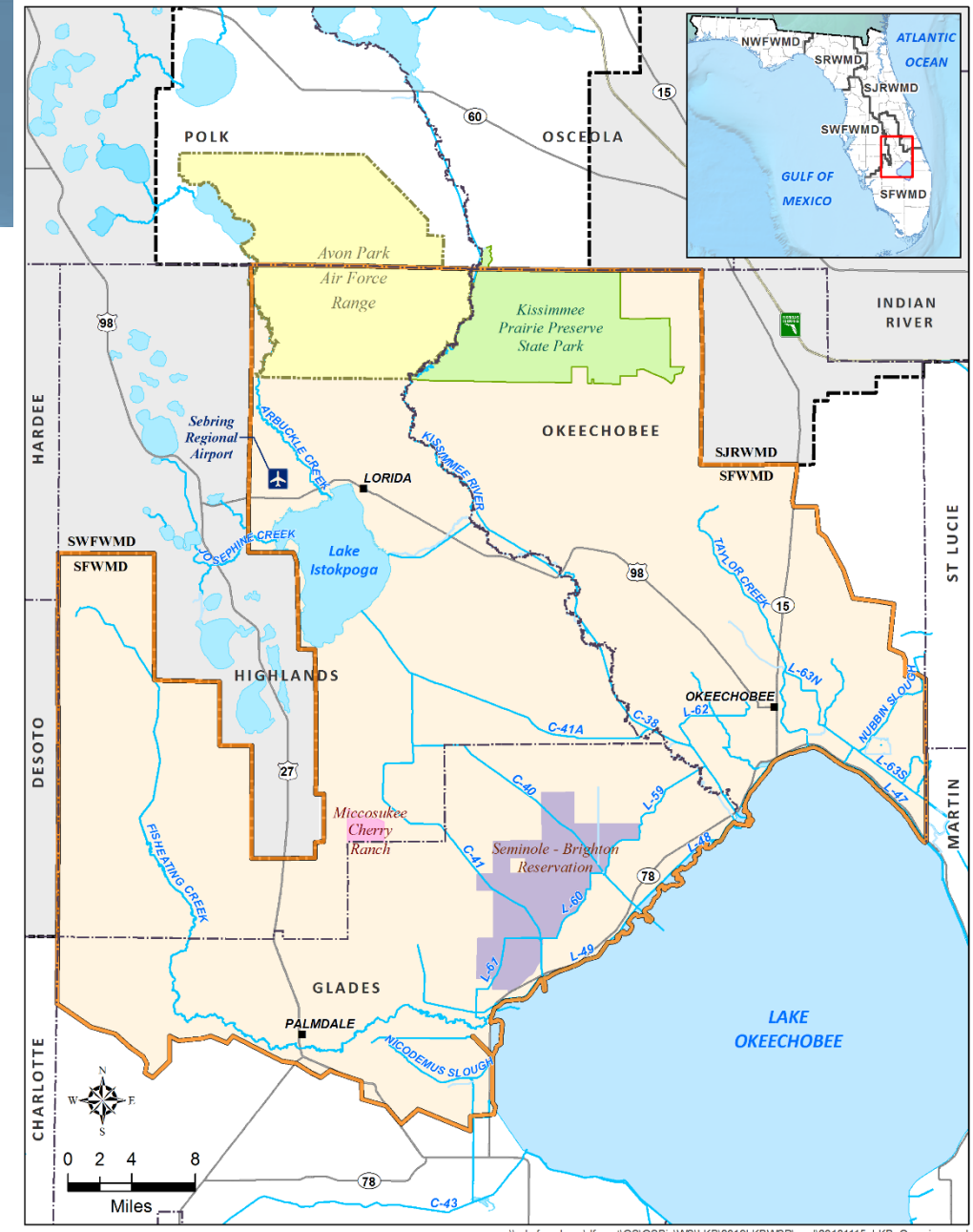
## What It Does NOT Do

- Does not authorize consumptive use permits
- Does not establish MFLs
- Does not adopt rules
- Does not require water users to implement specific projects
- Does not address surface water quality issues (e.g., algal blooms)

# LKB Planning Area

- Portions of Okeechobee, Highlands, and Glades counties
- Population:
  - 2022 52,434
  - 2045 57,229\*
- Major agricultural industry
- Seminole Tribe of Florida Brighton Reservation
- Significant environmental features

\*University of Florida (UF) Bureau of Economic and Business Research estimate.



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# Public Participation

## ➤ **Active participation to ensure plan reflects the needs of the planning area**

- Agricultural interests
- Public water suppliers
- Environmental community
- County commissions/city councils
- County/city planning staff
- Regional planning council
- Governing Board member involvement
- State agencies and special districts
- Tribal governments

## ➤ **Opportunities for public participation**

- Stakeholder meetings
- Governing Board meetings
- One-on-one meetings
- Draft document review and comment

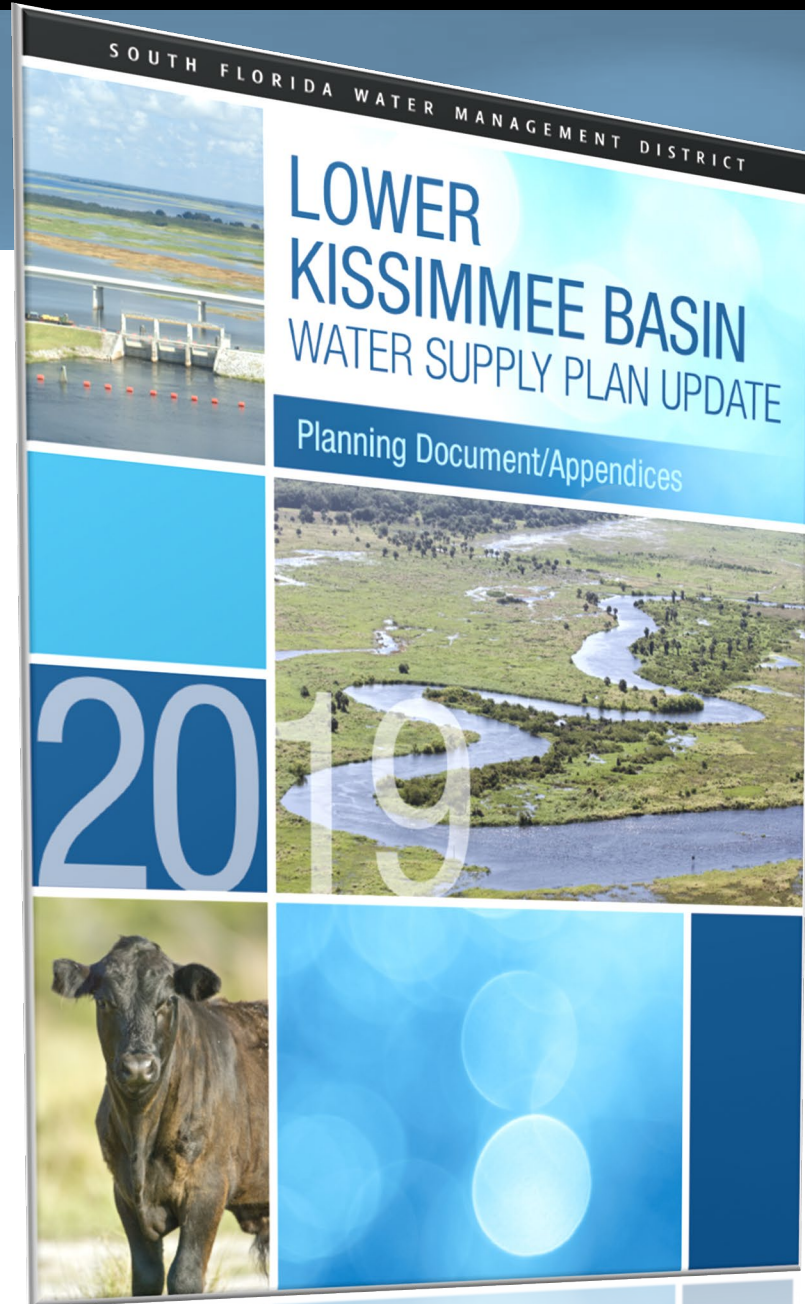




# LKB Water Supply Plan Update Process



# Summary of the 2019 Plan



# 2019 Gross Demand Projections

## Population

2017 52,496 residents  
 2040 58,662 residents



*12% increase*

## Irrigated agricultural acres

2017 119,034 acres  
 2040 123,118 acres

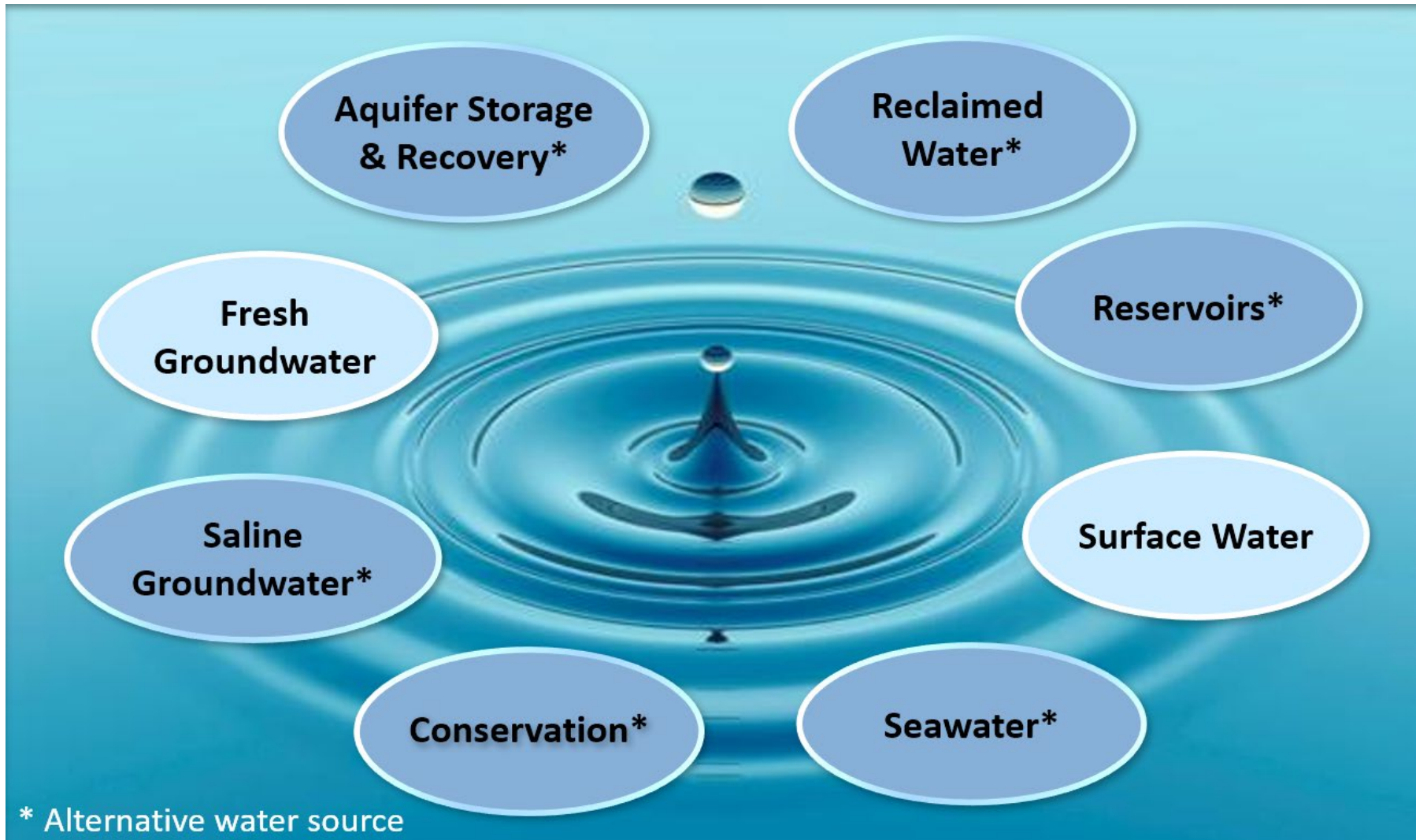


*3% increase*

	Public Water Supply	Domestic and Small Public Supply	Agricultural Irrigation	Industrial/ Commercial/ Institutional	Recreational / Landscape Irrigation	Power Generation	Total
<b>2017</b>	3.04	2.02	237.02	1.70	1.64	0.00	<b>245.42</b>
<b>2040</b>	3.39	2.28	248.14	1.95	1.73	0.00	<b>257.49</b>

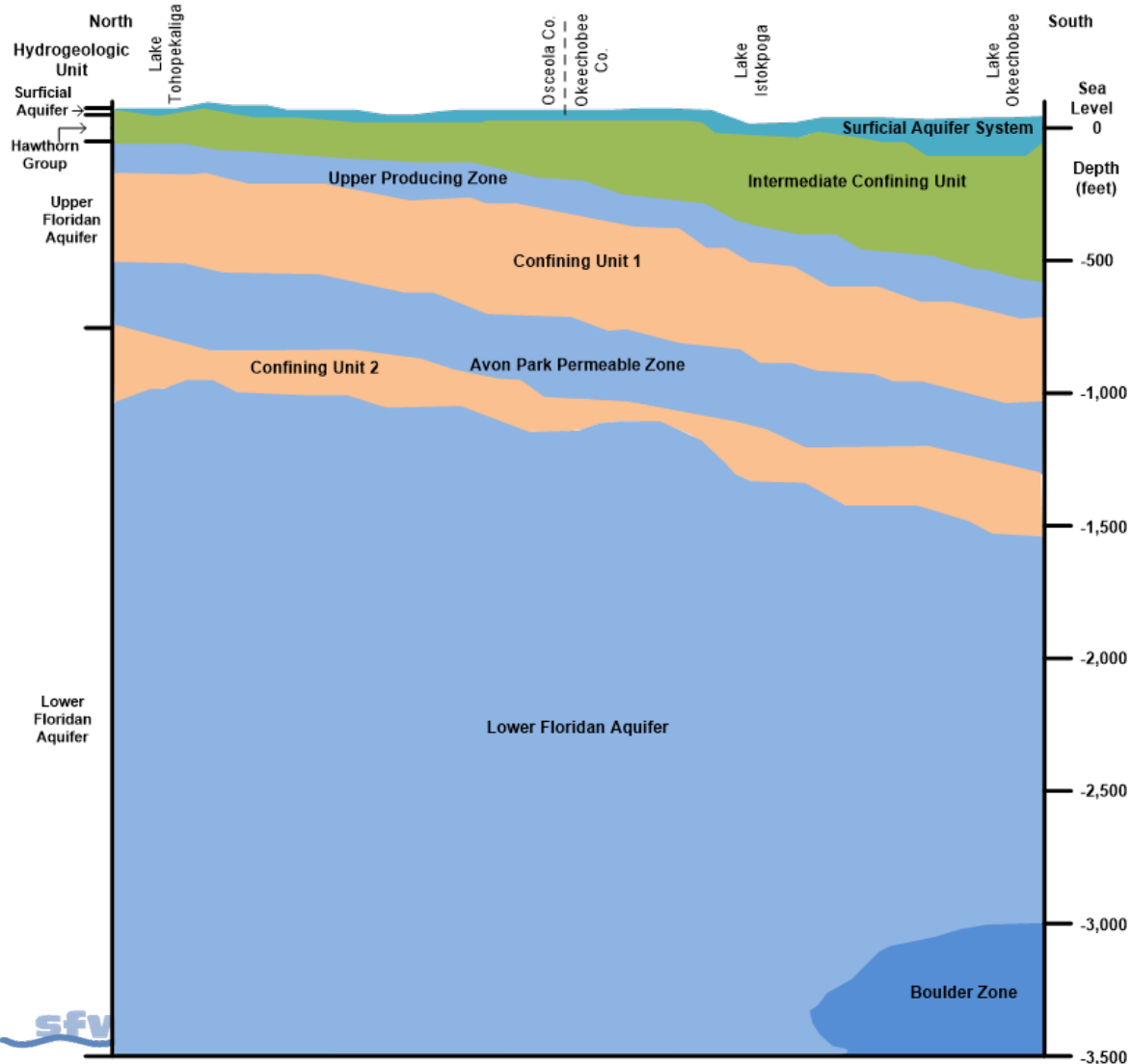
Demands under average rainfall conditions, in million gallons per day.

# Water Source Options and Alternatives



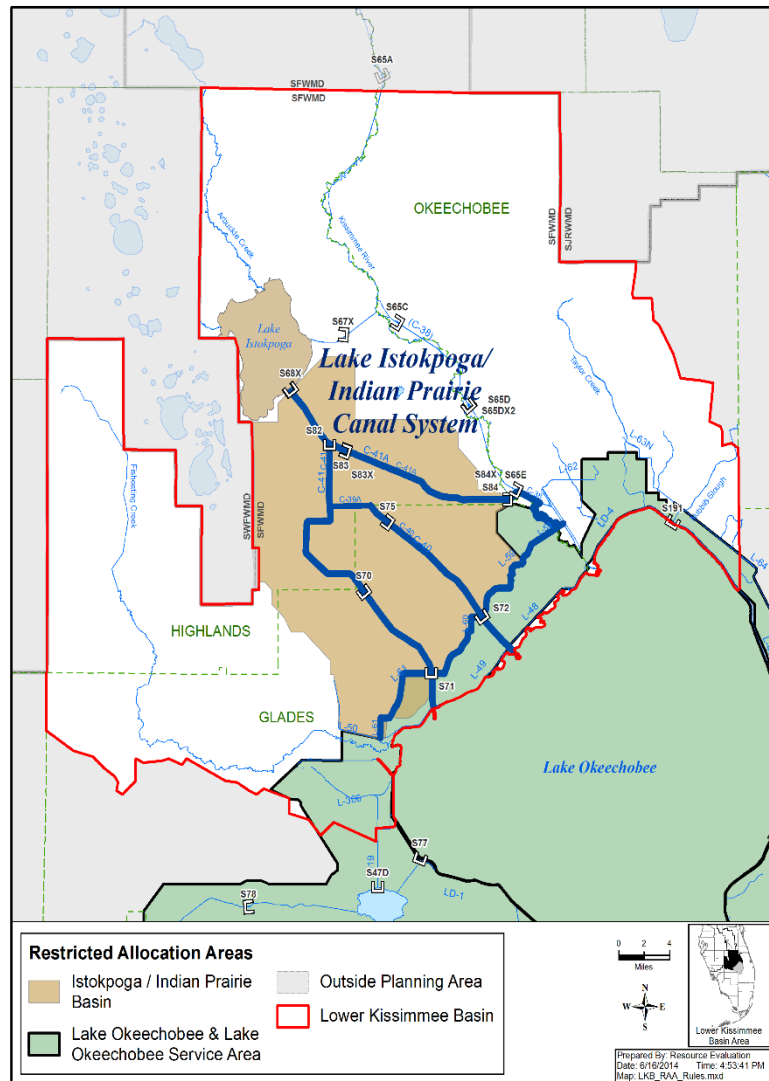
\* Alternative water source

# Groundwater of the LKB



- Fresh Groundwater
  - Surficial aquifer system
  - Upper Floridan aquifer (north)
- Saline Groundwater (*chloride >250 mg/L*)
  - Upper Floridan aquifer (south)
  - Avon Park permeable zone
  - Lower Floridan aquifer

# Summary of 2019 Water Resource Considerations



- Limited surface water availability
  - Lake Istokpoga/Indian Prairie Basin
  - Lake Okeechobee and LOSA
- Seminole Tribe of Florida Brighton Reservation water rights
- Kissimmee River Basin Water Reservation rule development (adopted 2021)
- Minimum Flows and Minimum Levels (MFLs) – SFWMD and SWFWMD (Lake Wales Ridge lakes)

# 2019 Resource Evaluation

## ➤ Surface water

- Restricted Allocation Areas – restrict availability of new surface water
- Minimal projected demand for new surface water through 2040

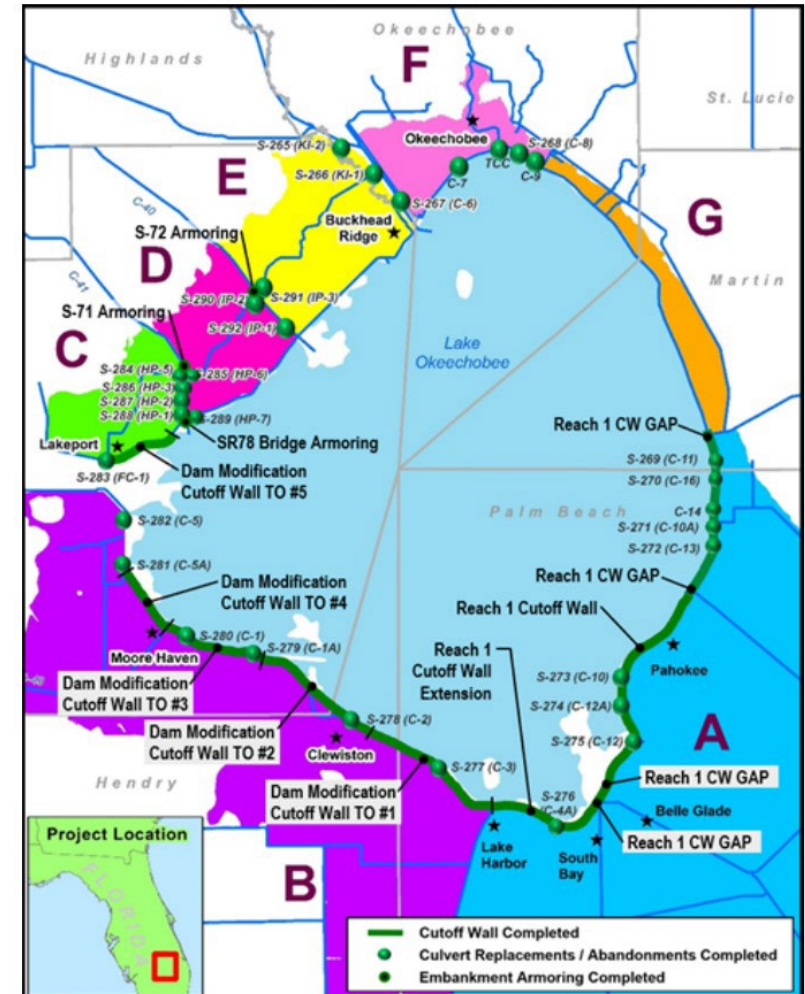
## ➤ Groundwater

- Updated LKB groundwater model to evaluate:
  - 2040 projected demands
  - Drawdown potential under MFL lakes
- No adverse impacts projected to SFWMD or SWFWMD MFL lakes

# 2019 Future Direction

- Complete development of Kissimmee River Basin Water Reservation
- Coordinate with SWFWMD to refine modeling of LKB region and MFL lakes
- USACE complete Herbert Hoover Dike (HHD) rehabilitation and revise the regulation schedule
- Continue to implement MFL recovery and prevention strategies
- Water users and SFWMD collaborate to increase understanding of the aquifers
- Continue to promote water conservation opportunities within the planning area

HHD Common Inundation Zones





# 2019 Water Supply Plan Conclusion

The 2019 LKB Plan Update concluded that the future water demands of the region can continue to be met through the 2040 planning horizon with appropriate management and conservation.



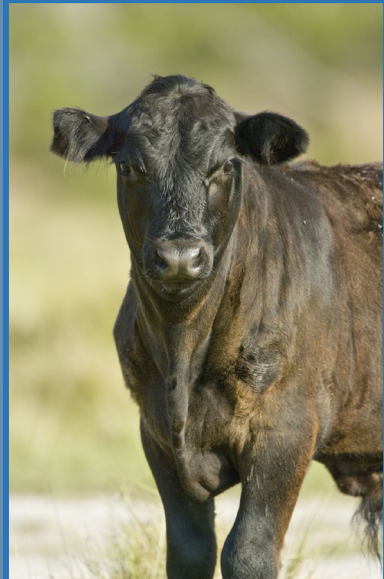
# Questions and Public Comment

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Kissimmee River

# 2024 LKB Plan Update Goal and Objectives and Progress Since 2019



Chad Brcka

LKB Water Supply Plan Manager, Water Supply Planning

2024 LKB Stakeholder Meeting

April 30, 2024



# Statutory Goal of Water Supply Plans (Section 373.709, Florida Statutes)

*To identify sufficient water supply sources and future projects to meet existing and future reasonable-beneficial uses during 1-in-10-year drought conditions through **2045** while sustaining water resources and related natural systems.*



# Objectives of the 2024 LKB Plan Update

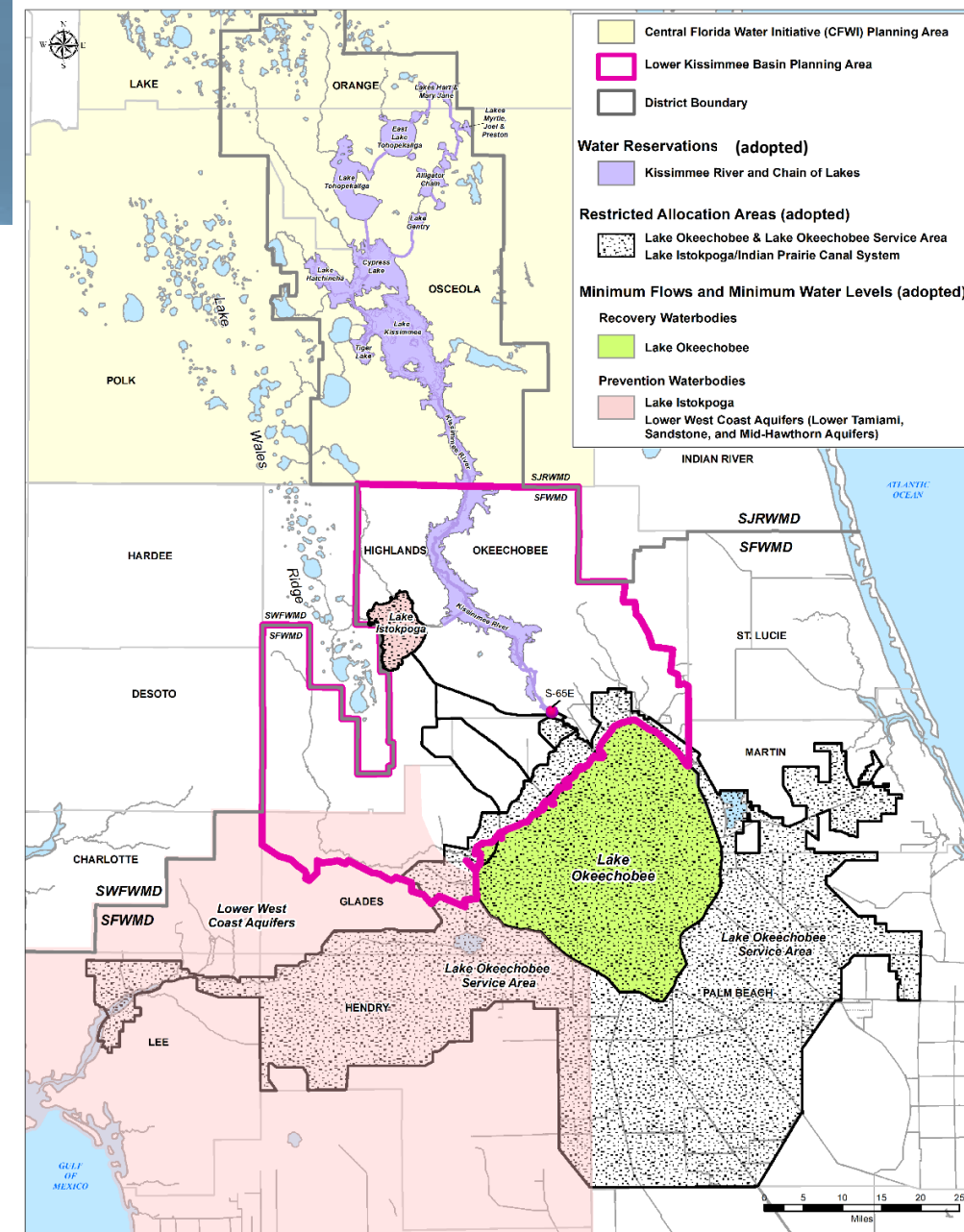
1. Quantify sufficient water supply during 1-in-10-year drought conditions through 2045
2. Identify planned water supply and water resource development projects
3. Ensure natural systems and water resources are protected
4. Encourage water conservation measures and alternative source development
5. Promote compatibility with local government planning
6. Coordinate and integrate with other water resource initiatives

# Progress Since the 2019 LKB Plan

Project		Status
Restoration & Construction	Kissimmee River Restoration Project	Completed 2021
	Lake Okeechobee Watershed Restoration Project	In progress
	Herbert Hoover Dike Rehabilitation	Completed 2023
	Lake Okeechobee Component A Reservoir (LOCAR)	In progress
Regulatory Protection Efforts	Kissimmee River and Chain of Lakes Water Reservation	Completed 2021
	Lake Okeechobee System Operating Manual (LOSOM)	Pending 2024
Publications, Hydrogeologic Studies, & Modeling	2021-2024 Support Document for Water Supply Plan Updates	Complete 2021
	Water Supply Cost Estimation Study	Complete 2023
	2022 Estimated Water Use Report	Complete 2024
	Regional Hydrogeological Studies	Ongoing
	East Central Florida Transient Expanded Model (version 2)	Complete 2024
	LOWRP ASR science plan	Ongoing
	Continued Floridan groundwater monitoring	Ongoing

# Water Resource Protection

- **Minimum Flows and Minimum Water Levels**
  - Lake Istokpoga (2006)
  - Lower West Coast Aquifers (2001)
  - Lake Okeechobee (2006)
- **Water Reservations**
  - **Kissimmee River and Chain of Lakes (2021)**
- **Restricted Allocation Areas**
  - Lake Okeechobee Service Area (2008)
  - Lake Istokpoga/Indian Prairie Canal System (2001)

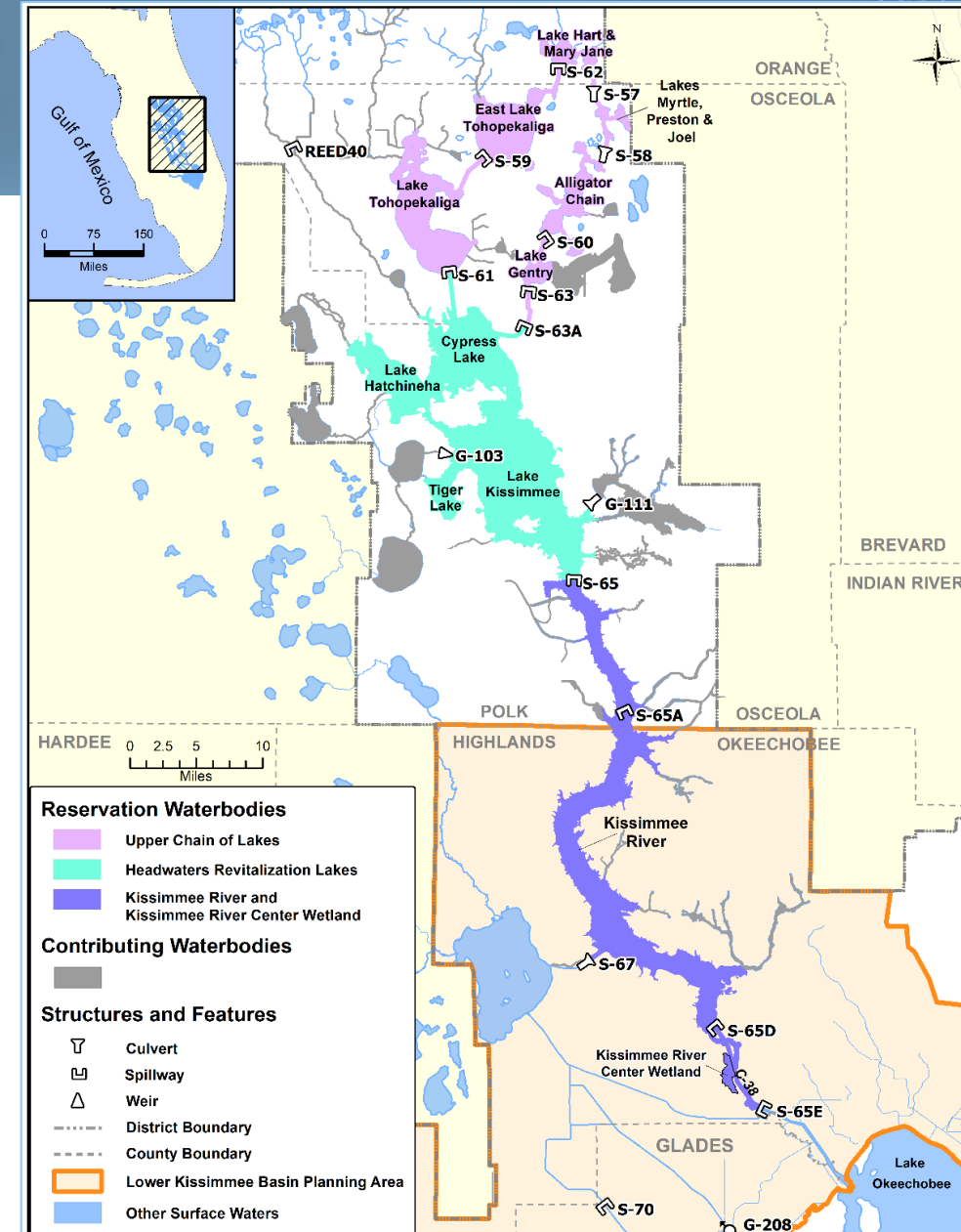


# Kissimmee River and Chain of Lakes

- 172,500 acres and spans portions of LKB and UKB (CFWI) Planning Areas
- Kissimmee River downstream of S-65A is in LKB Planning Area
- Upper Chain and Headwaters Lakes - primary sources of water for the Kissimmee River
- Water Reservation adopted 2021



Kissimmee River Restoration Project (KRRP): Looking north from the south end of the Phase I restoration area.

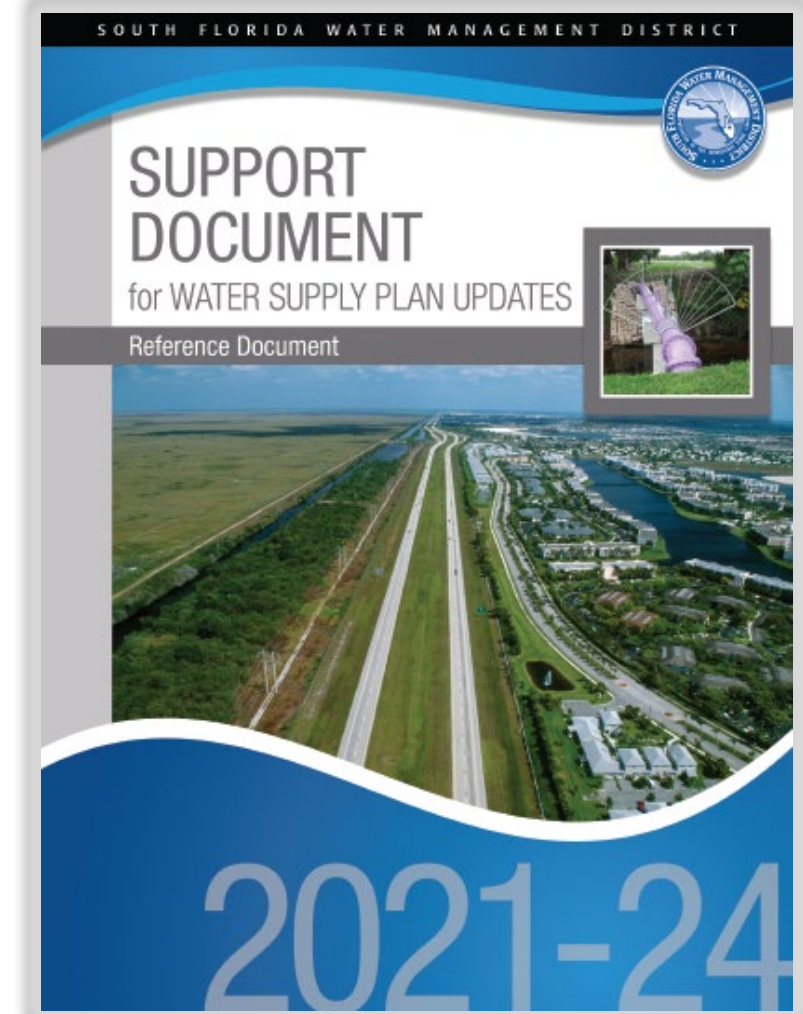




# 2021-2024 Support Document

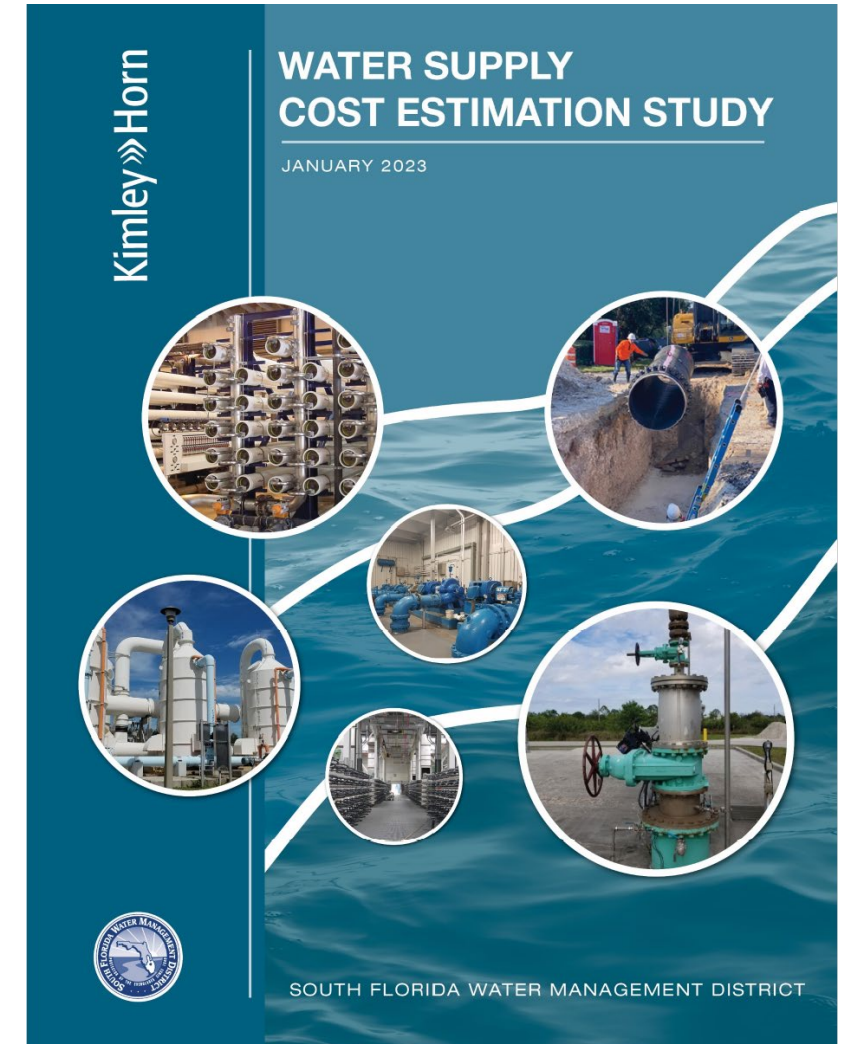
- Supplements the regional water supply plans
- Legal authority and linkage to local plans
- Comprehensive water conservation support
- Water use permitting process/coordination
- Water resource (natural systems) protections
- Ecosystem restoration and Districtwide water resource development projects
- Water sources options

Available at [www.sfwmd.gov/lkbplan](http://www.sfwmd.gov/lkbplan)



# Water Supply Cost Estimation Study

- Water supply development costs are important when considering alternative water supply feasibility
- Cost information was updated in 2023
- Planning-level estimates
- Investigates the costs of AWS in terms of capital, operation and maintenance, and total production costs



# Water Use Estimation Report

South Florida Water Management District  
2022 Estimated Water Use Report

February 2024



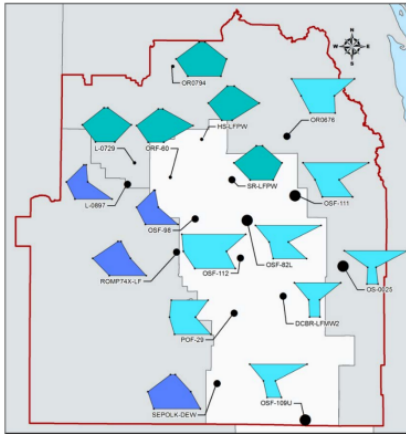
- The District began producing this document with 2014 data
- Produced annually for the past 9 years
- Includes actual pumpage data and estimated use
- Data are used to estimate base year water use for Landscape/Recreational and Commercial/Industrial/Institutional
- Link to the 2024 report: [South Florida Water Management District 2022 Estimated Water Use Report](#)

# Regional Hydrogeological Studies

## Groundwater Chemistry of the Lower Floridan Aquifer – Upper Permeable Zone in Central and South Florida

Technical Publication WS-57

December 2020



Elizabeth Geddes, P.G.  
Stacey Coonts  
Robert Carroll

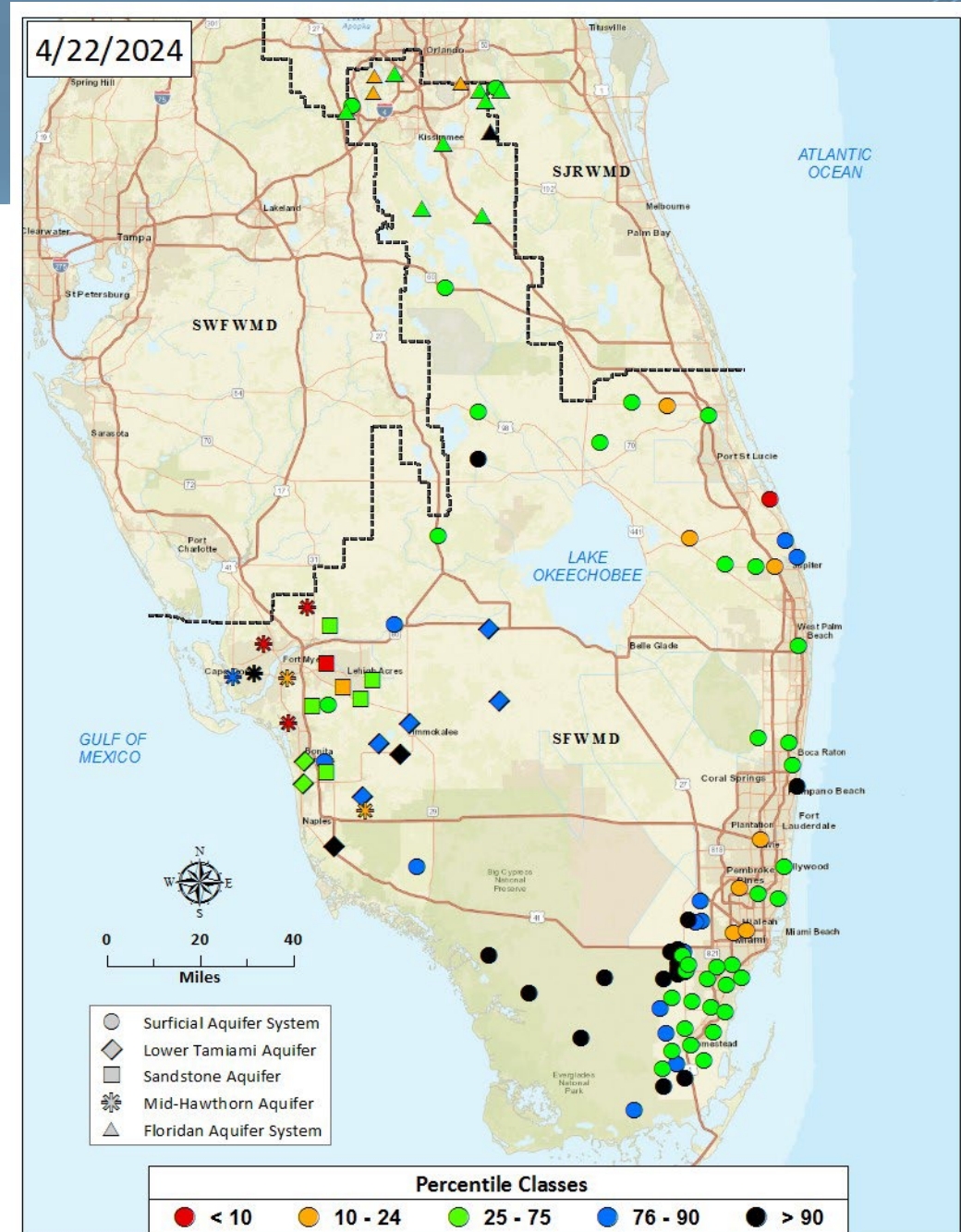


South Florida Water Management District | 3301 Gun Club Road | West Palm Beach, FL 33406

- ◆ **Groundwater chemistry of the Lower Floridan aquifer – upper permeable zone in Central and South Florida (Geddes et al. 2020)**
- ◆ **Geochemistry of the Upper Floridan aquifer and Avon Park permeable zone within the South Florida Water Management District (Geddes et al. 2018)**
- ◆ Saltwater interface monitoring and mapping program (Shaw and Zamorano 2020)
- ◆ Hydrogeology and groundwater salinity of Water Conservation Area 2A (Janzen and Baker 2020)
- ◆ Hydrogeologic investigation and aquifer performance testing at Morikami Park, southeastern Palm Beach County, Florida (Lindstrom 2020)
- ◆ Cycle test summary report Hillsboro Canal aquifer recharge, storage, and recovery system (Verrastro 2018)
- ◆ Installation of Biscayne aquifer monitor wells at three sites in Miami-Dade County (Smith 2018)
- ◆ Installation of a Biscayne aquifer monitoring well cluster at the S-356 pump station in Miami-Dade County (Smith 2018)

# Groundwater Monitoring

- USGS/SFWMD Cooperative Monitoring Network
- Long-term data stored in DBHYDRO database with public access
  - [DBHYDRO \(Environmental Data\)](#)
- Weekly Water Conditions Report
  - Focused on changing water levels due to rainfall conditions and canal water levels



# Cooperative Funding Program

## ➤ Funding since 2019 LKB Plan

- Alternative Water Supply (AWS) funding
  - 20 projects; 42.50 mgd capacity; \$24.2 million
- Conservation project funding
  - 43 projects; 3.03 mgd savings \$1.04 million

## ➤ Potential AWS and conservation projects

- Reverse Osmosis Water Treatment Plants and raw water supply wells
- Reclaimed Water Treatment Plants and transmission main extensions
- High efficiency indoor plumbing retrofits and/or rebates
- High efficiency outdoor retrofits and/or rebates
- Agricultural irrigation retrofits and tailwater recovery



Tailwater recovery system

# Questions and Public Comment

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Horses in a restored section of the Kissimmee River

# Comprehensive Everglades Restoration Plan Project Updates



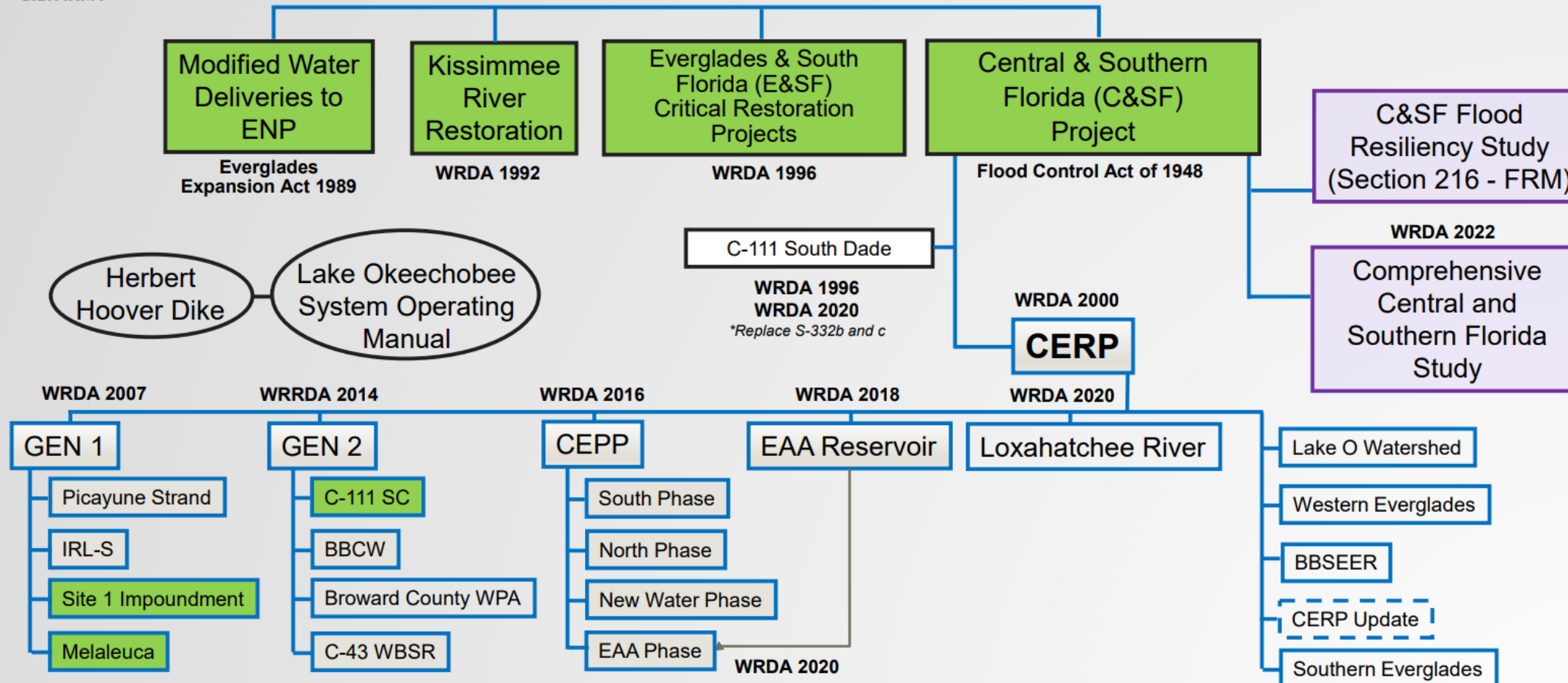
**Leslye Waugh**  
Section Administrator  
Ecosystem Restoration Planning & Project Management  
South Florida Water Management District  
Lower Kissimmee Basin Water Supply Plan  
Stakeholder Meeting #1  
April 30, 2024





U.S. ARMY

# SOUTH FLORIDA ECOSYSTEM RESTORATION AND C&SF RESILIENCE PROGRAMS PROGRAM STRUCTURE



1/12/2024

CONSTRUCTION ONGOING

CONSTRUCTION COMPLETE, IN OPERATIONS

FOUNDATION PROJECTS

Non CERP INVESTIGATIONS

CERP: Comprehensive Everglades Restoration Plan

GEN: Generation; linked to Authorization

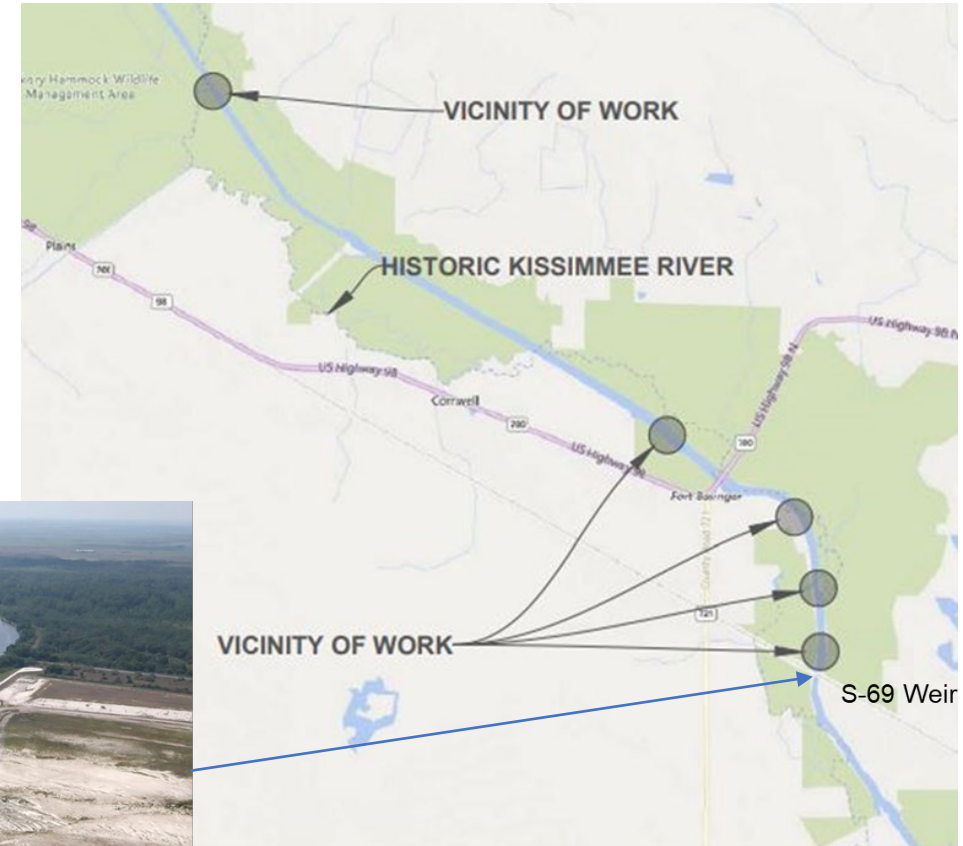
CEPP: Central Everglades Planning Project Legislation Dates = Original Authorization Date

# Kissimmee River Restoration

- Restoration work complete
- S-69 Weir undergoing repairs
- Navigational Signage Contract
  - Contractor mobilized in Feb 2024
  - Expected completion by Nov 2024



CNT 12A – S69 Weir ongoing repair work

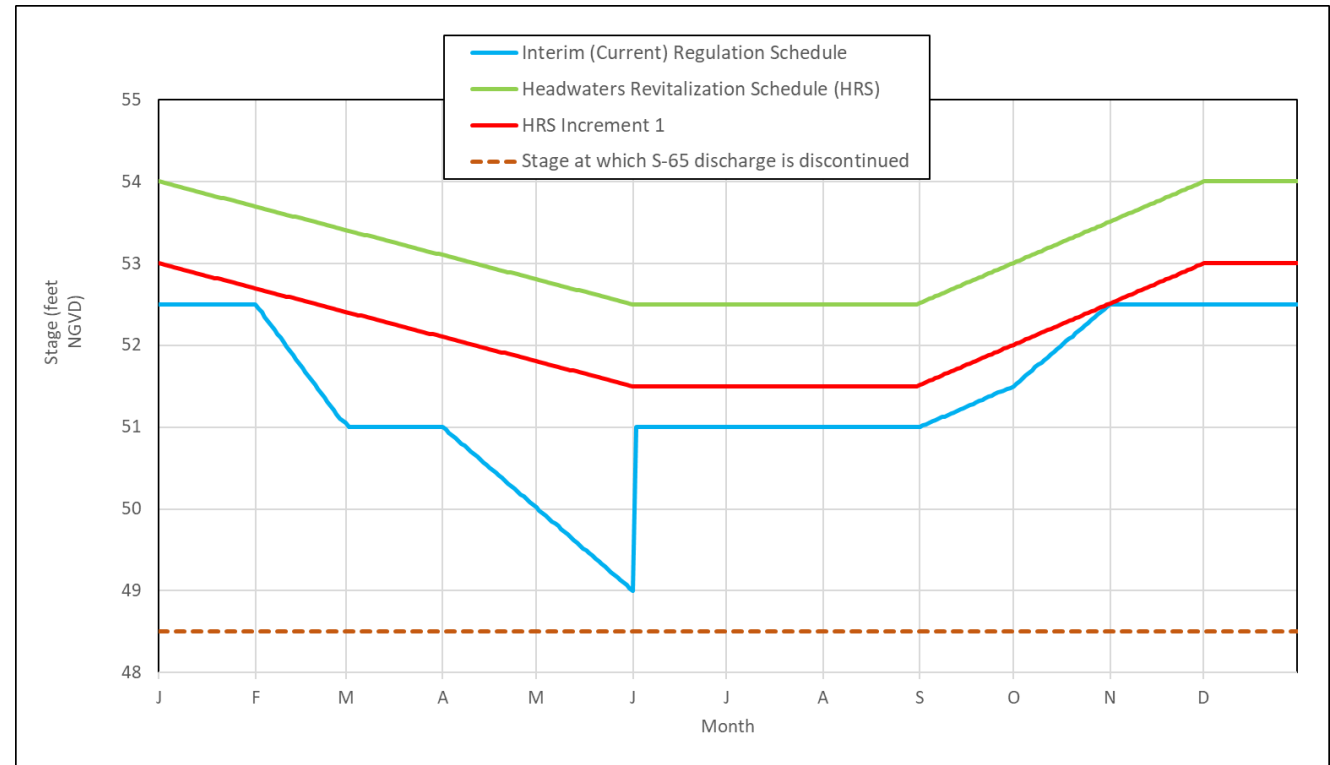


VICINITY MAP

Navigation Sign Installation

# Kissimmee River Restoration (KRR) Headwaters Revitalization Schedule

- Headwaters Revitalization Schedule (HRS)
  - Increment 1 (red line)
  - Expected to begin this wet season
- Full Headwaters Revitalization Schedule (green line)
  - Evaluation of operation schedules for Lakes Kissimmee, Hatchineha, and Cypress
  - Planning process 2024-2027



# Comprehensive Everglades Restoration Plan (CERP)

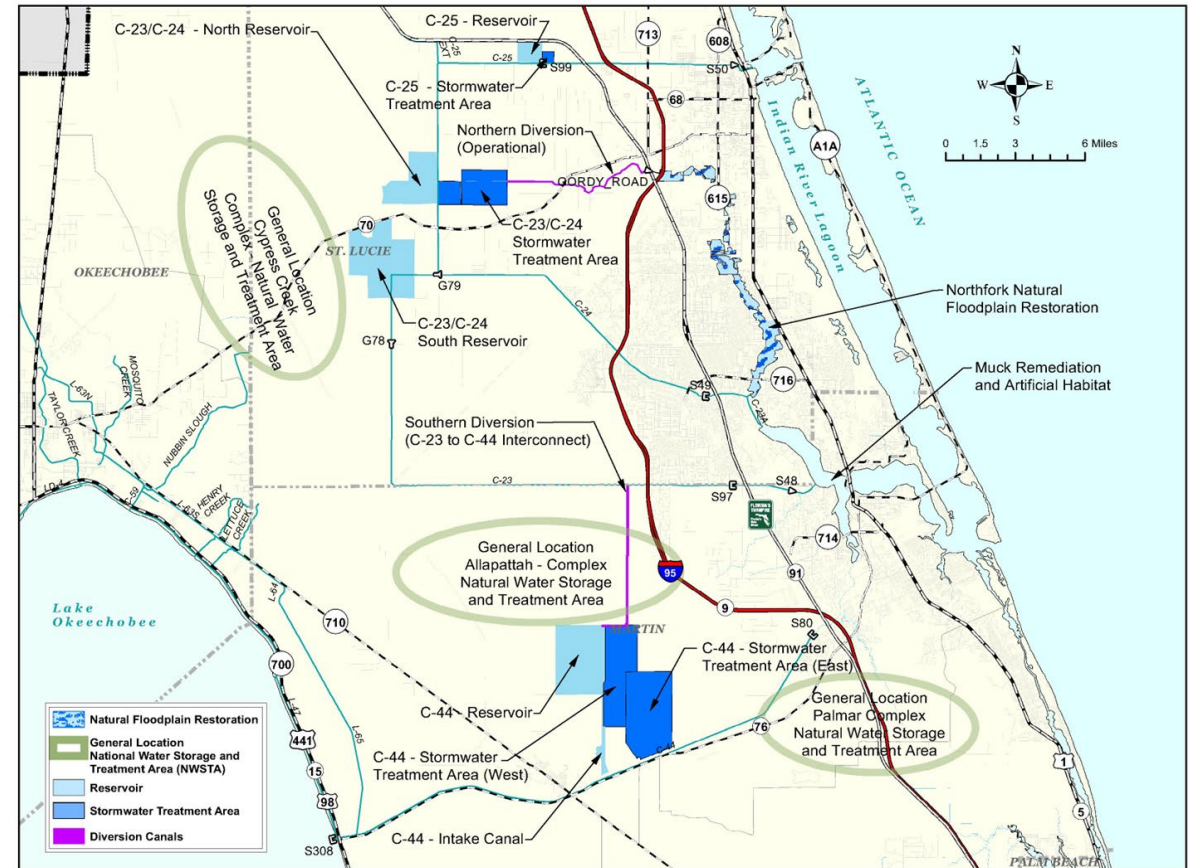
## Implementation of Authorized Projects

- Indian River Lagoon South (IRLS)
- Caloosahatchee (C-43) Basin Storage Reservoir
- Picayune Strand Restoration Project (PSRP)
- Loxahatchee River Watershed Restoration Project (LRWRP)
- Broward County Water Preserve Areas (BCWPA)
- **Central Everglades Planning Project (CEPP)**
- Biscayne Bay Coastal Wetlands Phase I (BBCW)
- C-111 Spreader Canal Western Project (C-111)



# Indian River Lagoon South

- Phase I Storage & Treatment Features
  - C44 Reservoir & STA – OTMP
  - Estuary Discharge Diversion Canal - Construction
  - C23/24 North Reservoir - Design
  - C23/24 South Reservoir - Design
  - C23/24 STA - Construction
  - C25 Reservoir & STA – Design
  
- Phase II Natural Lands Components

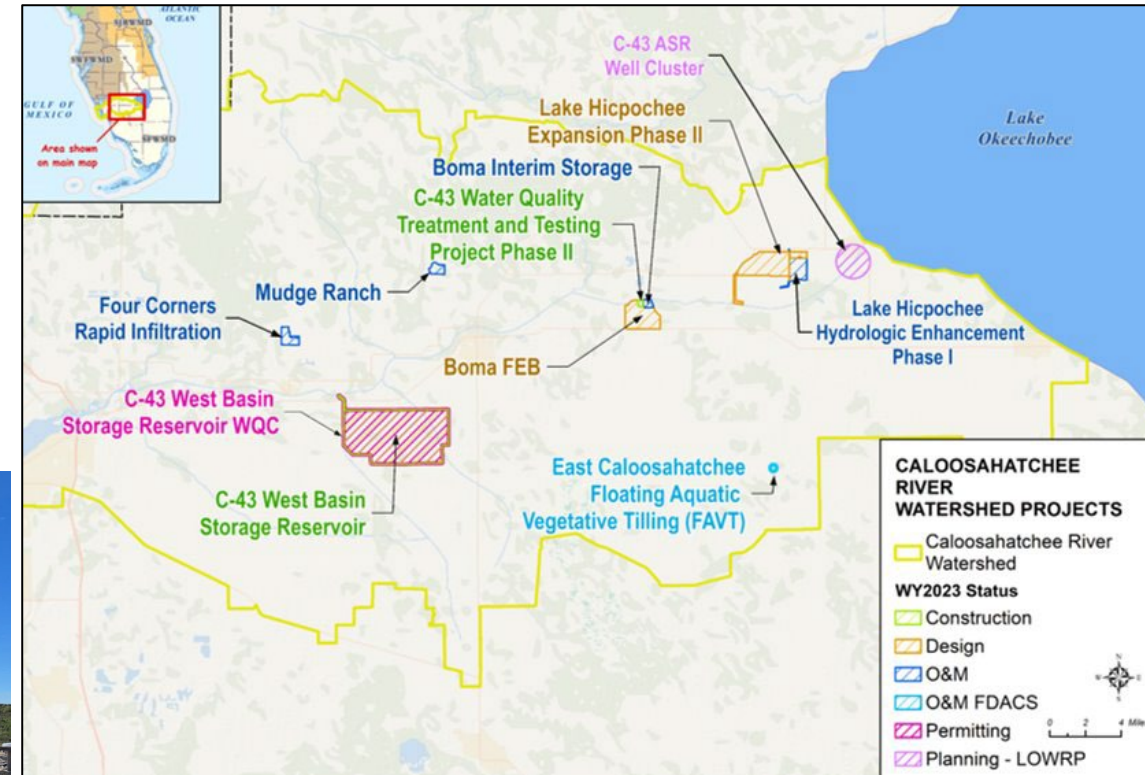


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Contact Information: Patrick Murphy [pmurphy@sfwmd.gov](mailto:pmurphy@sfwmd.gov)

# Caloosahatchee River (C-43) West Basin Storage Reservoir

- Purpose is to capture and store runoff and Lake Okeechobee regulatory releases to reduce excess discharges and improve salinity balance in the Caloosahatchee Estuary
- Approximately 170,000 acre-feet of storage



Contact Information:  
 Patrick Murphy [pmurphy@sfwmd.gov](mailto:pmurphy@sfwmd.gov)

# Central Everglades Planning Project (CEPP)

## Project purpose

- Increase quantity, quality, timing and distribution of water to the Central Everglades

## Four phases:

- Everglades Agricultural Area
- North
- South
- New Water

**CEPP Public Informational Meeting**  
**May 1, 2024 from 3pm-4:30pm**



# Comprehensive Everglades Restoration Plan

## Planning Projects Update

- **Lake Okeechobee Watershed Restoration Project (LOWRP)**
- **Lake Okeechobee Component A Reservoir (LOCAR)**
- **Biscayne Bay and Southeastern Everglades Ecosystem Restoration (BBSEER)**
- **Western Everglades Restoration Project (WERP)**





# Lake Okeechobee Watershed Restoration Project (LOWRP)

## Recommended Plan in 2022:

- 2 wetland restoration areas
- Up to 55 Aquifer Storage and Recovery (ASR) Wells
- Expected benefits:
  - Restore 5,900 acres of wetland habitat
  - Improve lake stage levels
  - Reduce discharges to the northern estuaries
  - Improve water supply

## Status:

- Preparation of Waiver Package for updated Recommended Plan with separable elements
- First Report: LOWRP Wetlands Restoration Report – Target WRDA 2024
- Second Report: LOWRP ASR – Pending additional science
- SFWMD continuing phased implementation of ASR and the Science Plan



Contact Information: Elizabeth (Liz) Caneja [ecaneja@sfwmd.gov](mailto:ecaneja@sfwmd.gov)

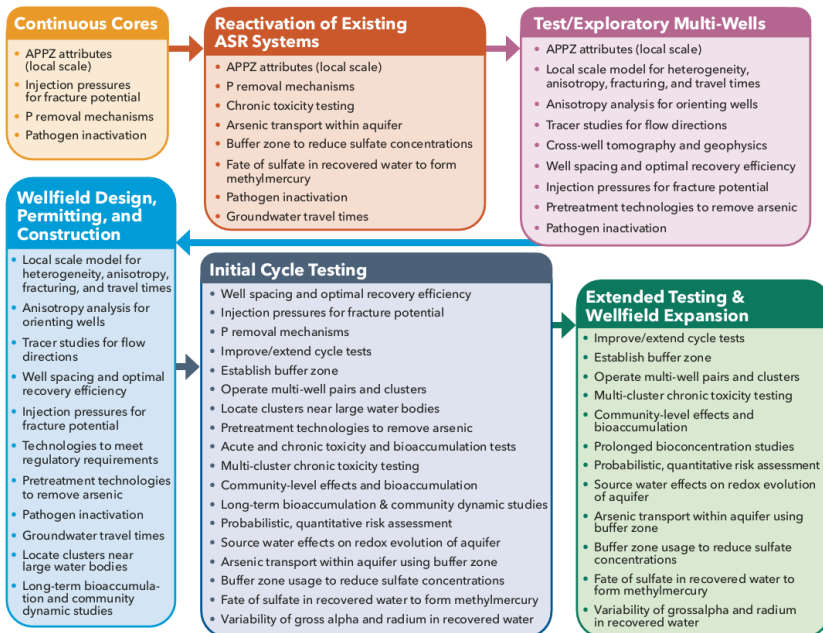
[www.SFWMD.gov/LOWRP](http://www.SFWMD.gov/LOWRP)

# Lake Okeechobee Watershed Restoration Project (LOWRP), Aquifer Storage and Recovery (ASR) Component

## Goals and Objectives:

- Increase water storage
- Improve lake stage levels
- Improve water supply

## ASR Phased Implementation:



## Status:

- Installed 4 continuous cores to ~2,000 ft below land surface
- Constructed 2 test wells and associated monitoring wells at C38N and C38S
- Completed aquifer pumping test at C38N and C38S for wellfield expansion
- Design underway for the 10-mgd Demonstration Facility at C38S

## ASR Science Plan:

- Plan prepared to address uncertainties with ASR wells as recommended by the National Research Council
- ASR Peer Review Panel
- 2021 ASR Science Plan completed
- 2022 Draft ASR Science Plan available on webpage



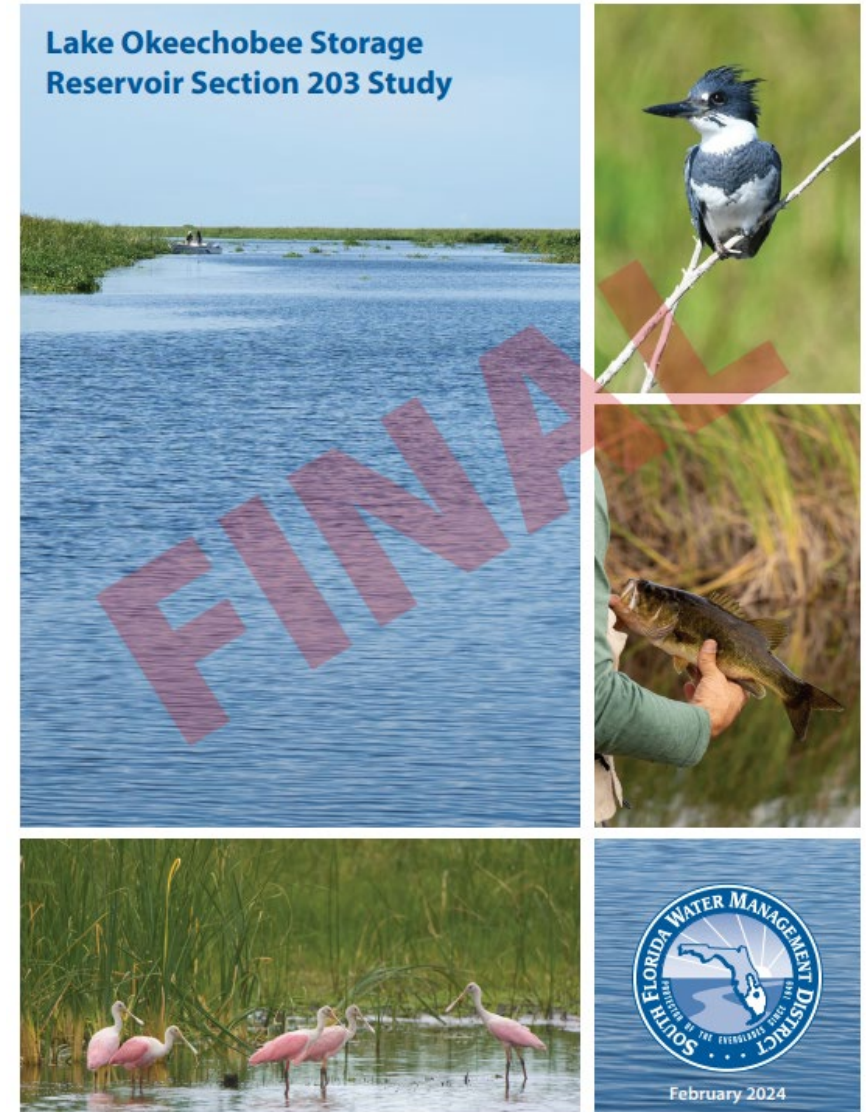
Contact Information: Elizabeth (Liz) Caneja [ecaneja@sfwmd.gov](mailto:ecaneja@sfwmd.gov)

[www.SFWMD.gov/ASR](http://www.SFWMD.gov/ASR)

# North of Lake Okeechobee Component A Storage Reservoir (LOCAR)

- SFWMD prepared a Feasibility Study under Section 203 of the Water Resources Development Act
- Concurrently with the LOCAR Section 203 Study, the U.S. Army Corps of Engineers prepared an Environmental Impact Statement for the LOCAR Study
- The Study evaluated Component A of CERP, which proposed a 200,000 ac-ft above ground storage reservoir
- Purpose is to provide storage and retain water during wet periods for later use during dry periods to benefit Lake Okeechobee
- The Feasibility Study is under review with the U.S. Army Corps of Engineers, Assistant Secretary of the Army Targeting WRDA 2024

Contact Information: Elizabeth (Liz) Caneja [ecaneja@sfwmd.gov](mailto:ecaneja@sfwmd.gov)



Integrated Delivery Schedule (IDS) 2023 Update

INTEGRATED DELIVERY SCHEDULE 2023 UPDATE

SOUTH FLORIDA ECOSYSTEM RESTORATION | CENTRAL AND SOUTHERN FLORIDA COMPREHENSIVE EVERGLADES RESTORATION PLAN



The Comprehensive Everglades Restoration Plan (CERP) is the largest aquatic ecosystem restoration effort in the nation, spanning over 15,000 square miles, and is designed to improve the health of more than 2.6 million acres. The Integrated Delivery Schedule (IDS) is a forward-looking overview of upcoming planning, design, and construction schedules and programmatic costs of a "big" level for the South Florida Ecosystems (SFER) Program, including CERP, Modified Water Deliveries to Everglades National Park, the Critical Project Program, Kissimmee River Restoration, and non-CERP Central and Southern Florida (CSF) projects.

Table with columns: SOUTH FLORIDA ECOSYSTEM RESTORATION (SFER), FEDERAL, NON-FEDERAL, GRAND TOTAL. Rows include Modified Water Deliveries to ENP, Kissimmee River Restoration, CSF, CSF CERP, CSF CERP, and TOTALS.



The IDS reflects the sequencing strategy for planning, design, and construction and does not include costs for work completed in other fiscal years or land acquisition. The IDS does not require an agency action and is not a decision document. It is a tool that provides information to decision-makers - a living document that is updated as needed to reflect progress and/or program changes. The IDS synchronizes project priorities with the State of Florida and achieves the CERP restoration objectives at the earliest practicable time, consistent with funding constraints and the interdependencies between project components.

Although non-CERP and Foundation projects which the CERP is dependent are reflected in the IDS schedule, they are not included in the funding scenario. These projects are funded through other program authorities or by other entities. Restoration projects by others are also not included but are considered during planning.

Note: The IDS serves the purpose of the Master Sequencing and Implementation Plan (MSIP) described in the original CERP plan (Yellow Book). Funding shown for Fiscal Year 25 (Fiscal Year, October 1 - September 30) and beyond is only national, representing approximate funding levels that would be needed to sustain the work displayed in the IDS for any particular fiscal year. The funding does not represent a commitment by the Administration to budget the amounts shown.

Main project schedule table with columns: PROJECT LOCATION, PROJECT, YELLOW BOOK COMPONENT, and fiscal years from 2023 W to 2034 W. Rows include various restoration projects like Herbed Hooper Dike, Ricayene Shoal Restoration, Colossus/chee River, etc.

- A "road map" that guides projects and maximizes the benefits of all Comprehensive Everglades Restoration Plan (CERP) efforts
• Schedule is reviewed each year and has yielded significant Everglades restoration progress
• Developed through a public process with participation of the South Florida Ecosystem Restoration Task Force and its Working Group

https://www.saj.usace.army.mil/IDS

If you are participating via Zoom:

Click the Reactions button to access the Raise Hand feature

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When you are called on, please state your full name and affiliation prior to providing comments and/or questions

**Thank you!**

**Leslye Waugh**

**Section Administrator**

**Ecosystem Restoration Planning & Project Management**

**[lwaugh@sfwmd.gov](mailto:lwaugh@sfwmd.gov)**

**561-682-6483**

# Demand Estimates and Projections



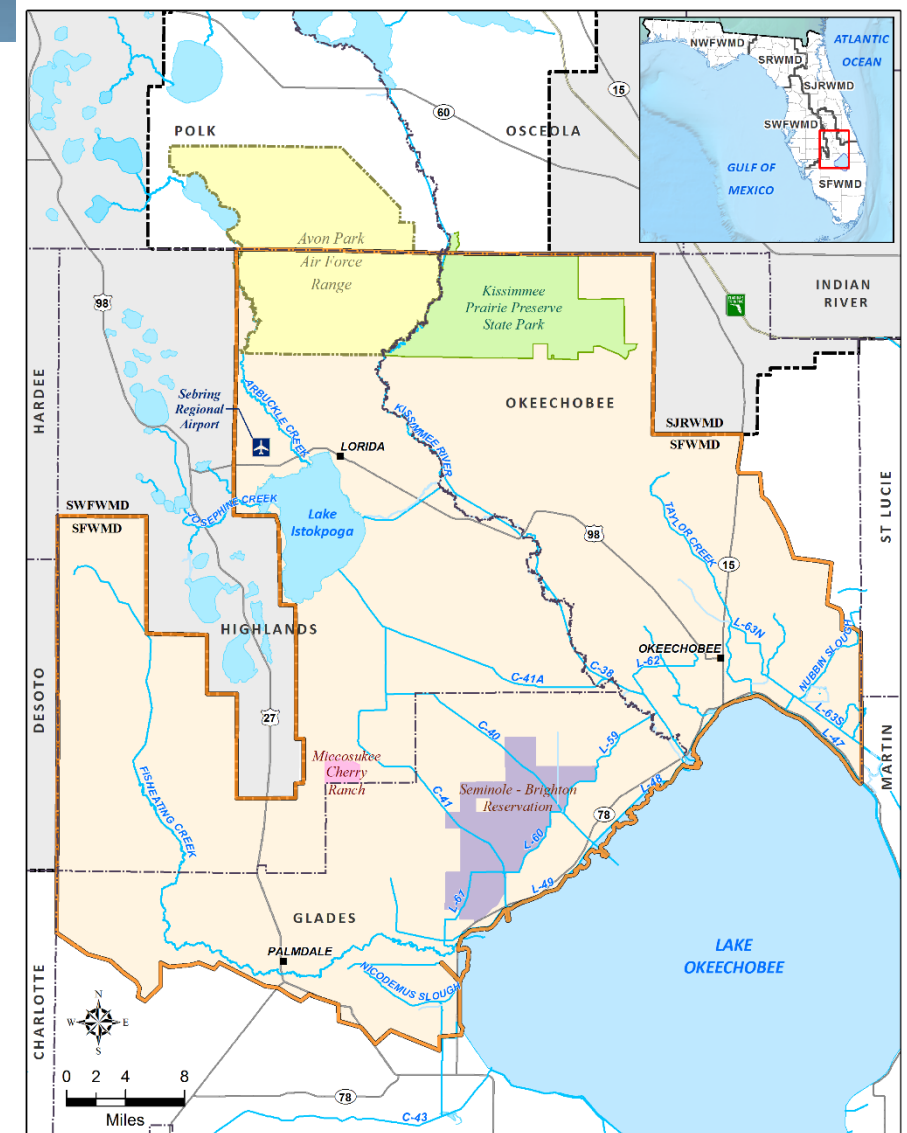
Rebecca May  
Senior Scientist, Water Supply Planning  
2024 LKB Stakeholder Meeting  
April 30, 2024



# Observations Since the 2019 LKB Update

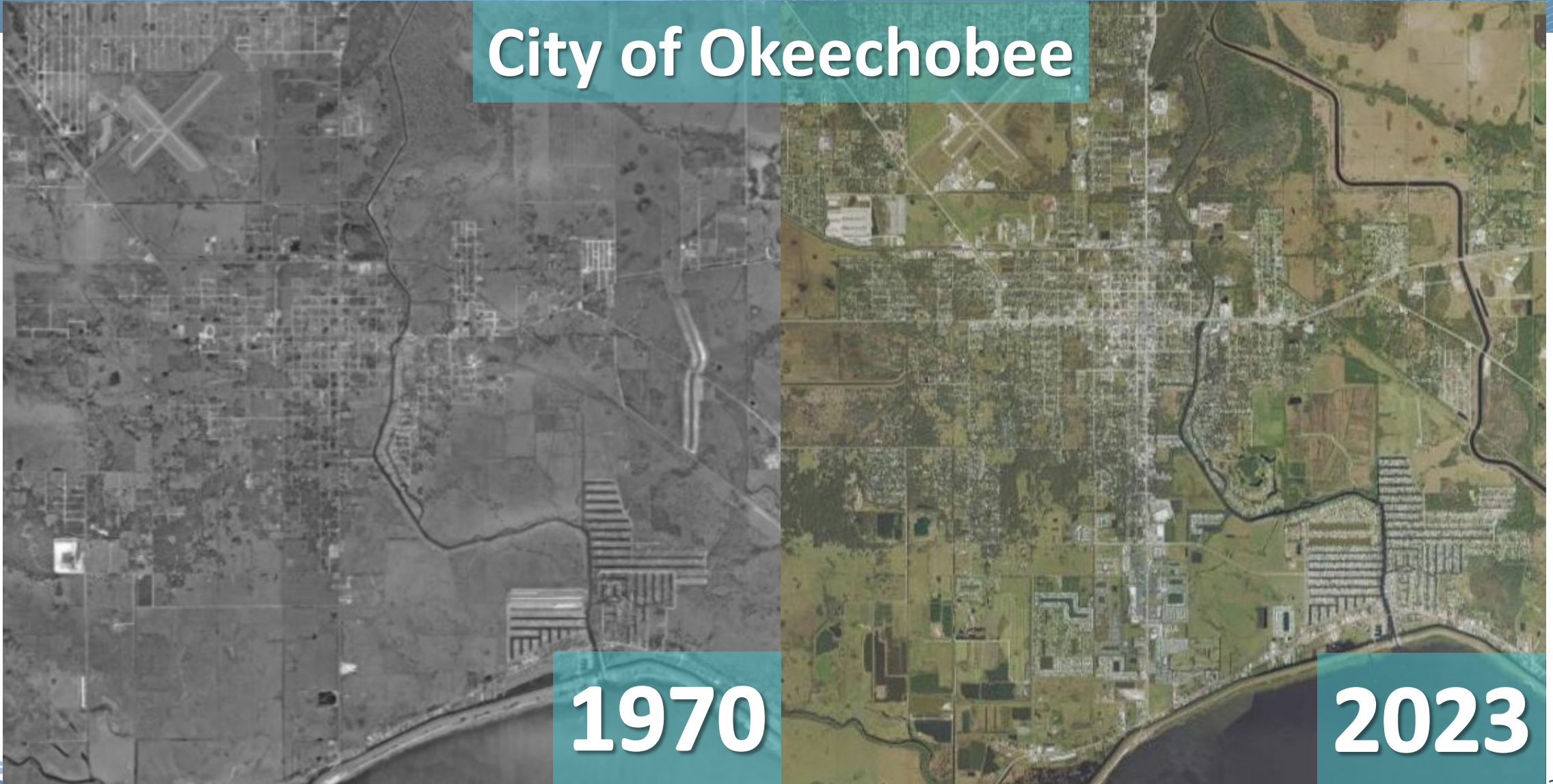
- Irrigated agricultural acreage projected to decrease slightly through 2045
- Irrigated Pasture and Citrus are still the dominant crops
- Minimal change to utility service areas
- Population projections have been updated using the latest Census and BEBR\* data

\* The University of Florida's Bureau of Economic and Business Research (BEBR) produces Florida's official state and local population estimates and projections.



# Land Use Changes

## City of Okeechobee



1970

2023



# Water Use Categories

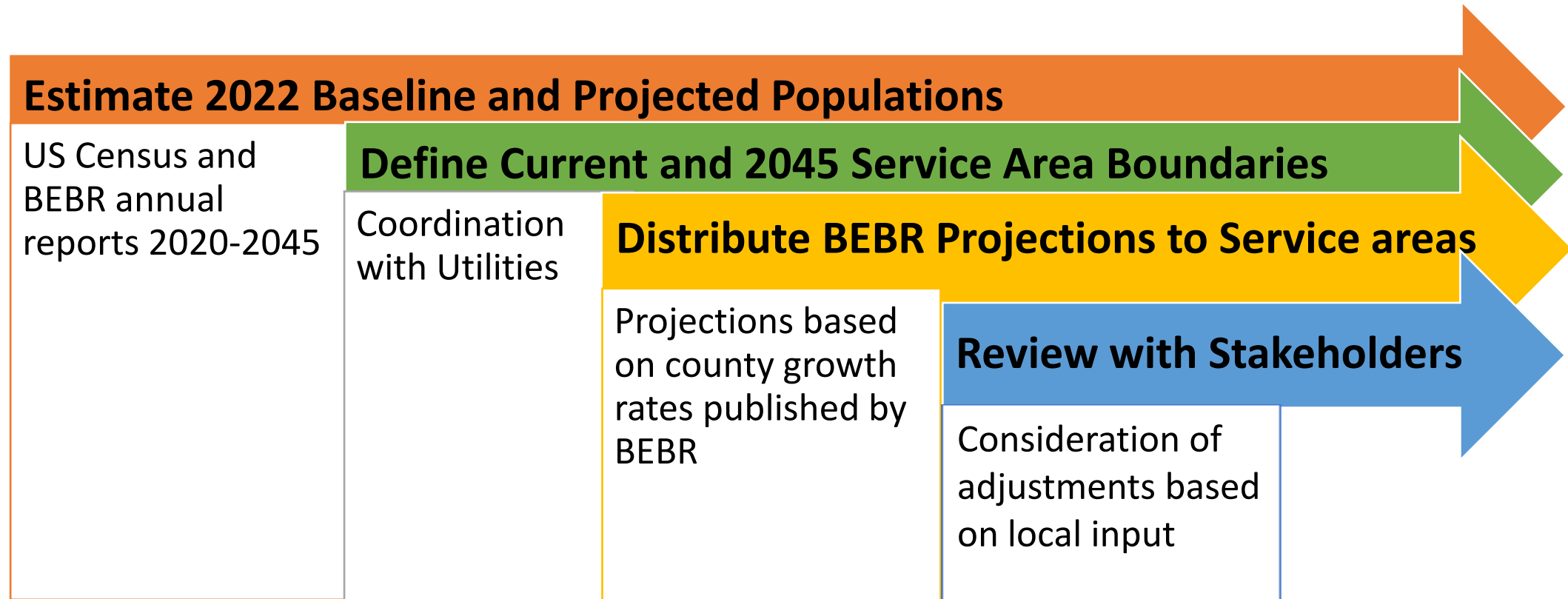
1. **Public Supply (PS)**
2. **Domestic Self-Supply (DSS)**
3. Agriculture (AG)
4. Commercial/Industrial/Institutional (CII)
5. Landscape/Recreational (L/R)
6. Power Generation (PG)

# Principles for Urban Demand Estimates and Projections

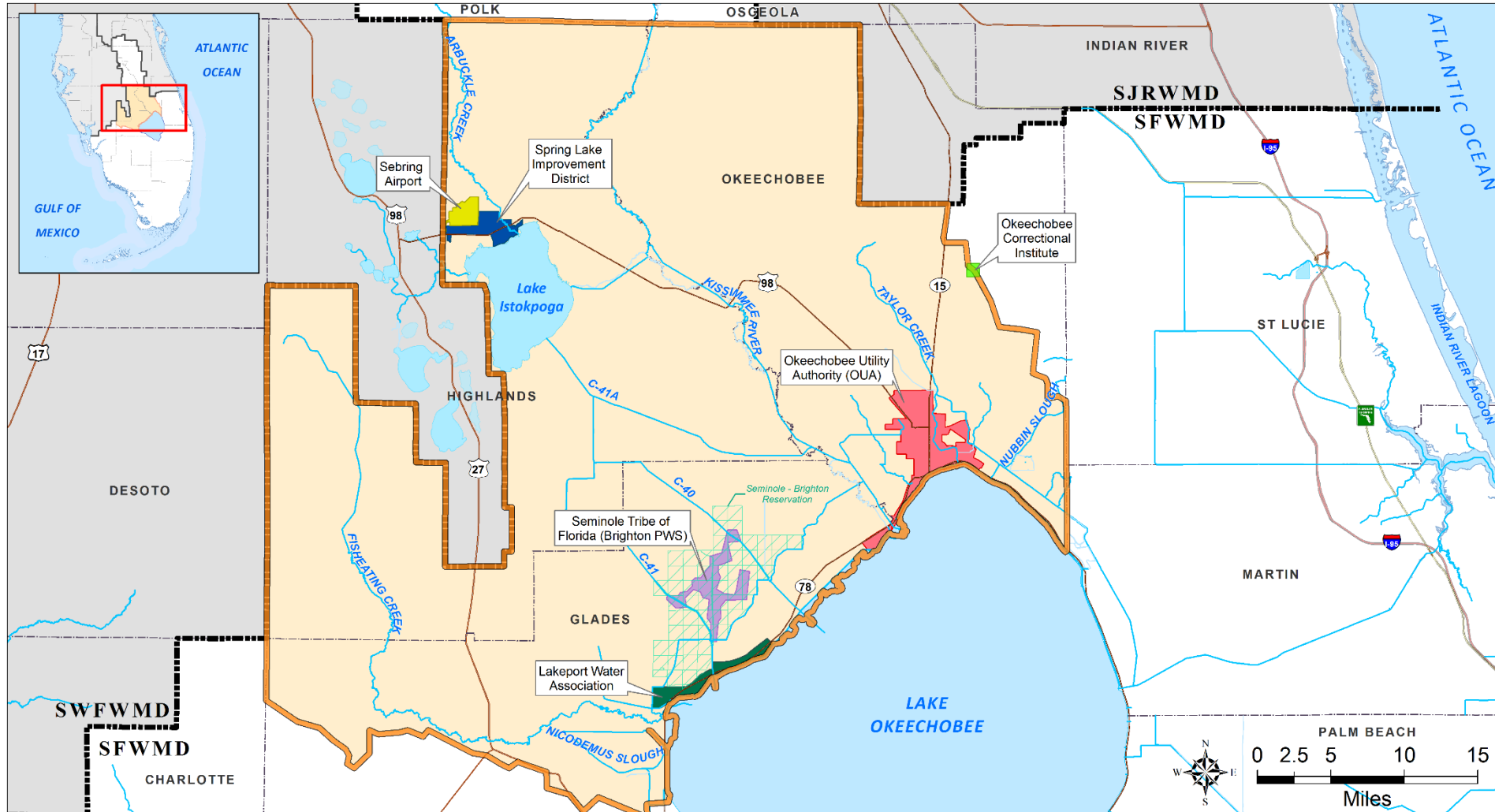
- Section 373.709, Florida Statutes
- Maintain \*BEBR-medium county totals
- Accurately describe relative growth across the LKB
- Identify and use best available data
- Simple, reproducible, and transparent methodology
- Consistent with local government population planning estimates

\* The University of Florida's Bureau of Economic and Business Research (BEBR) produces Florida's official state and local population estimates and projections.

# Population Projections

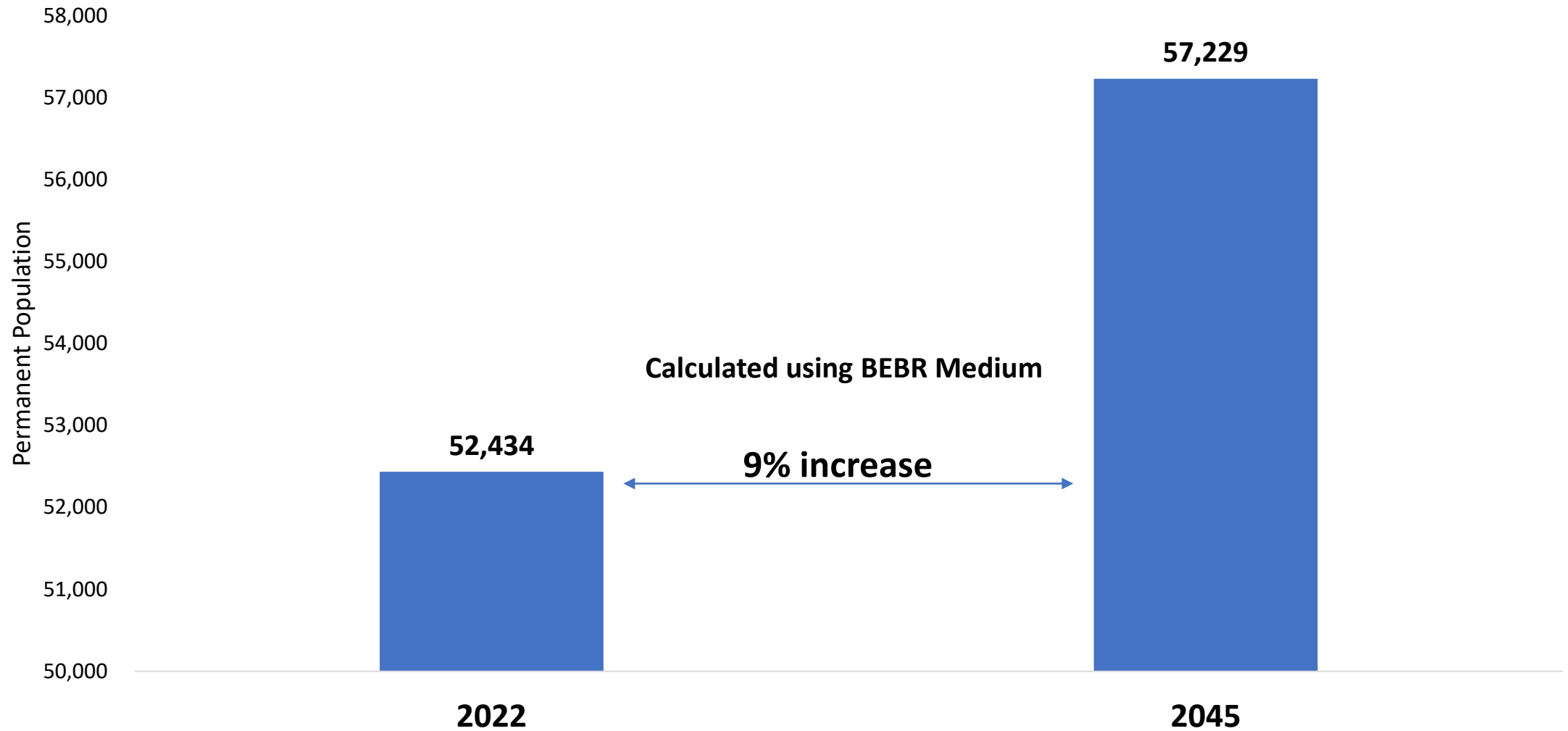


# Lower Kissimmee Basin Utility Service Areas



\\ad.sfwmd.gov\dfsroot\GIS\GISB\2\WS\LB\2019\LBWSP\Print\20190325\_Current\SA\_PPT.mxd

# LKB Population Projections

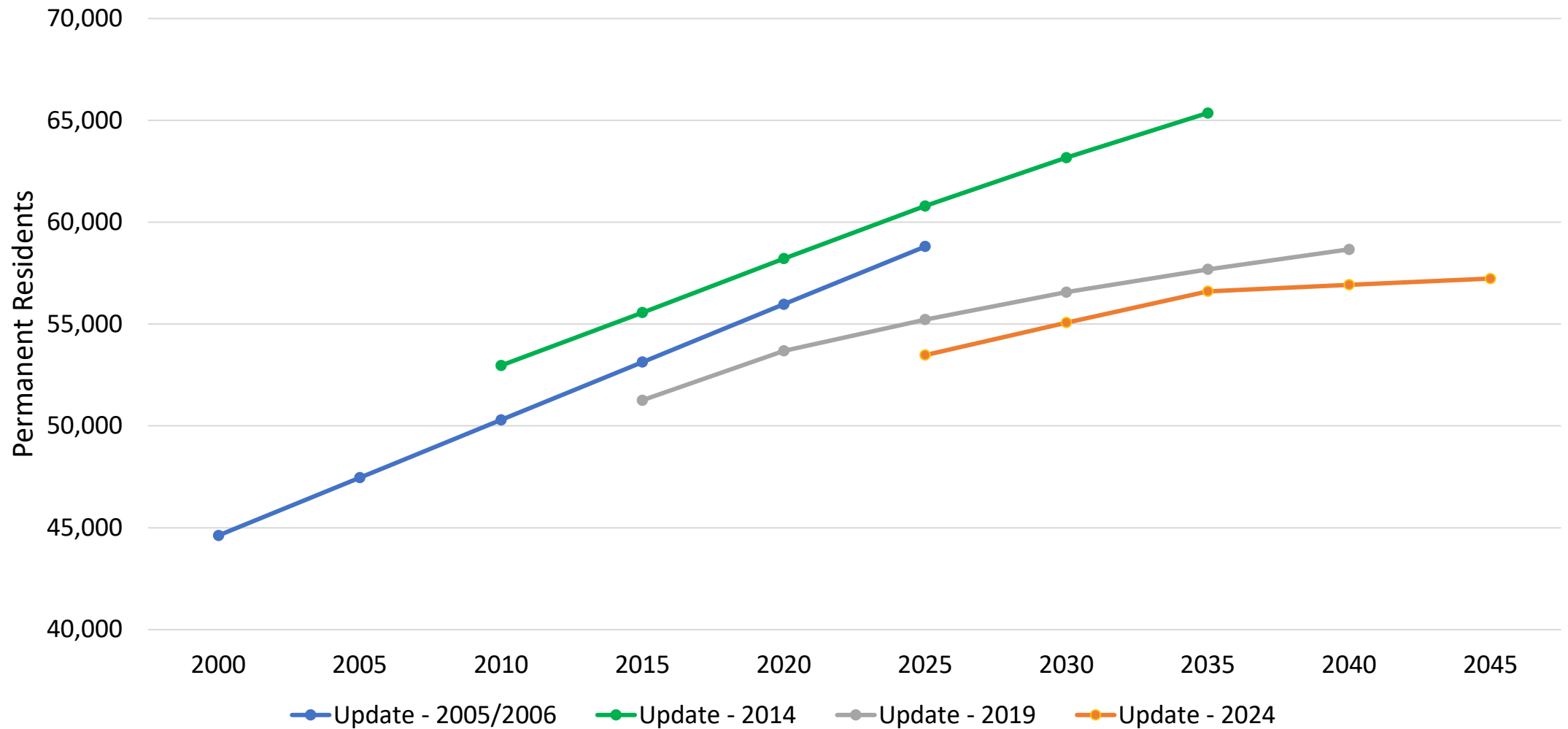


# Draft LKB Population Projections

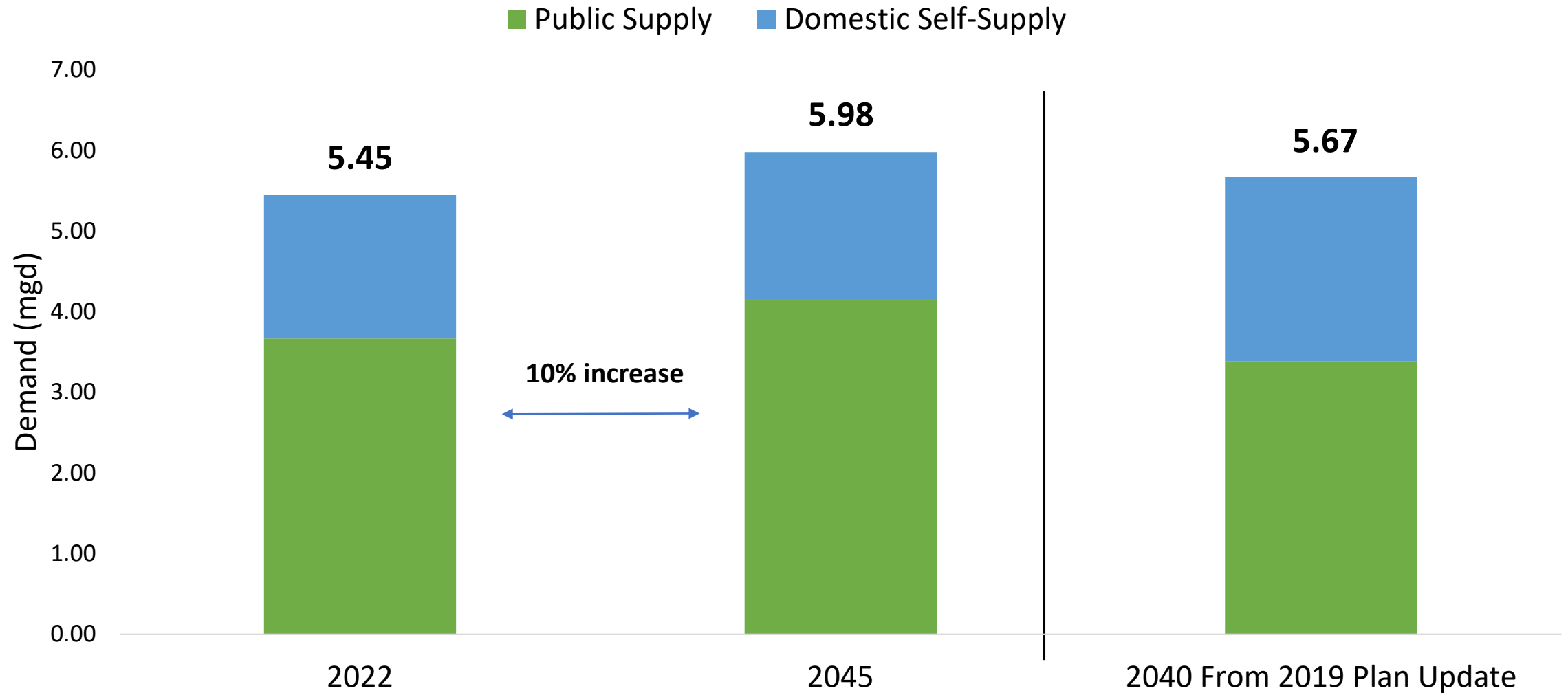
- **Public Supply (PS)** – Potable water supplied by water treatment plants with a current allocation of 0.10 million gallons per day (mgd) or greater
- **Domestic Self-Supply (DSS)** – Potable water used by households served by small utilities (less than 0.10 mgd) or self-supplied by private well

County		2022	2045	% Change
Glades	PS	3,823	7,220	89%
	DSS	391	301	-23%
	<b>Total</b>	<b>4,214</b>	<b>7,521</b>	<b>78%</b>
Highlands	PS	3,140	3,388	8%
	DSS	5,421	5,620	4%
	<b>Total</b>	<b>8,562</b>	<b>9,008</b>	<b>5%</b>
Okeechobee	PS	25,981	26,646	3%
	DSS	13,677	14,054	3%
	<b>Total</b>	<b>39,658</b>	<b>40,700</b>	<b>3%</b>
LKB Total	PS	32,945	37,253	13%
	DSS	19,489	19,976	2%
	<b>Total</b>	<b>52,434</b>	<b>57,229</b>	<b>9%</b>

# Population Projections by Plan Updates



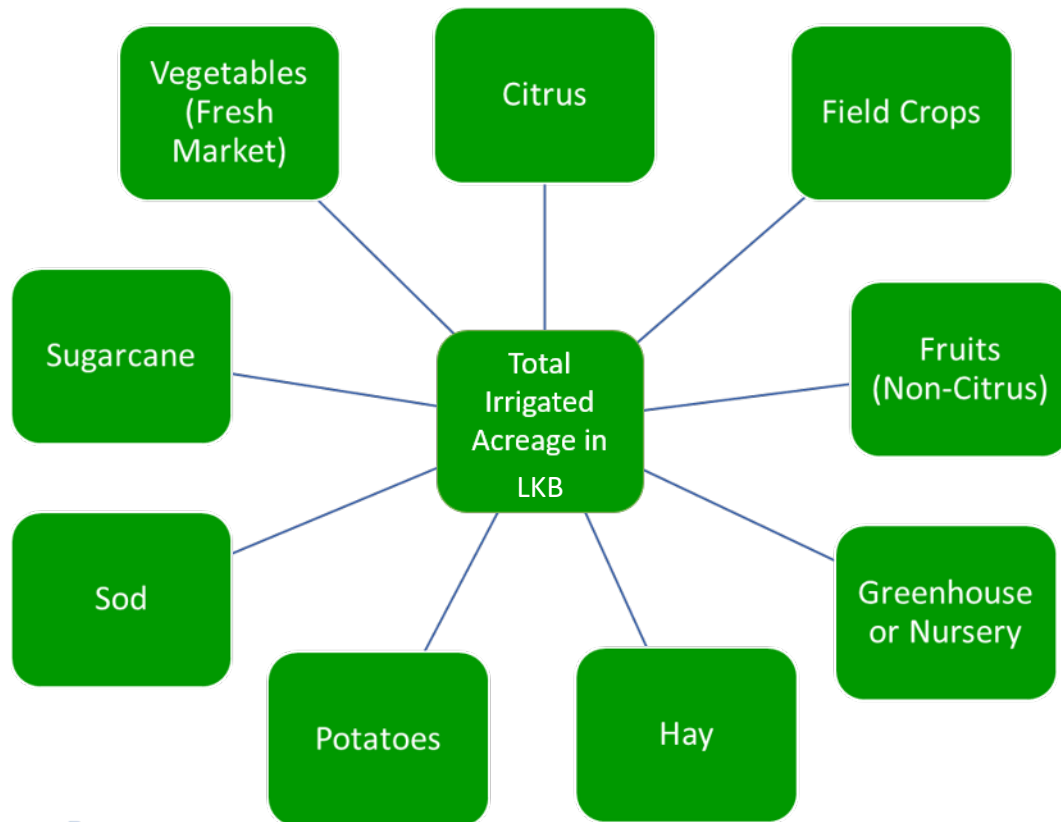
# Draft Public Supply and Domestic Self-Supply Demands





# Water Use Categories

1. Public Supply
2. Domestic Self-Supply
3. **Agriculture – Largest water use category**
4. Commercial/Industrial/Institutional
5. Landscape/Recreational
6. Power Generation



# Nine Standard Crop Categories



# Data Sources for Agricultural Projections

# Statutory Basis for Projections

## Florida Statewide Agricultural Irrigation Demand (FSAID)



PO No. POEC1121

Prepared By:

The Balmoral Group, LLC  
165 Lincoln Avenue  
Winter Park, FL 32789  
Phone: 407-629-2185  
Fax: 407-629-2183



- FDACS\* develops annual statewide agricultural projections (Section 570.93, Florida Statutes)
  - Acreage – historical, current, and 20-year projection by crop
  - Demands by crop for average and 1-in-10-year rainfall conditions
  - Metered data factored into estimates of historical and current demands
  - Consult with stakeholders
- FDACS publishes the annual Florida Statewide Agricultural Irrigation Demand (FSAID) report

\*Florida Department of Agriculture and Consumer Services

# Statutory Basis for Projections

➤ Section 373.709, Florida Statutes: Agricultural demand projections in water management districts' regional water supply plans should be based on best available data

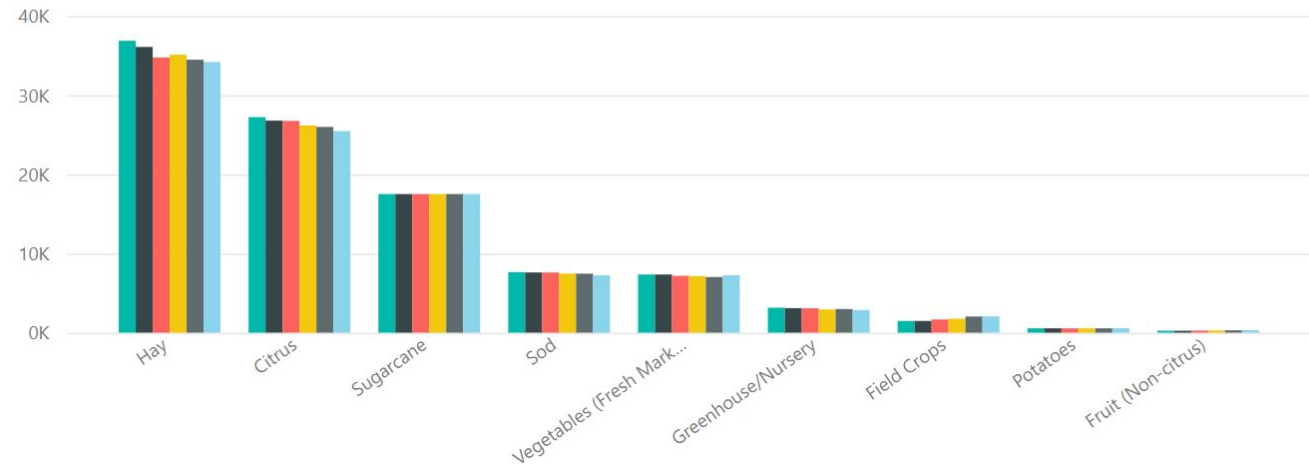
- Must consider data of future demands provided by FDACS
- Any deviation from that data must be described
- FDACS data are presented with adjusted data

FSAID X: ILG acreage (2021-2045)  
Florida Statewide Agricultural Irrigation Demand



## Irrigated Acres by Crop Group

YEAR ● 2021 ● 2025 ● 2030 ● 2035 ● 2040 ● 2045



Link to the interactive FSAID website: [Microsoft Power BI](#)

# Basic Components of Agricultural Demand Projections

## Irrigated Acreages

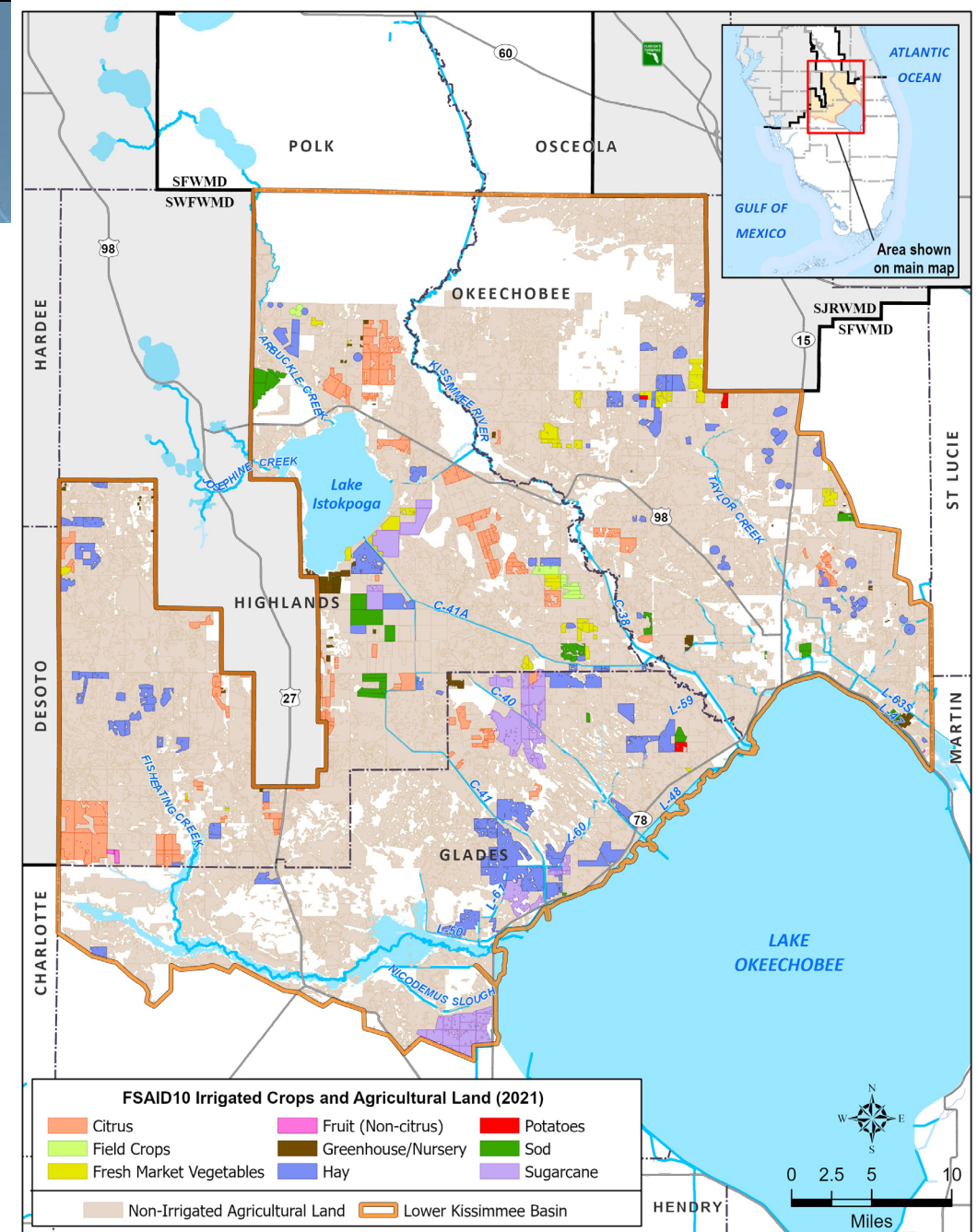
- FSAID Irrigated Lands Geodatabase

## Water Demand Models

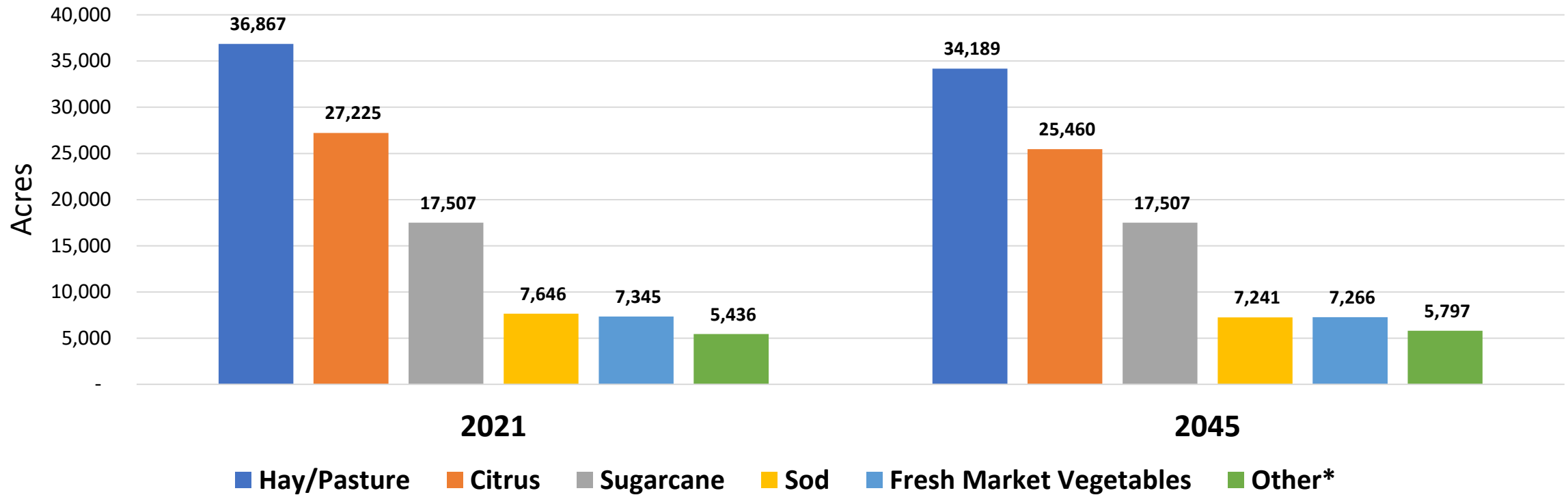
- FSAID water use model
- **Agricultural Field-Scale Irrigation Requirements Simulation (AFSIRS) model**

# LKB Agriculture

## FDACS/FSAID10 2021 Distribution of Irrigated Crop Areas



# LKB Agricultural FSAID10 Crop Acreage



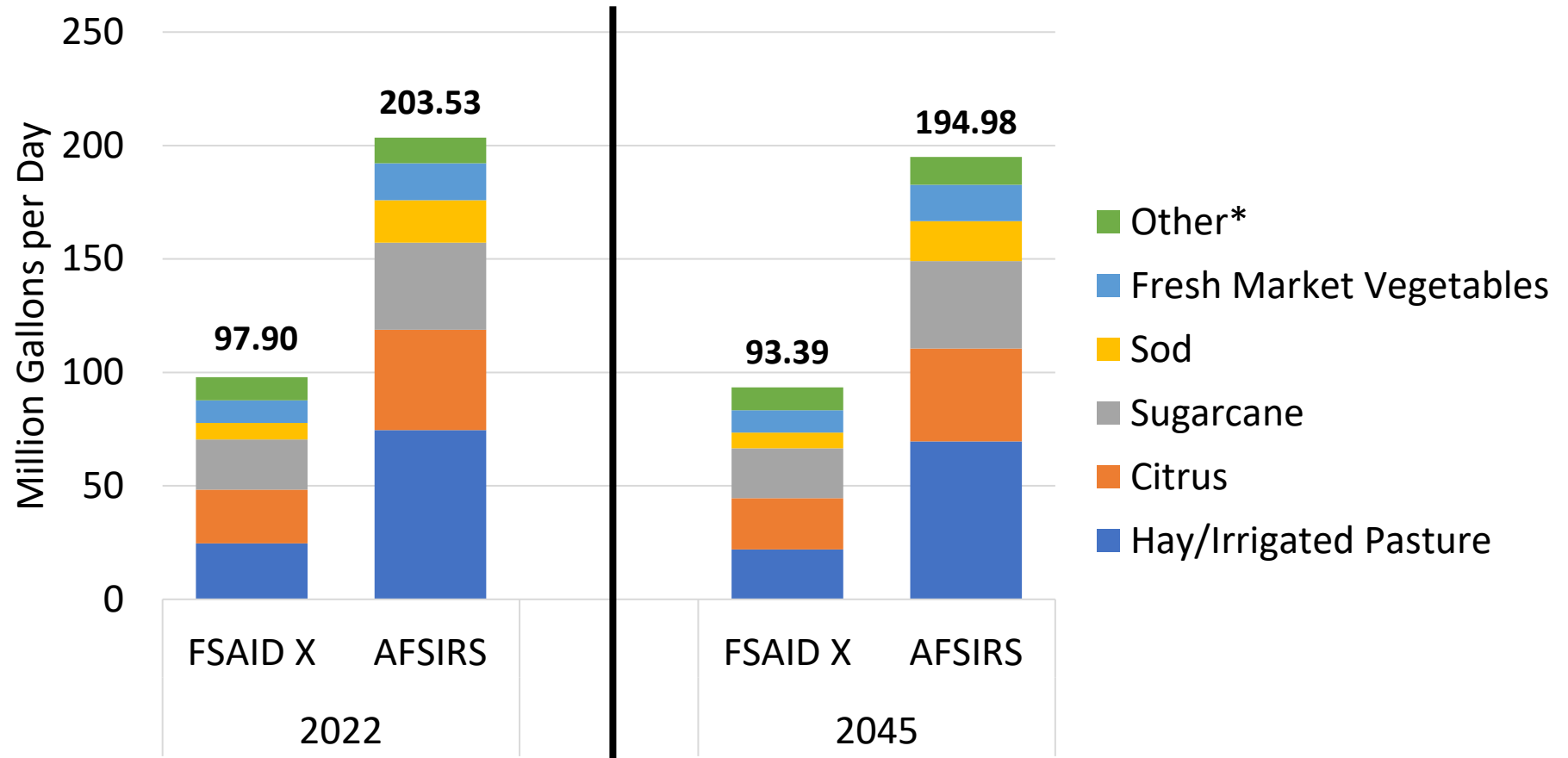
\*Other category includes Fruit (Non-Citrus), Greenhouse/Nursery, Potatoes, and Field Crops

Acres	2020/2021	2025	2030	2035	2040	2045
<b>FSAID 10 Projections (2024 LKB Plan)</b>	102,026	100,715	99,375	98,924	98,339	97,460
<b>FSAID 5 Projections (2019 LKB Plan)</b>	133,644	134,295	134,552	134,085	134,856	-



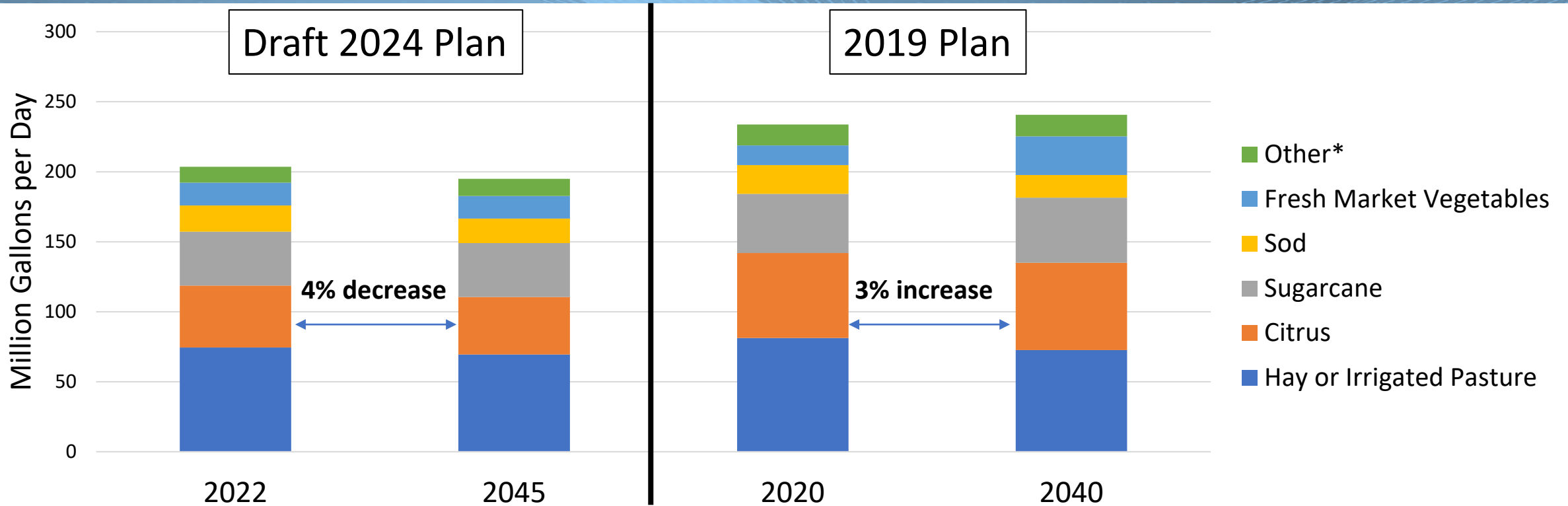
# Comparison of FSAID10 and AFSIRS Crop Demands

- ❖ The District uses AFSIRS demand projections to remain consistent with its regional modeling efforts.
- ❖ AFSIRS model produces similar results to water use permit allocations in the region.



\*Other category includes Fruit (Non-Citrus), Greenhouse/Nursery, Potatoes, and Field Crops

# LKB Agricultural Crop Demands



\*Other category includes Fruit (Non-Citrus), Greenhouse/Nursery, Potatoes, and Field Crops

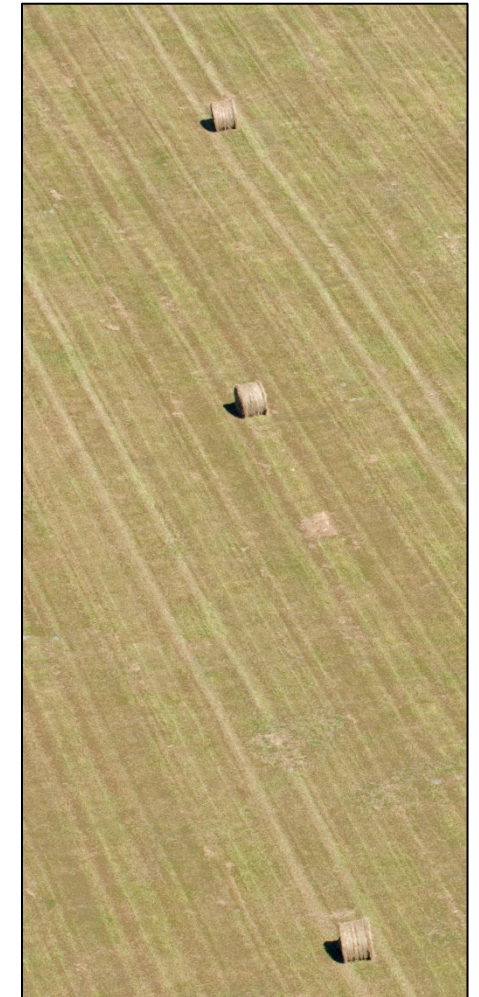
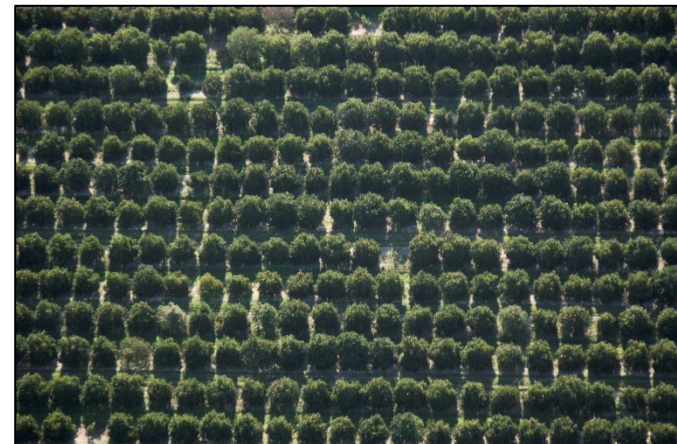
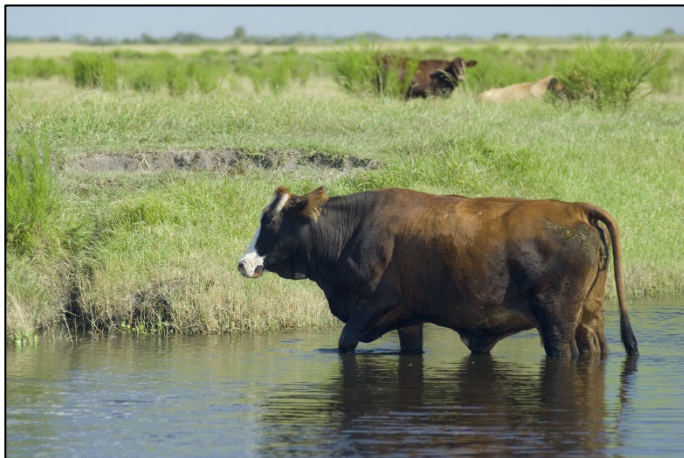
Million Gallons per Day	2020/2022	2025	2030	2035	2040	2045
<b>AFSIRS (2024 LKB Plan)</b>	203.53	200.93	198.05	197.11	196.62	194.98
<b>AFSIRS (2019 LKB Plan)</b>	233.78	235.48	237.12	237.09	240.61	-

# Draft LKB Agricultural Demands Summary

Agriculture Subcategory	2022	2045
Crops	203.53	194.98
Livestock	7.02	7.02
Aquaculture	0.76	0.76
<b>LKB Planning Area Total</b>	<b>211.31</b>	<b>202.76</b>

Demands in million gallons per day.

**Total = 4% Decrease**



# Water Use Categories

1. Public Supply
2. Domestic Self-Supply
3. Agriculture
4. **Commercial/Industrial/Institutional**
5. Landscape/Recreational
6. Power Generation

# Draft Commercial/Industrial/Institutional Demands

## Methodology

- Baseline estimates based on permitted allocation or pumpage reporting
- Water returned directly to withdrawal source not considered as demand
- Mining and commercial operations projected to grow with region's population

County	Demand (mgd)	
	2022	2045
Glades	0.58	1.04
Highlands	1.59	1.67
Okeechobee	0.17	0.17
<b>LKB Planning Area Total</b>	<b>2.34</b>	<b>2.88</b>

Demands in million gallons per day.

**Total = 23% Increase**

# Water Use Categories

1. Public Supply
2. Domestic Self-Supply
3. Agriculture
4. Commercial/Industrial/Institutional
- 5. Landscape/Recreational**
6. Power Generation

# Draft Landscape/Recreational Demands

## Methodology

- 2022 acres based primarily on District permitted data
  - Landscape – 610 acres
  - Golf courses – 221 acres
- Landscape projections increased at county population growth rates
- Golf is not predicted to grow in this region

County	Demand (mgd)	
	2022	2045
Glades	0.03	0.05
Highlands	0.33	0.33
Okeechobee	1.30	1.33
<b>LKB Planning Area Total</b>	<b>1.66</b>	<b>1.71</b>

Demands in million gallons per day.

**Total = 3% Increase**

# Water Use Categories

1. Public Supply
2. Domestic Self-Supply
3. Agriculture
4. Commercial/Industrial/Institutional
5. Landscape/Recreational
6. **Power Generation**



# Lower Kissimmee Basin Draft Water Demands (mgd) Summary

Water Use Category	2022	2045	2040 From 2019 Plan Update
Public Supply	3.67	4.15	3.39
Domestic Self-Supply	1.78	1.83	2.28
Agriculture (i.e., crop, livestock, and aquaculture)	211.31	202.76	248.14
Commercial/Industrial/Institutional	2.34	2.88	1.95
Landscape/Recreational	1.66	1.71	1.73
Power Generation	0.00	0.00	0.00
<b>LKB Planning Area Total</b>	<b>220.76</b>	<b>213.33</b>	<b>257.49</b>

Demands in million gallons per day.

**2024 LKB Demand Total = 3% Decrease**

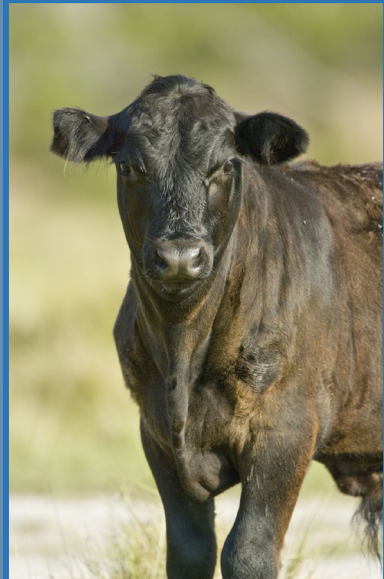
# Questions and Public Comment

- If **you** are participating via Zoom:
  - Click the Reactions button to access the Raise Hand feature
- If you are participating via phone:
  - \*9 raises hand
  - \*6 mutes/unmutes your line
- When you are called on, please state your full name and affiliation prior to providing comments and/or questions



Cattle ranch along the Kissimmee River

# 2024 LKB Plan Update Next Steps



Chad Brcka  
LKB Water Supply Plan Manager, Water Supply Planning  
2024 LKB Stakeholder Meeting  
April 30, 2024



# 2024 LKB Water Supply Plan Organization

- Executive Summary
- Chapter 1: Introduction
- Chapter 2: Demand Estimates and Projections
- Chapter 3: Water Conservation
- Chapter 4: Resource Protection
- Chapter 5: Water Source Options
- Chapter 6: Water Resource Analyses
- Chapter 7: Water Resource and Supply Development Projects
- Chapter 8: Future Direction
- Appendix A: Water Demand Projections
- Appendix B: Public Supply Utility Summaries
- Appendix C: MFLs and Prevention and Recovery Strategies
- Appendix D: Wastewater Treatment Facilities



# Next Steps

- Continue coordination with utilities, agricultural operations, state agencies, and other stakeholders
- Distribute some individual chapters early for stakeholder review
- Stay up-to-date with progress of local development and regional projects
- Complete a full draft of the water supply plan
- Potential agenda topics for next stakeholder meeting: **August 2024**
  - Water resource protection rules
  - Overview of Draft 2024 LKB Plan Update

# 2024 LKB Plan Update Schedule

Topic	Dates
<i>Stakeholder Meeting 1*</i>	<i>April 30, 2024</i>
Stakeholder Meeting 2*	August 2024
Post Draft Plan for public review & comment	August 2024
Governing Board Meeting (Draft)	September 2024
Public comment period ends	September 2024
Governing Board Meeting (Final)	November 2024

\* Stakeholder meetings will be virtual.

# Need Water Supply Information?

- Plan information can be found at [www.sfwmd.gov/lkbplan](http://www.sfwmd.gov/lkbplan)
- Workshop announcements sent via email
- **Chad Brcka, Plan Manager**
  - [cbrcka@sfwmd.gov](mailto:cbrcka@sfwmd.gov)
- **Tom Colios, Section Leader**
  - [tcolios@sfwmd.gov](mailto:tcolios@sfwmd.gov)
- **Mark Elsner, Bureau Chief**
  - [melsner@sfwmd.gov](mailto:melsner@sfwmd.gov)

The screenshot shows the website for the Lower Kissimmee Basin Water Supply Plan. The navigation menu on the left includes: Flood Control, Water Supply Planning, Water Quality Improvement, Ecosystem Restoration - By Region, Ecosystem Restoration - Projects and Programs, MRLs & Water Reservations, & RAAs, Land Management, Local Projects and Programs, Addressing Blue-Green Algae, and Resiliency. The main content area features a header image of a boat on a river, followed by the title 'Lower Kissimmee Basin Water Supply Plan'. Below the title is a map of the planning area, which includes portions of Okeechobee, Highlands, and Glades counties. The text explains that the South Florida Water Management District developed the 2019 Lower Kissimmee Basin Water Supply Plan Update (LKB Update) to assess projected water demands from 2017 to 2040. A list of documents is provided, including the 2019 Water Supply Plan Update, 2021-2024 Support Document, 2022 Physical Features and Water Resources, and Public Comments Received.