Annual Report to District Landowners 2024 Activities & Accomplishments

Tommy B. Strowd, P.E., Executive Director Annual Landowners' Meeting January 8, 2025



Goals and Objectives



- In 2024, the state legislature required special districts to establish goals & performance objectives
- Board adopted these goals and objectives in October 2024
- Annual report is required to be published on the District's website by December 1 of each year



MISSION:

 Lake Worth Drainage District's core mission is to provide flood control and protect water supply for communities within its jurisdiction.

GOALS:

- Operate and maintain flood control infrastructure to ensure effective drainage and sufficient water supply.
- Protect flood control infrastructure to ensure ongoing services to a growing population.
- Engage and inform the public of water management and flood control responsibilities.

Report Outline

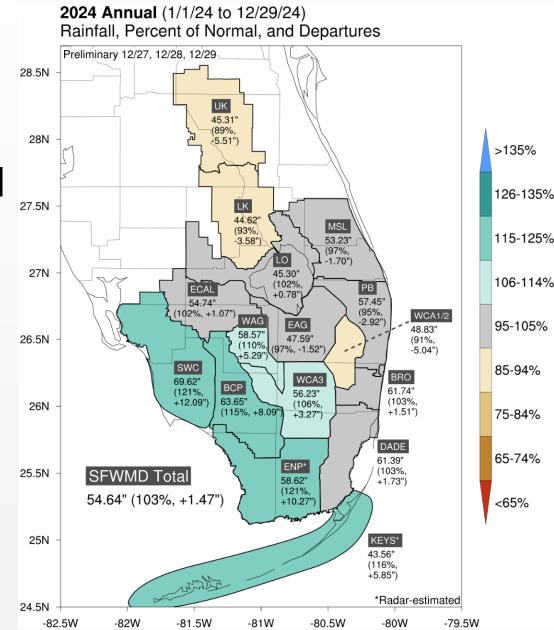


- Weather and water management
- Key capital projects
- Canal Rehabilitation Program
- Maintenance activities
- Regulatory actions
- Administrative functions

2024 Annual Rainfall



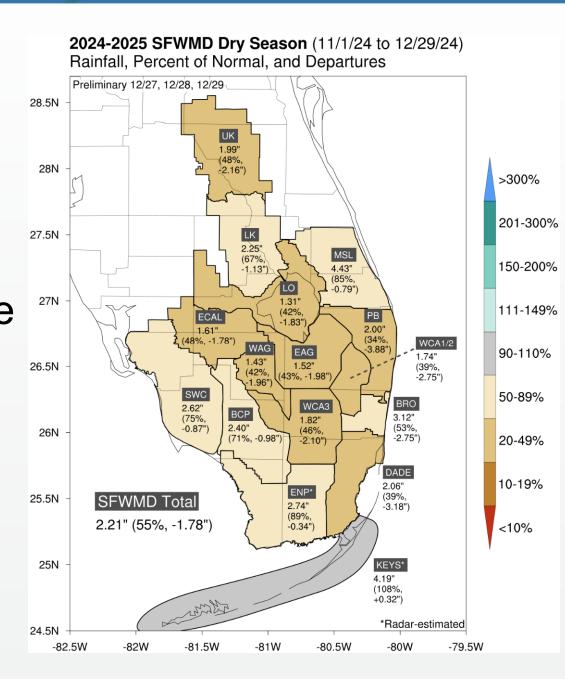
- Overall, LWDD experienced near average annual rainfall
 - ~95% of normal rainfall
- No significant flood events occurred during 2024
- Normal water supply operations



2024 Annual Rainfall



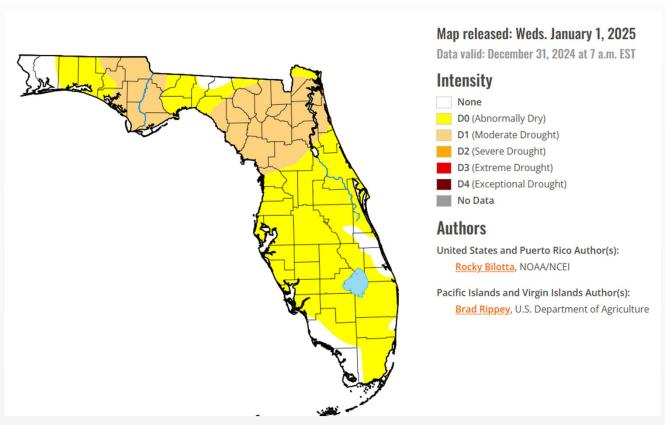
- However, 2024 Fall / Winter experienced significantly below average rainfall
- This is likely due to the La Nina event that is currently active



2024 Annual Rainfall



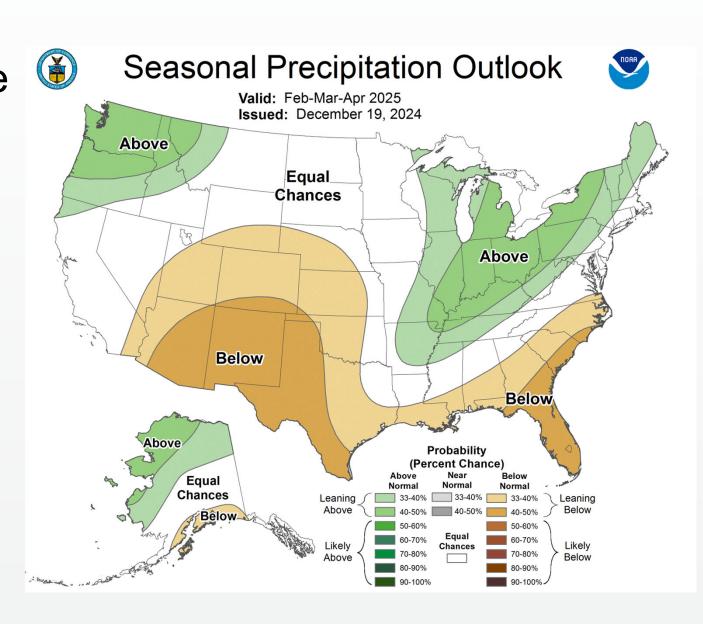
 US Drought Monitor (NOAA) currently indicates 'Abnormally Dry' conditions exiting across south Florida



2024 / 2025 La Nina

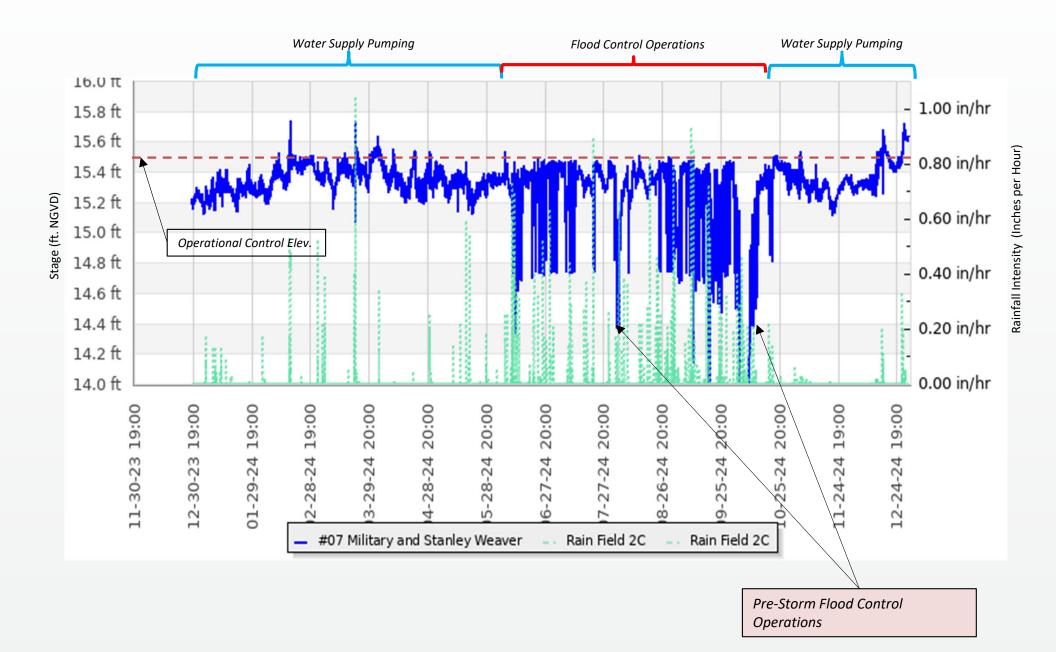


 Below average rainfall is expected to continue into Spring 2025



2024 General Water Control Operations

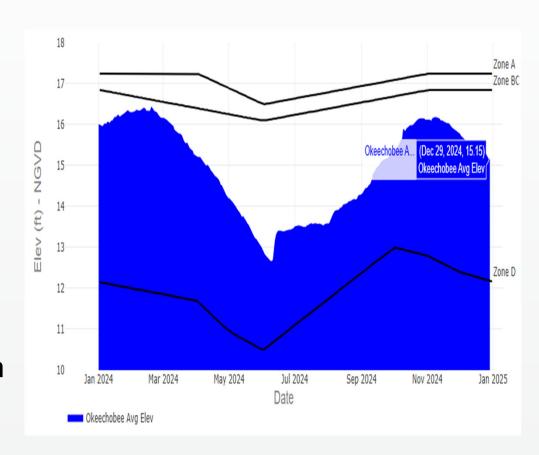




Lake Okeechobee



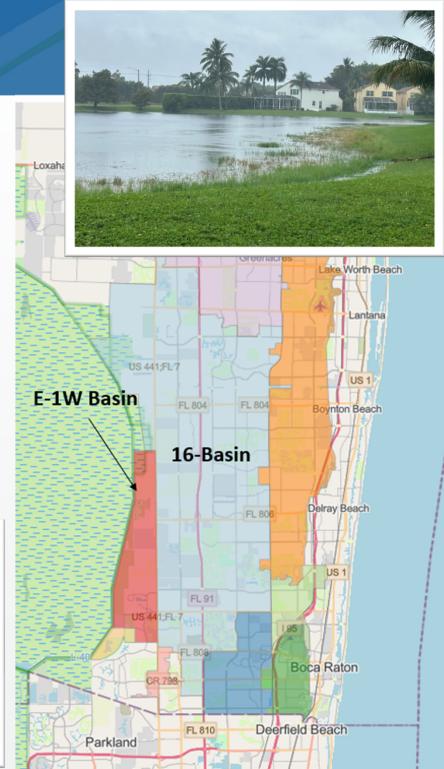
- New Regulation Schedule (LOSOM) in place
- Current stage: 14.93 ft NGVD
 - Above the 'ecological envelope'
- 'Bad' ecological potential
 - Lake littoral zone
 - Coastal estuaries
 - St. Lucie
 - Caloosahatchee
 - Everglades
- 'Moderate' water supply potential
- USACE is currently making regulatory releases to the coastal estuaries and Water Conservation Areas
- Start-of-wet-season stage target between 11.5 ft and 12.0 ft NGVD by June 1, 2025.



Hurricane Milton

- Early forecasts predicting significant, historic rainfall event
- Initiated pre-storm canal drawdown on October 3; authorized community structure openings
- Maintained canal elevations at or below design stage in the 16-Basin throughout the storm
- Maintained canal elevations to avoid submergence impacts to community discharge structures in the E-1W Basin
- Emergency operations taken to address <u>potential</u> flooding in 2 residential communities – Boca Chase and Lake Charleston
- Authorized post-storm community structure openings on October 10; return to normal operations on October 11

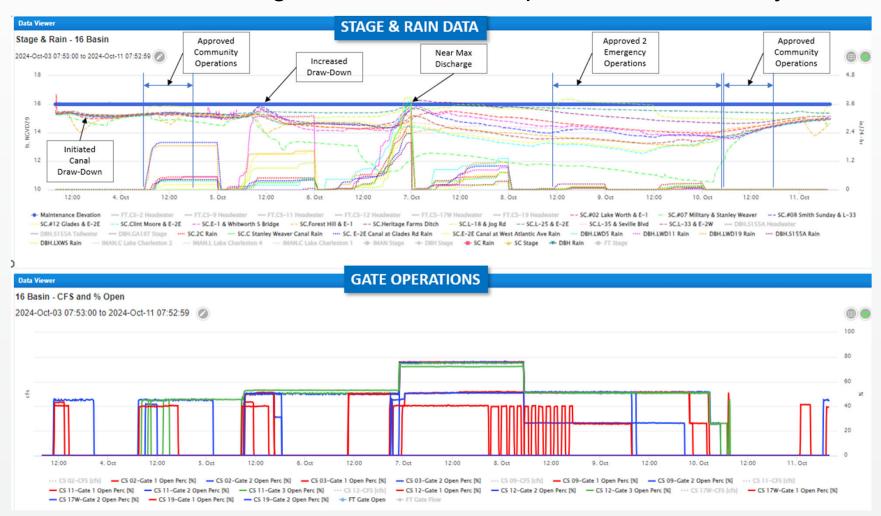




Water Management Dashboard



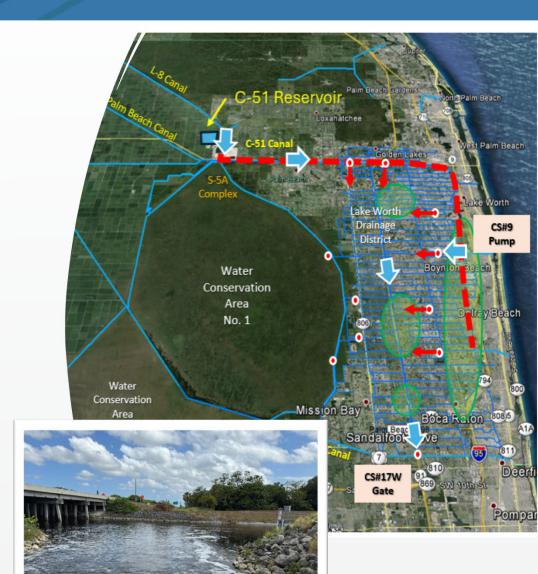
- Staff continue to make enhancements to eRIS Water Management Dashboard
- Benefits realized during storm event comprehensive look at system



C-51 Phase I Reservoir Operational



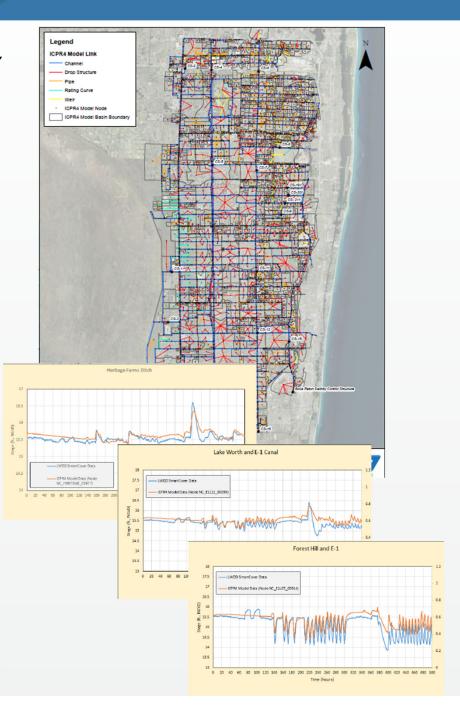
- Received first request to pass-thru water from SFWMD
- 184-acre feet delivered in June 2024
 - CS #9 Pump (South Unit)
 - 8 hours each day for 7 days
 - CS #17 Discharge:
 - 2 hours each day; 1 gate opened 1 foot
- LWDD reimbursed for operating costs



Comprehensive Modeling Effort



- ✓ Phase 1 completed HYDROLOGY
 - Sub-basin delineation and runoff
- ✓ Phase 2 completed -HYDRAULICS
 - Canal geometry and culverts
- ✓ Phase 3a completed -COMPILING
 - Combining hydrologic & hydraulic components and develop functional model.
- Phase 3b 2024/2025 yr end CALIBRATION underway
 - Testing & calibration of the model vs. historic rainfall events
- Phase 4 Spring 2025 FINAL REPORT (supersedes prior "Interbasin Study 1996 rev")

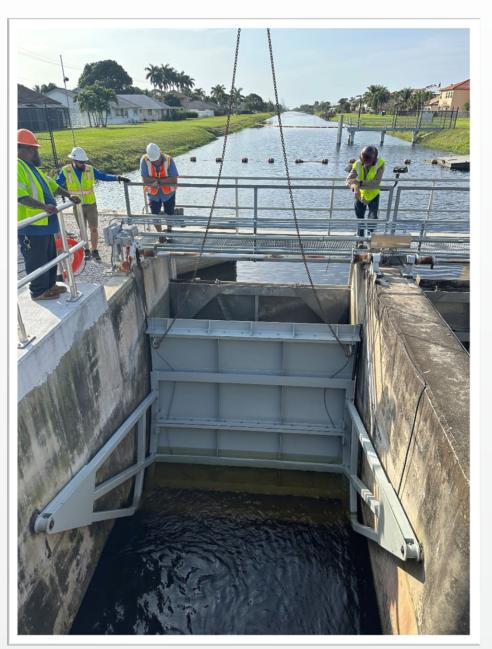


Control Structure 9 Refurbishment



- Comprehensive refurbishment of Control Structure 9 completed!
- Radial Gates replaced in January 2024





Control Structure 9 Refurbishment



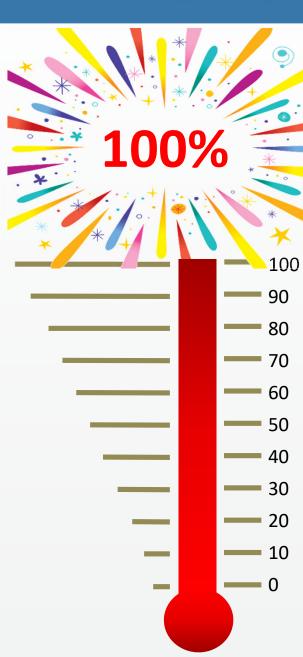


Canal Rehabilitation Program



- CRP Phase I Vegetation Removal is...
 COMPLETE!
- 1.45 miles completed in 2024
- 173.1 miles completed since October 2015
 - LWDD 85.4 miles
 - Contractor Services 81.7 miles
 - 3RD Party (Developer/Govt.) 6.0 miles

Goal Achieved - 173.1 mi



L-34; Lakes of Delray Blvd to E-3

(0.5 mi)











L-45; Golf Course Rd to E-2W

(0.43 mi)





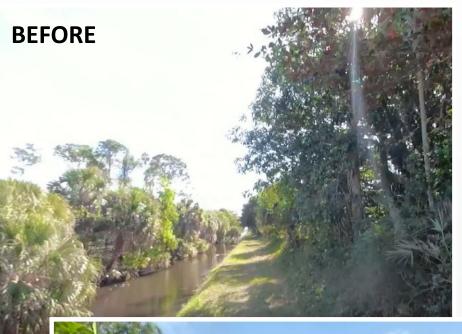






L-5; Jog Rd to Fergusson Lane (0.52 mi)











Stanley is safe and sound!



STANLEY

6/24/2024

Captured on L-5, east of Jog Rd and Relocated to his ½ acre and starter burrow on 711 Ranch near Vero Beach



\$5,500

CRP Phase II: Maintenance Restoration Program (MRP)



- CRP Phase II Canal bank restoration underway!
 - GOAL: Reconstruct canal sections to recover banks and achieve final configuration for future maintenance; reduce dependence of herbicide treatment on restricted banks
- Completed inventory in 2023
 - 500 projects identified; over 250 miles
 - Projected completion over ~20 years









Maintenance Restoration Program (MRP) EXAMPLE





Vegetation Removal



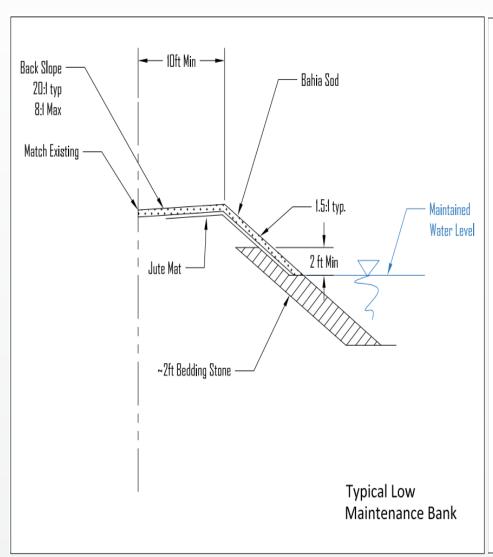


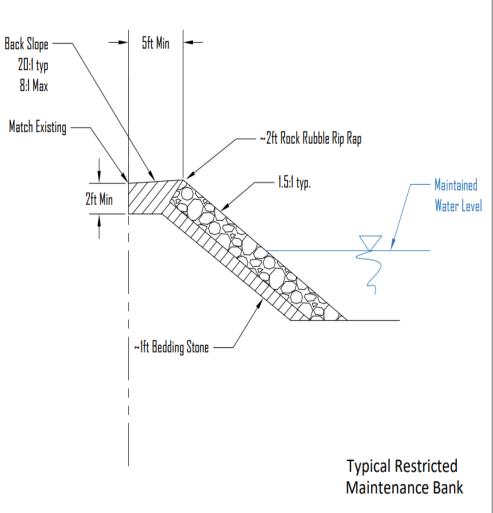
Bank Restoration



Low Maintenance Bank Design

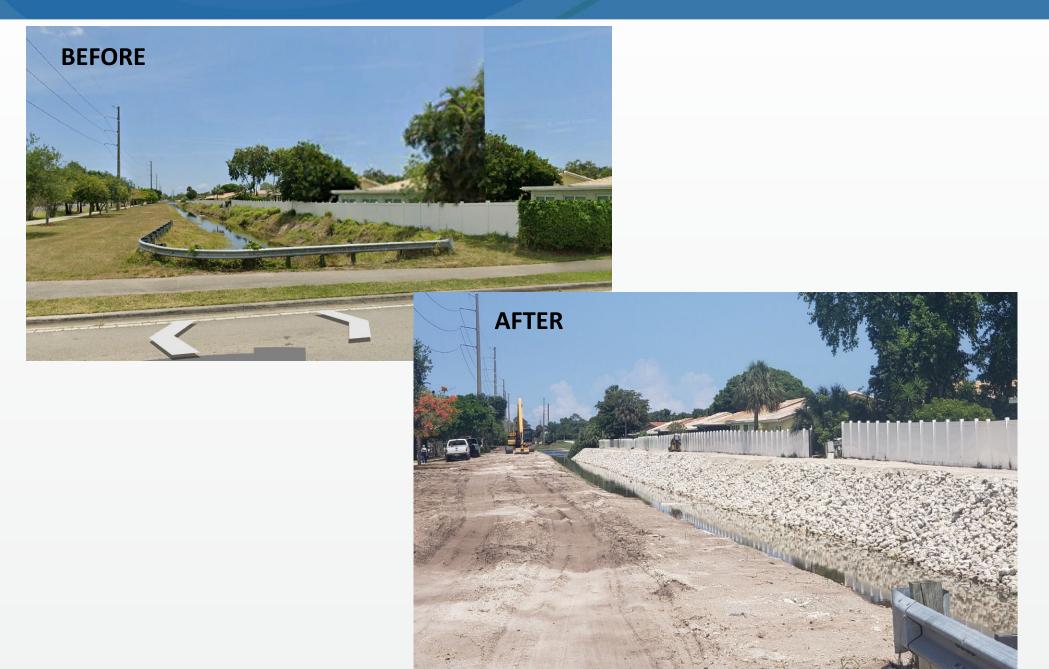






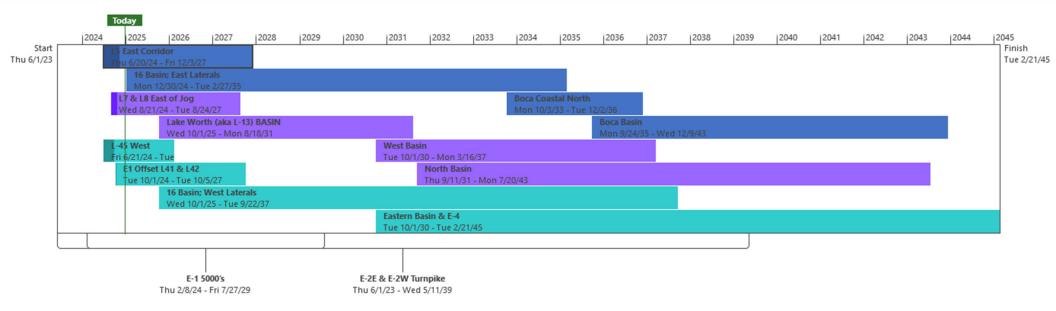
L-48 Canal – East of Boca Del Mar Dr. Restricted Maintenance Bank





MRP Timeline



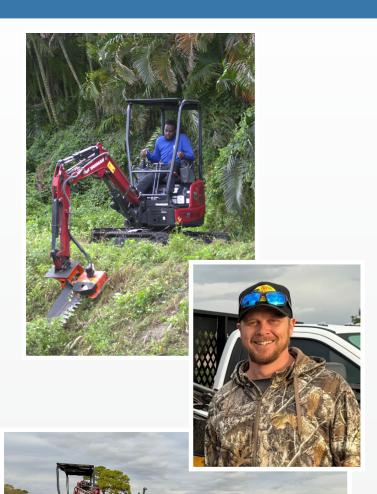


- L5 East; 2025 thru 2027
 - Approximately 4.7 Miles
 - Currently rebuilding L5 from Jog to Fergusson
- L7 & L8 East of Jog; 2025 thru 2027
 - Approximately 4.1 miles
 - L7 to E3 survey has been completed and currently scheduling work
- L45 West; 2025 thru 2026
 - Approximately 1.8 miles
 - L45 from Golf Course to Lyons "roughed in" and beginning final grading and rock stabilization
- E-1 offset L41 & L42; 2025 thru 2027
 - Approximately 2.7 miles
 - Reviewing plans and scheduling public outreach

Canal Maintenance Low Maintenance Bank Mowing



- Low Maintenance Team established in 2022 to mow the narrow banks that are inaccessible to tractors
- Hired 4 new employees in 2024 to staff 2 small teams that can support a routine maintenance schedule of 2x per year
- Kevin MacPherson promoted to Crew Leader overseeing both LM teams
- Currently maintaining ~153 miles of low maintenance bank; additional miles are continually being added as MRP projects create accessible banks



Canal Maintenance Low Maintenance Bank Mowing





BEFORE



BEFORE



AFTER



Canal Maintenance High Maintenance Bank Mowing



- ~1,575 miles of Flat Mowing
 - ~283 miles, 4-6 times per year
- ~1,207 miles of Slope Mowing
 - ~399 miles, 2-3 times per year
- FY24 Annual Contract for Mowing Services; \$277,000
 - Flat: ~125 miles, 4 times/year
 - Slope: ~140 miles, 4 times/year





Canal Maintenance Vegetation Management



- Treated ~5,922 acres of aquatic vegetation
 - ~1080 acres of Floating Vegetation
 - ~640 acres of Submerged Vegetation
 - ~1,161 acres of Littoral Vegetation
 - ~3,041 acres of Littoral/Floating combined
- Treated ~442 acres of terrestrial treatments on low maintenance banks that are unable to be mowed
- Annual Contracted Services: \$93,000
 - North of C-51 Canal
 - Boca Basin







Canal Maintenance Vegetation Management



- Currently maintaining 136 booms in 91 locations throughout District canals
- Replaced 28 booms in 17 locations due to wear and/or boat traffic
- Continued mechanical removal of aquatic vegetation to supplement chemical treatment
- Developed procedure to notify owners of private canals that they will need to maintain their canal once we place a boom to keep their debris out of our system





Canal Maintenance

- Routine dredging ~24 mi
- Vertical side-trimming ~38.75 mi
- Fill hauling ~18,495 CY
- Vegetation/Mulch hauling 7,100 CY
- 16 new access gates installed









Canal Maintenance – Tree Crew Example: L-5 Marginal Road to E-2W









Canal Maintenance – Tree Crew Example: L-14 Canal at Military Trail





Canal Maintenance – Tree Crew Example: L-10 West of Jog Road





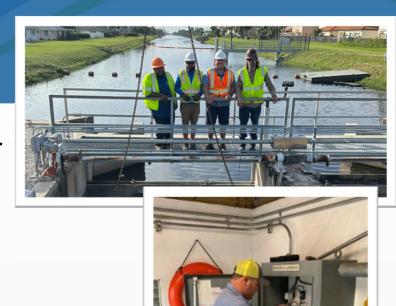




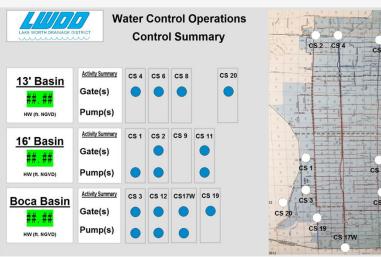


Structure Maintenance

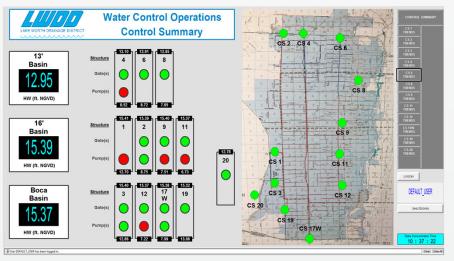
- Regularly service and maintain 14 major water control structures; continual monitoring of system components to ensure efficient operation of structures and flood control gates
- Contracted with Graymatter for SCADA assessment
 - Implemented numerous system improvements; updated SCADA user interface



BEFORE:



AFTER:

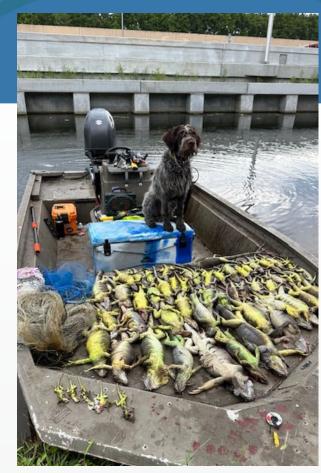


Maintaining Infrastructure Iguana Control

- Initiated \$25K pilot project for iguana control
- Over 1300 iguanas eradicated



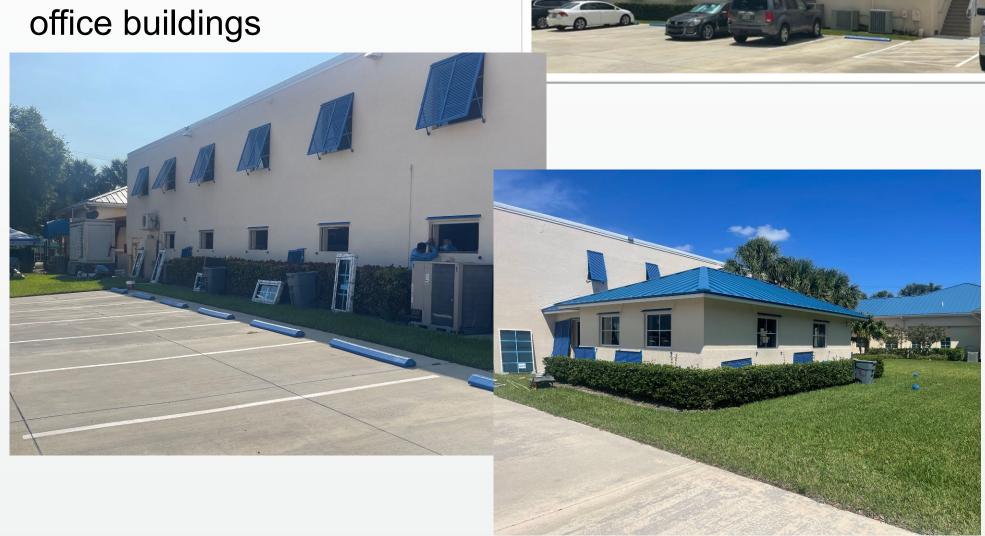






Campus Improvements

 Completed installation of hurricane proof windows in office buildings



Campus Improvements



Replaced dilapidated
 Miner Building with new pole barn for storage

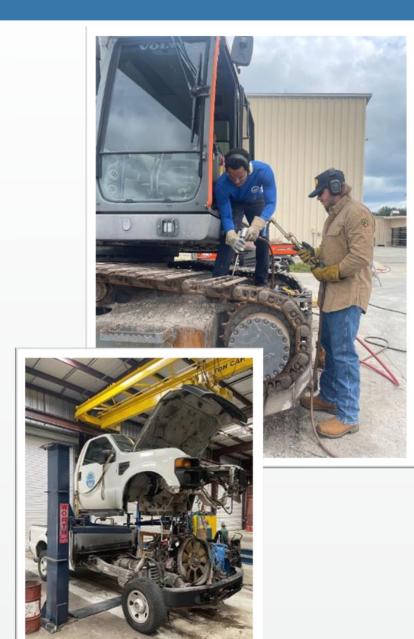




Fleet Maintenance

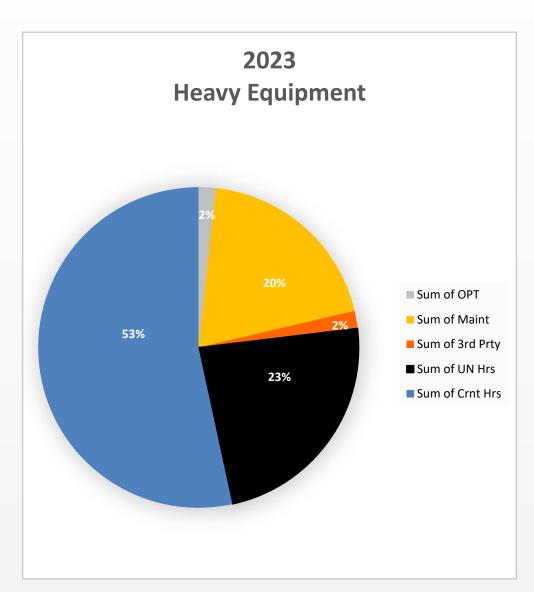


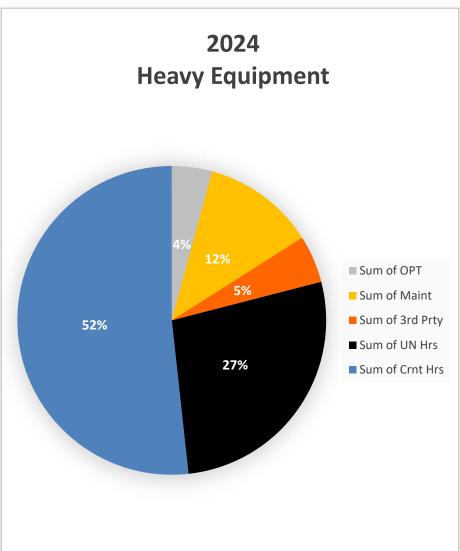
- District staff maintains a fleet of:
 - 61 light/heavy vehicles
 - 37 machines / heavy equipment
 - 11 tractor mowers
 - 8 boats
- Routine services completed
 - 104 light vehicles
 - 122 machines / heavy equipment
 - 51 tractor mowers



Equipment Utilization Heavy Equipment

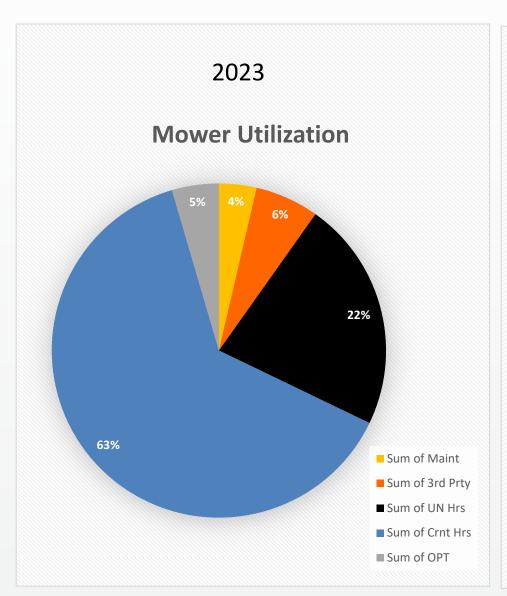


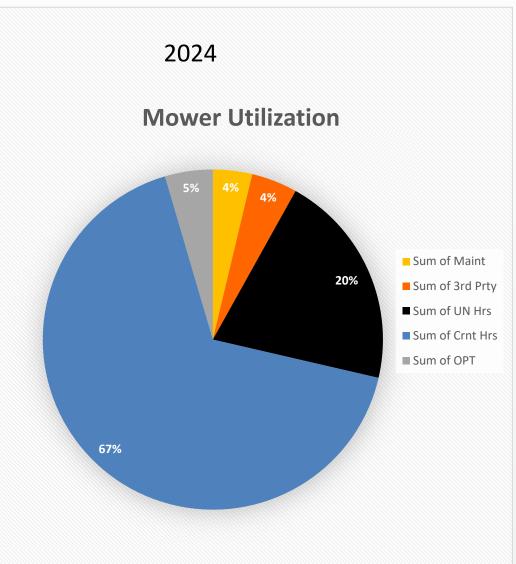




Equipment Utilization Mowers







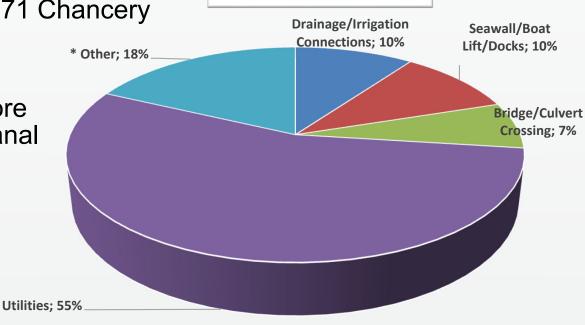
 Received 305 new right-of-way permit applications; issued 307 new permits

 Issued an additional 143 right-of-way permit modifications, extensions, transfers and permit related letters (objection, no objection, dewatering, etc.)

 Completed 632 plat and development reviews for county and municipality projects

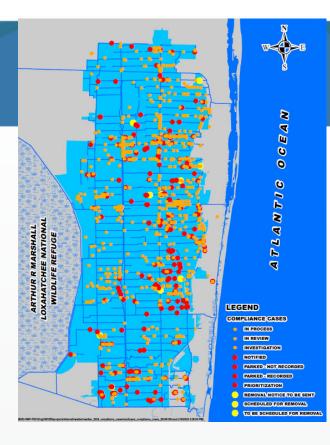
Researched and responded to 1,471 Chancery
 Case 407 review requests

 Completed 7 topographic surveys with cross sections and staked more than 3 miles of canal to support canal rehabilitation projects



^{*} Other includes Access Gates, Multiple, Piping, Signs, Temp. Access

- 3,211 permit compliance deliverables (record drawings, construction commencement notices, fees, inspections, insurance) due for 1,577 individual permits
 - 512 or 16% of these deliverables are reoccurring annual deliverables
 - 92% compliance rate
- Collected \$16,137 (100%) in Service Agreement fees and \$190,304 (94%) in Annual Fees
- Opened 233 new compliance cases; resolved/closed 239 cases
- Staff continue to work towards closing out legacy compliance issues – over 100 cases (10%) acted upon
 - If not resolved through current compliance processes, Notice of Encroachment is recorded in public record to notify current/future owners
 - Removal by LWDD prioritized based on canal bank restoration schedules







Encroachment Relocation; L-13 - W of Davis Road - Fence

Fence Encroachment





Before After





Delray Lakes Estates Berm Removal; E-2W - W of Turnpike, S. of Atlantic Blvd.

Previously Existing Vegetated Berm



Before



Delray Lakes Estates Berm Removal; E-2W - W of Turnpike, S. of Atlantic Blvd.

Berm In Process of Removal



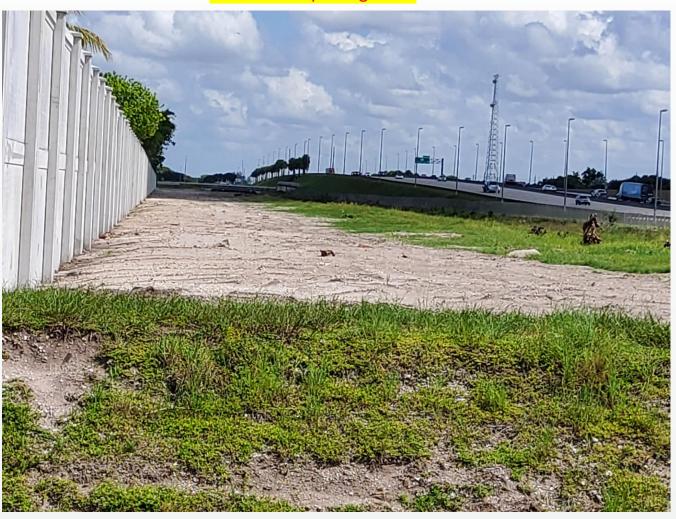


Before



Delray Lakes Estates Berm Removal; E-2W - W of Turnpike, S. of Atlantic Blvd.

New Wall Replacing Berm



After



BNAI TORAH Temple Encroachment/Vegetation Removal; L-50 @ Canary Palm Drive

Before After







GIS Enhancements



- Continued GIS enhancements to support field and regulatory staff
 - Upgraded ArcGIS Server providing additional functionality for mapping and information display
 - Installed Image Server and made available historic imagery from 1940 to 2024

1940 1999 2024



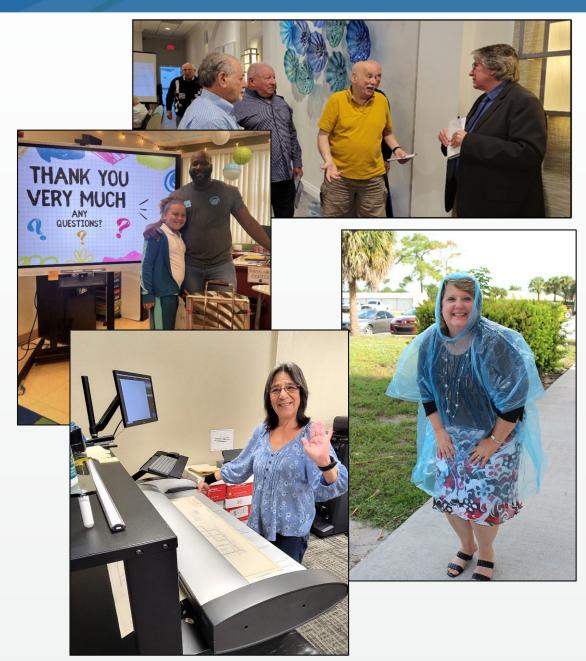




Public Records & Information



- Continued public presence at community meetings and outreach to HOA's through website, newsletters and social media
- Hosted 10th Annual Flood Control Workshop
- Satisfied 1,000+ inquiries from the public
- Completed District Records Retention Plan and initiated reorganization of electronic records to meet business needs and retention schedules
- Scanned 22,718 documents; disposed of 40 cubic feet of records



Staffing

- Total number of staff has not increased in more than 15 years; 93 budgeted positions (4 current vacancies)
 - Average 10.5 years of service for current employees
 - 23 employees hired in 2024
 - 2 employees retired in 2024
 - 10 current employees enrolled in DROP and will be retiring within next 8 years
- Implementing training programs for retention of entry level staff mowers, equipment, CDL training
- Conducting Classification & Compensation Study in 2025 to ensure fair and competitive salaries

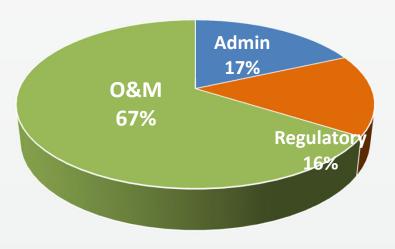


Financial Highlights



- Auditors issued unqualified opinion for FY2023; financial records and statements are fairly and appropriately stated in accordance with generally accepted accounting principals
- Adopted FY25 budget of \$17.3 million with decrease in annual assessment
 - Reduced non-ad valorem annual assessment by \$1.00 -from \$49.50 to \$48.50
 - Reflects the District's ongoing commitment to maintaining and improving infrastructure while responsibly considering the financial implications to landowners
- Revenues received:
 - Permit fees \$1,182,000
 - Interest earnings/Change in Value -\$1,432,000
 - Quit claim deeds \$2,000
 - Tower Lease \$131,000
 - Sale of surplus equipment \$64,000





LWDD Assessment History

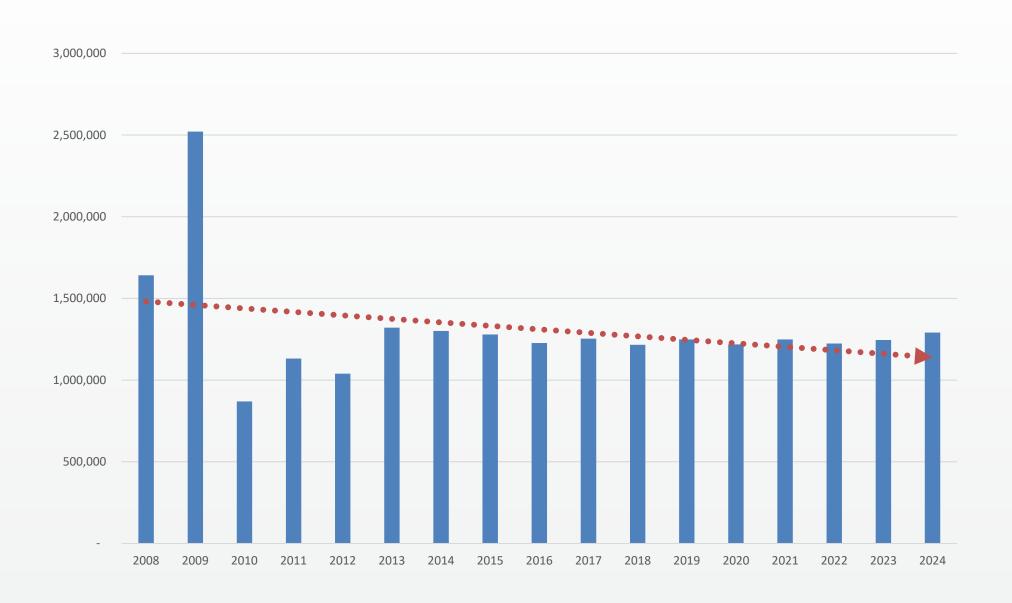






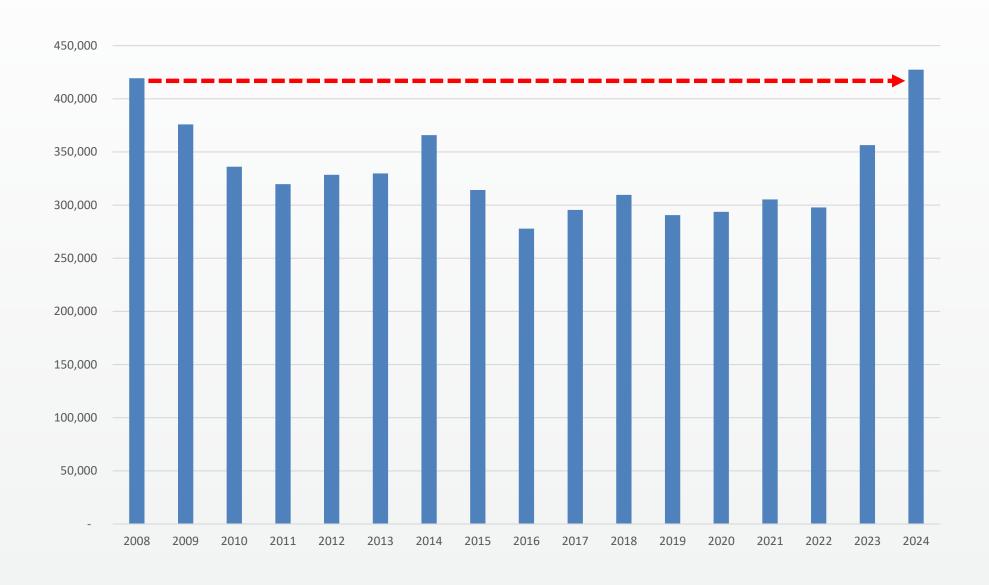
Maintained Healthcare Costs





Maintained Property/Casualty Insurance Costs





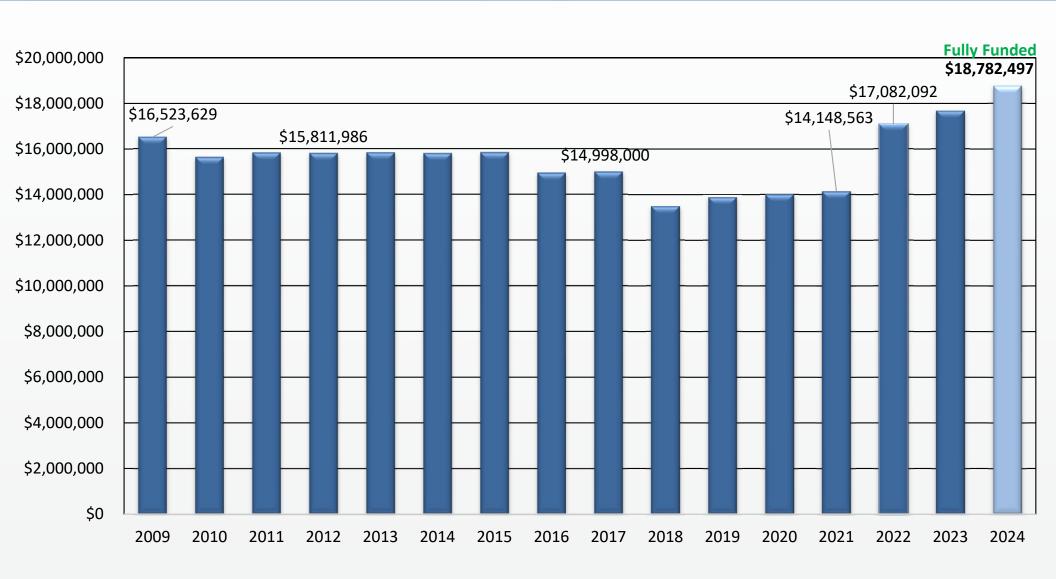
Maintained Salaries





Hazard Mitigation Funds





Other Fund Balances



- Capital Projects Fund: \$29.4 million
 - \$18.4 million in revenue from sale of development units in Ag Reserve; committed for capital and water supply projects
- Self Insurance Fund: \$2.2 million
- Canal Revetment Fund: \$1.1 million

Looking Ahead



- CRP Phase II Maintenance Restoration Program (MRP)
 - Restoration of low maintenance canal banks
 - Management of existing structural encroachments on rights-of-way remaining after canal rehabilitation
- Addressing legacy compliance issues
- Ongoing capital projects for refurbishment of water control infrastructure
 - Hydrologic model; last comprehensive model completed in 1992, nearly 30 years ago
 - Secondary Control Structure remediation and enhancements
- Regional water supply issues
 - Lake Okeechobee Operating Schedule (LOSOM)
 - Lower East Coast Water Supply Plan
- Turnpike widening project coordination
- Campus facility planning

Recommendation



- The Annual Report to Landowners provides an overview of the District's annual activities, including District activities undertaken in furtherance of the adopted water control plan
- Recommend acceptance of report pursuant to Florida Statutes Ch. 298.26