

# **Water Supply Mission: Part III**

**Governing Board Workshop Meeting  
December 14, 2011  
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Office of Counsel**

# Water Supply Mission Presentations

## ■ Presentation Series

- Complex state and federal programs and Project operations
- Upcoming decision areas: shortage, Corps input, regulatory, plans

## ■ October

- Legal framework of supply mission (“tools”) and certainty of water rights

## ■ November

- Legacy of C & SF Project, 2008 LORS, and Adaptive Protocols
- Alternatives for reservation rule development(s)

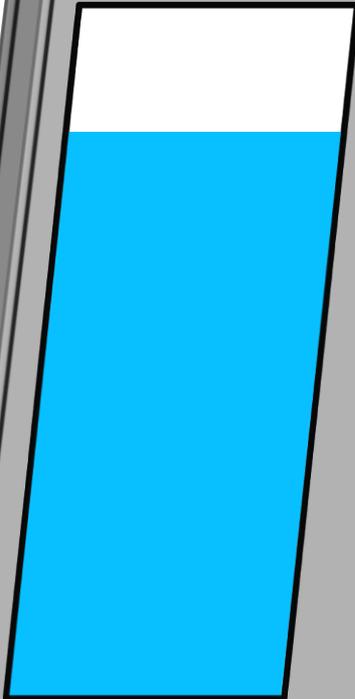
## ■ December

- District’s program re: withdrawals
- Focus on pulling presentations together and 2008 LORS impact on supply mission



# WATER SUPPLY CONTROL PANEL

SUPPLY



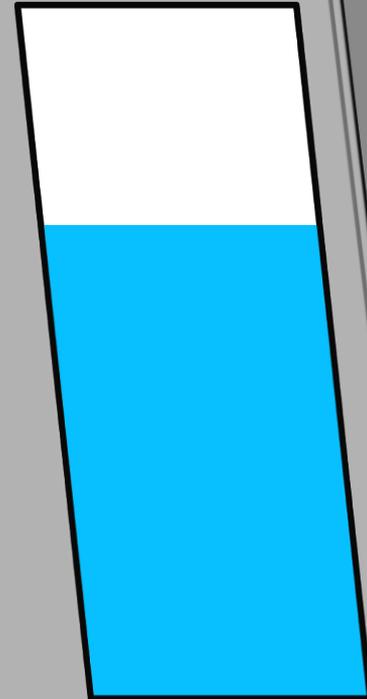
RAINFALL



EVAPO-  
TRANSPIRATION



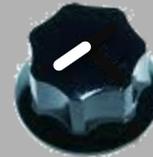
FREQUENCY



ALTERNATIVE  
SUPPLY



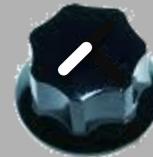
STORAGE



OPERATIONS



WITHDRAWALS

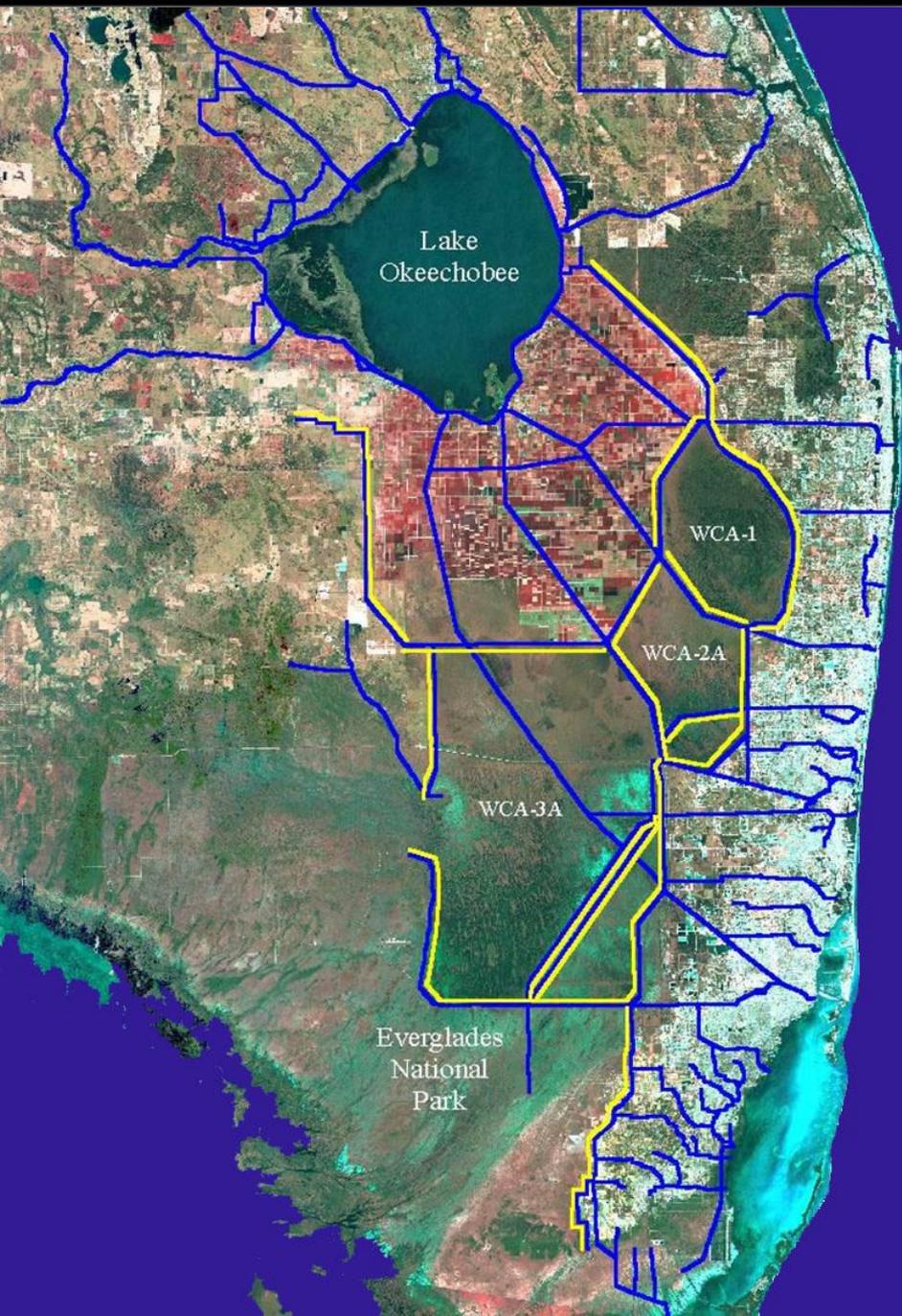


# Overview: Supplemental Deliveries for Natural System and Users

- **District's supply program implements Florida Statutes and analysis by District and USACE**
- **Natural systems:**
  - **Rules to protect natural system are adopted as part of comprehensive package**
    - **Permit program moves forward and establishes water rights**
  - **Not allocate water if: harmful, inconsistent with MFL strategy, or uses reserved water**
- **Consumptive uses:**
  - **Permit (i.e. water right) typically granted for 20 year duration, if conditions for issuance met**
    - **Permit condition: Water shortage restriction**



# C & SF Project Review



- **Highly engineered system**
  - **Substantially altered entire Central and South Florida region**
  - **“Legacy”**
  - **Project purposes evolved from focus on navigation to flood control and consumptive use purposes**
  - **More recently - restoration efforts**

# C & SF Project – Review



- **Central Florida connected by meandering River**
- **Lake Okeechobee, then flowed south**
- **Caloosahatchee River not connected to Lake**
- **Everglades ecosystem to south**



# C & SF Project – Review, cont.

- **Hamilton Disston began canals in 1880's**
  - Local interests continued
- **Hurricanes and flooding**
- **C & SF Project - major components:**
  - **Channelize Central Florida lakes and Kissimmee River**
  - **Lake Okeechobee dike**
  - **Outlets and salt barriers**
  - **Southern system**

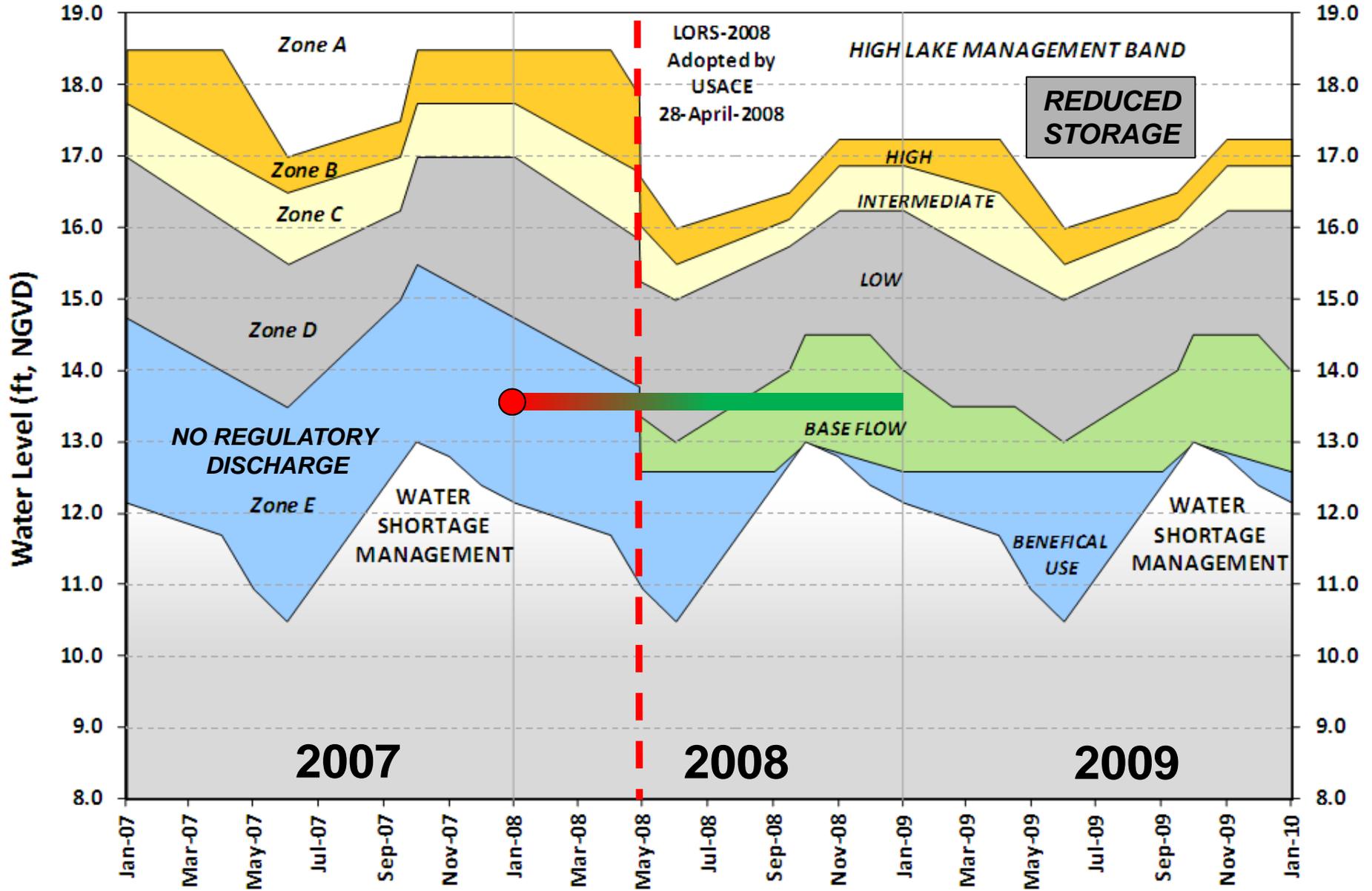


# C & SF Project – Review, cont.

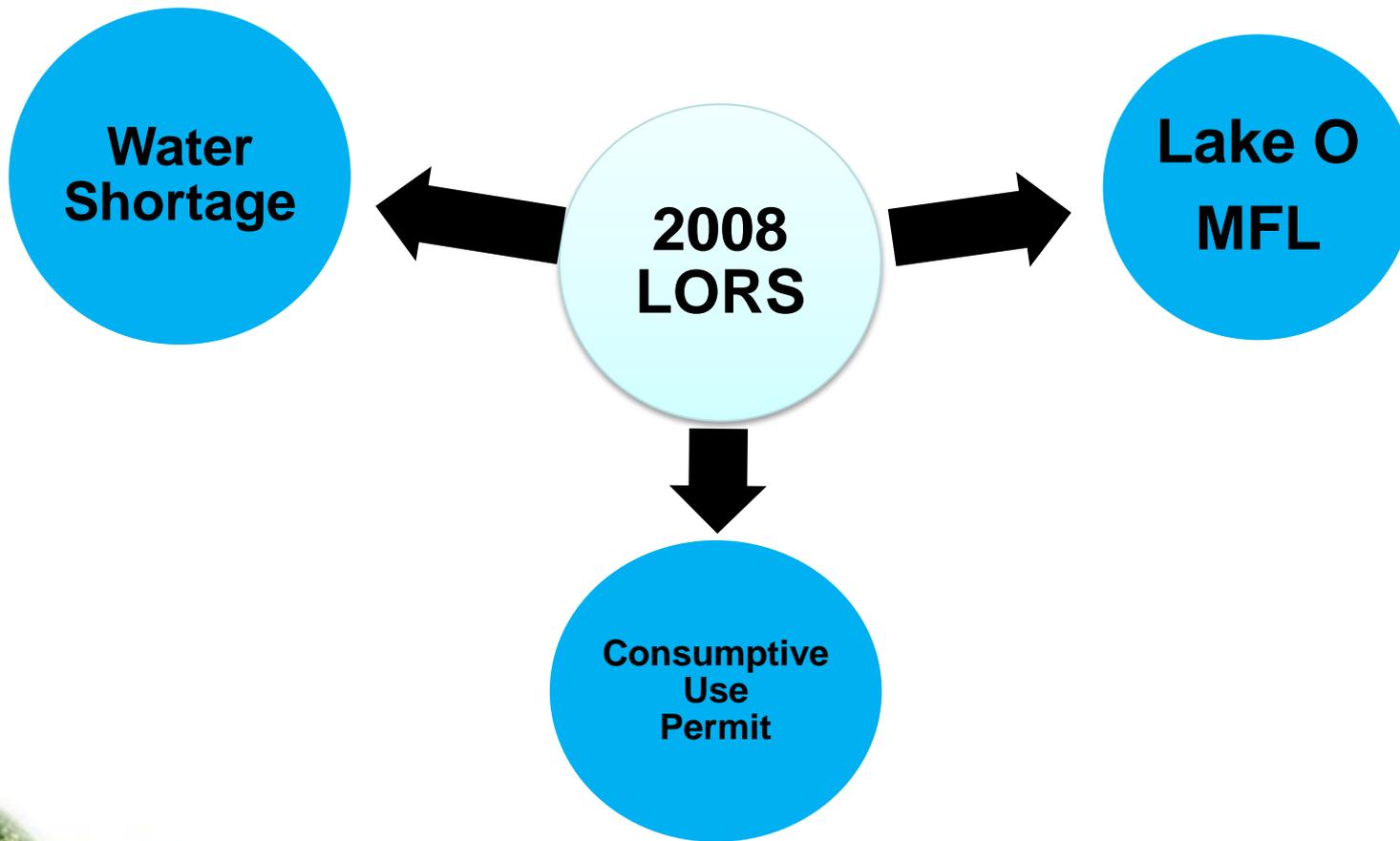
- **Recognition of impacts of Project and efforts to change Project performance**
  - **Late 1990's restoration vision developed**
    - Everglades, Kissimmee, estuaries, Lake, etc.
    - Restore via new storage infrastructure
    - CERP laws assured users
    - MFLs adopted in conjunction with the restoration vision
    - Water supply demands met concurrently with schedule for restoration project development
  - **2008 LORS: technical analysis and adoption**
    - Loss of Lake storage (Dike)
    - Tidal releases more often to keep Lake lower
    - Impacted Lake ecology, STA's, users, Tribe, etc.
    - Increased discharges to Caloosahatchee improve performance



# Lake Okeechobee Regulation Schedule Lowered in 2008



# SFWMD's Actions to Adapt Programs to 2008 LORS

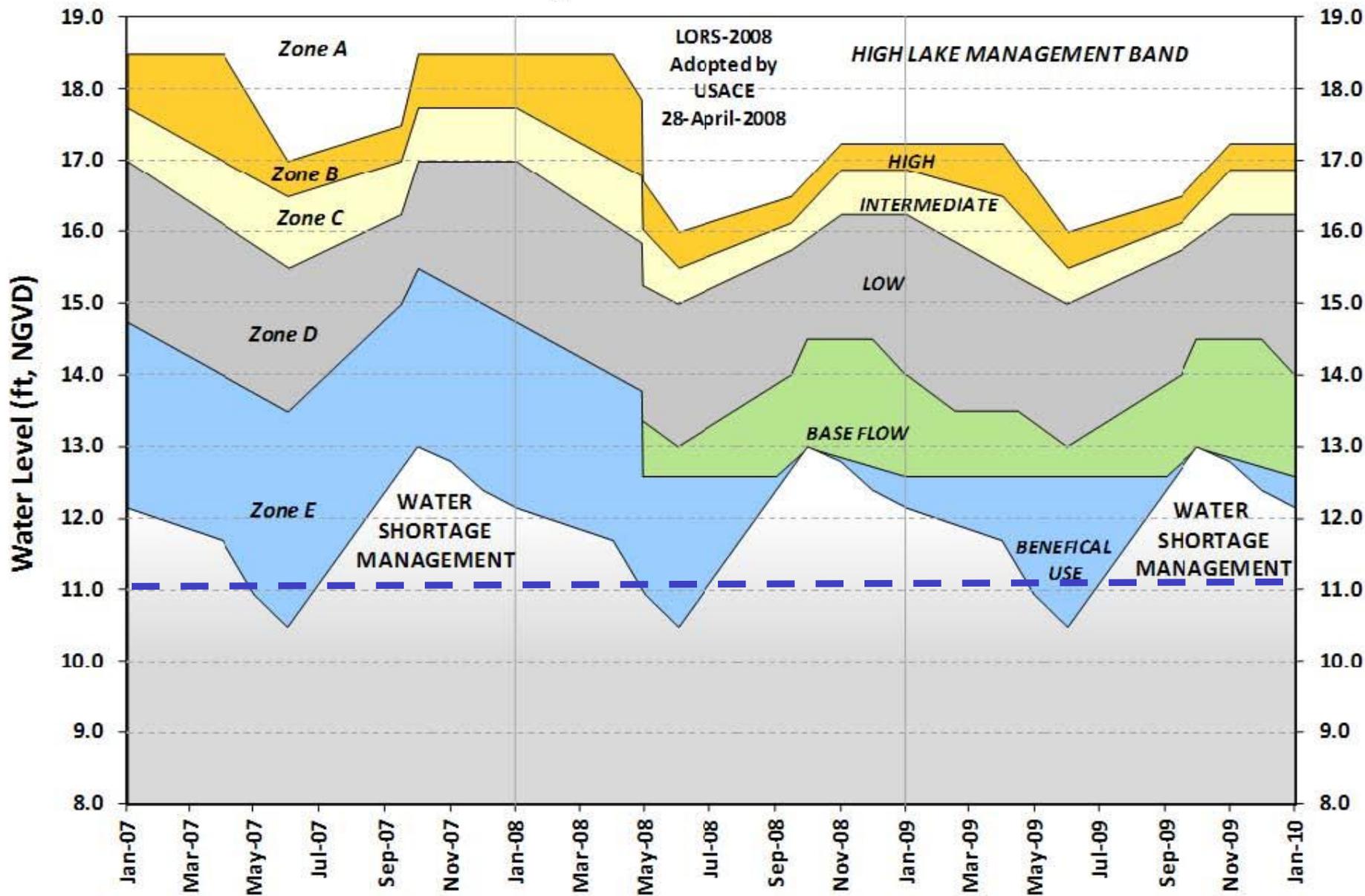


# SFWMD's Actions to Adapt Programs to LORS 2008: **Water Shortage**

- **2008 LORS Development:**
  - **Multiple performance measures analyzed**
    - Impacts to water rights analyzed frequency of water shortage
  - **Examined possibility of lowering water shortage trigger line to avoid impacting users with more water shortage events**
    - **Option 1: Lower line 1 foot**
      - Result: No cutbacks, even when Lake's MFL exceeded
    - **Option 2: Do not change existing water shortage trigger line**
      - Result: Significant loss of "physical certainty" of water right
      - Restrictions 1 in 6 years, triggered before MFL exceeded
    - **Decision: Option 2, keep trigger line**
      - Same water shortage trigger line as in existing District rules



## Lake Okeechobee Regulation Schedule Lowered in 2008



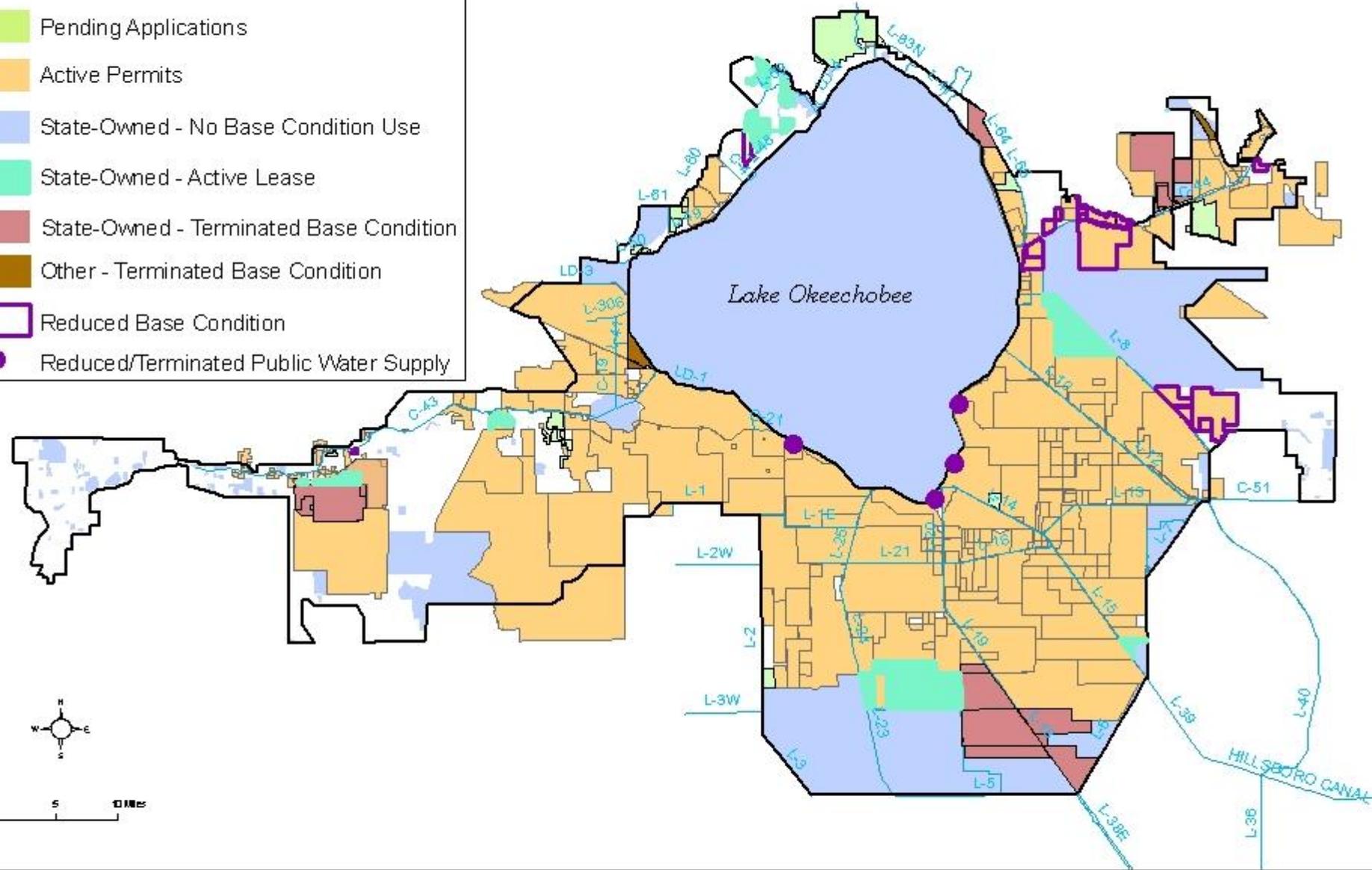
# SFWMD's Actions to Adapt Programs to LORS 2008: **Lake Minimum Flow and Level**

- **LORS 2008 projected Lake MFL violation**
- **Changed status to recovery and added recovery strategy to water supply plan and rules**
- **4 components**
  - **Capital improvement projects (Dike, storage)**
  - **Environmental enhancements at low Lake levels**
  - **Water shortage restrictions**
  - **Regulatory constraints on new consumptive use of Lake water**



# Legend

- Pending Applications
- Active Permits
- State-Owned - No Base Condition Use
- State-Owned - Active Lease
- State-Owned - Terminated Base Condition
- Other - Terminated Base Condition
- Reduced Base Condition
- Reduced/Terminated Public Water Supply



# SFWMD's Actions to Adapt Programs to LORS 2008: **Consumptive Use Permitting**

- **Overall context: All Lake irrigation permits to expire in 2009 (over 700,000 acres agricultural use)**
- **Existing District permit rules:**
  - **MFL criteria prohibits issuance of new permits for MFL waterbody, unless use is consistent with waterbody's recovery strategy**
  - **Existing users projected to have reduced physical certainty**
- **Without changing rules, faced with: competition, MFL recovery, and denial of applications for existing projects**



# SFWMD's Actions to Adapt Programs to LORS 2008: **Consumptive Use Permitting**

- **Lake Okeechobee Restricted Allocation Area (2008)**
  - **Effect: Caps allocations from Lake Okeechobee at "base condition water use"**
    - **No more volumes allocated than historically used**
    - **Sets level of impact on resource at historic experience**
  - **Why?**
    - **Prevents increased withdrawals on Lake (MFL in recovery)**
    - **Avoiding further erosion of certainty of rights and competition**
    - **"Leave no farmer behind" – assure users of water ability to obtain permit, but no more volumes allocated than historically used**



# SFWMD's Actions to Adapt Programs to LORS 2008: **Consumptive Use Permitting**

- **Components of rule:**
  - **Scope: Lake Okeechobee Service Area (LOSA)**
    - **Restricts increased use of Lake Okeechobee water and connected canals**
    - **Substantial region**
    - **Similar to Lower East Coast rule**
  - **1st: Calculate "base condition water use"**
  - **2nd: Applicants to provide reasonable assurance that requested allocation will not increase withdrawals above "base condition"**
  - **3rd: What if an applicant requests more?**



# SFWMD's Actions to Adapt Programs to LORS 2008: **Consumptive Use Permitting**

- **Allocations beyond base condition will be provided from:**
  - **Certified Project Water**
  - **Impacts of a withdrawal are "offset" by an alternative source**
  - **Alternative source (e.g. groundwater)**
  - **"Available base condition water"**
    - **Projects with historic use that was terminated or reduced (aka "ledger")**
    - **Concept: Terminated / reduced water rights may be re-allocated without changing performance of Lake or users**
    - **But, Board may restrict re-allocation**



# SFWMD's Actions to Adapt Programs to LORS 2008: **Consumptive Use Permitting**



**Base condition water use**  
**– allocated**  
**terminated / reduced**  
**water (“Ledger”)**



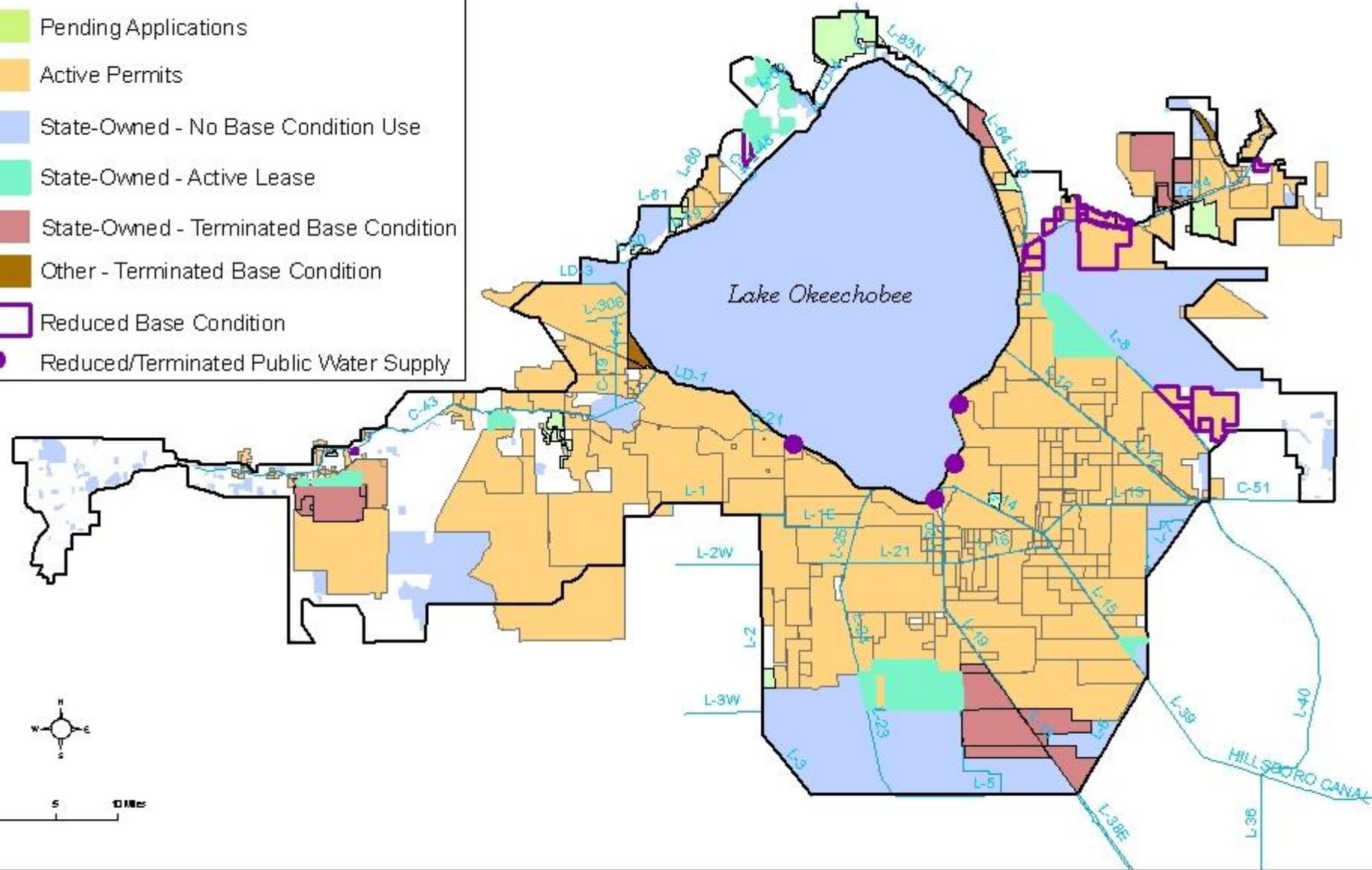
# SFWMD's Actions to Adapt Programs to LORS 2008: **Consumptive Use Permitting**

- **Status: Renewal process identified terminated or reduced water rights ("the ledger"); running totals**
  - **What volumes?**
  - **Why terminated or reduced?**
    - **Shifting crop type**
    - **More efficient irrigation system**
    - **Shifting source**
    - **Change in land use**
    - **District land acquisition is vast majority of ledger, but future need**
  - **Where is "the ledger" water?**
    - **In Lake Okeechobee; not allocated**
    - **Benefiting all: Lake, users, discharge to estuary, STAs, etc.**



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# SFWMD's Actions to Adapt Programs to LORS 2008: **Summary**

- **Legacy of C & SF Project and CERP**
- **2008 LORS Impacted Water Supply Program:**
  - Diminished storage, impacting users and Lake, etc.
  - Releases improve Caloosahatchee Estuary performance
- **Lake Okeechobee MFL violated and in recovery**
  - Recovery strategy developed and implemented
- **Consumptive use permit program:**
  - "Capped" - No allocations above base condition water use
  - Issued renewal / new permits to users at historic use
  - Terminated / reduced water rights exist ("ledger")
  - Discussion as to disposition of "ledger" water



**Questions?**