Lake Killarney Board
Regular Meeting

Agenda
November 6, 2024 @ 10:00 AM
City Hall Commission Chambers
401 S. Park Avenue

welcome
Agendas and all backup material supporting each agenda item are accessible via the city's website at cityofwinterpark.org/meetings/ and include virtual meeting instructions.

assistance & appeals
Persons with disabilities needing assistance to participate in any of these proceedings should contact the City Clerk's Office (407-599-3277) at least 48 hours in advance of the meeting.

"If a person decides to appeal any decision made by the Board with respect to any matter considered at this hearing, a record of the proceedings is needed to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based." (F.S. 286.0105).

please note
Times are projected and subject to change.

1. **Call to Order**

2. **Consent Agenda**

   a. Approve the minutes of September 4, 2024. 1 Minute

   b. Approve the minutes of October 2, 2024. 1 Minute

3. **Public Comments (for items not on the agenda): Three minutes allowed for each speaker**

4. **Public Hearings (Public participation and comment on these matters must be in person.)**

5. **Action Items**

6. **Non-Action Items**

   a. Stormwater Western Basin Study 30 Minutes

7. **Staff Updates**

   a. Orange County Update 10 Minutes

   b. Lakes Management 10 Minutes

      - Lake Elevations
      - Storm Preparedness
      - Water Quality
      - Killarney Canal
      - Hydrilla & Pondweed Treatment
      - Maintenance & Efforts

   c. Upcoming Events 5 Minutes

      - Household Hazardous Waste Drop-off - 11/9 9a @ Cady Way Park
      - Lakes Shoreline Restoration - 11/16 9a @ Lake Rose

   d. Stormwater Management 10 Minutes

      - CIP Update
      - Killarney Dr. Pipe Replacement Project Timeline
      - Lake Front Construction Updates

Follow-up Items:

- Private Exfiltration Letter
- BMP Feasibility Study for Killarney Dr. Outfall Consolidation (when available)
- Outfall Condition Update

8. Board Comments

a. Discussion of Public Comments Received 5 Minutes

9. Upcoming Agenda Items

a. Upcoming Agenda Items 5 Minutes

b. Summary of Meeting Action Items 5 Minutes

10. Adjournment

Lake Killarney Board

agenda item 2.a

item type
Consent Agenda

meeting date
November 6, 2024

prepared by

approved by

subject
Approve the minutes of September 4, 2024.

motion | recommendation

background

alternatives | other considerations

fiscal impact

attachments
1. LKB-mins-2024-09-04 DRAFT GE

Lake Killarney Board
Regular Meeting Minutes

September 4, 2024 at 10:00 AM

City Hall Commission Chambers
401 S. Park Avenue

Present
David L. Dickerson, Joyce D. Cunningham, Ellen Hencken, Carolyn Minear, William Voecks, Brian King.

Absent
Jason K. Ellison

Staff Present
Director of Natural Resources and Sustainability Gloria Eby, Assistant Director of Public Works Don Marcotte; Public Works Engineer Shannon Monahan, Lakes Division Manager Joseph Cordell, Administrative Assistant Victoria Tabor

Also Present:
Orange County Senior Environmental Specialist Nidia Volpe and Orange County Lake Killarney Board Members Conrad Necrason and Langdon Stanley

1. Call to Order

David Dickerson called the meeting to order at 10:02 a.m.

2. Consent Agenda

Ms. Hencken advised that she attended the last meeting virtually.

a. Approve the minutes of August 7, 2024

Motion made by Ms. Minear to approve the minutes as corrected, seconded by Ms. Cunningham. Motion carried unanimously with a 6-0 vote.

3. Public Comments (for items not on the agenda): Three minutes allowed for each speaker

Robert Kunzweiler 2000 Lake Drive, commented on the Lake Killarney canal beautification project. Mr. Kunzweiler stated the following: new crepe myrtles were planted and not maintained; an existing palm tree is never trimmed; the landscapers from the business across the canal is dumping debris into the canal. Mr. Kunzweiler invited staff to come and view the property. Ms. Eby welcomed videos or photos of the illegal dumping and advised that after the herbaceous planting, the invasive plant issue had been addressed. Ms. Eby informed that upon inspection, the wax myrtles will be

replanted if they have died. Beautification will restart in October at the start of the new budget year. Mr. Cordell will inspect next week and meet with Mr. Kunzweiler.

4. Public Hearings

5. Action Items

6. Non-Action Items

7. Staff Updates

a. Orange County Update

Ms. Volpe stated she reached out to Orange County Public Works and was advised the negotiation with Mr. Mitchell's easement is ongoing. After the easement negotiation and the temporary construction easement, work can begin. A timeline has not been set. Orange County is having their quarterly Orange County Lake Killarney Advisory Board meeting on September 12th at 5 p.m. at the Winter Park Police Department.

b. Lakes Management

- Shoreline Violations
- Lake Elevation
- Water Quality
- Lakeshore Ordinance Overview (Ch. 114)
- Prioritization List

Mr. Cordell presented the Lakes Management update. The violation on Lake Drive has been resolved. The violation at 530 Country Club is being remediated by owner's landscaper. The dock at Fairview has not been inspected for correction.

Lake Elevation as of August 21, 2024 is 82.0.

Water Quality Comparison - higher nutrient levels were presented for the cove/canal sample location. Ms. Eby explained that morphology is a primary contributor to higher nutrients including re-suspension of sediments. Ms. Eby explained the water quality data received from Orange County will be 3 to 6 months in arrears as samples to go through accreditation of the laboratory results.

Maintenance Efforts - removal of 105 gallons of debris, 40 gallons of trash and 10 cubic yards of eelgrass.

Mr. Cordell presented an overview of the Code of Ordinances of the City of Winter Park Chapter 114 – Waterways. This presentation allows for the Board to have a dialogue and add any items to a future agenda for board action or discussion. Mr. Cordell reviewed the following topics from Chapter 114: Winter Park Surface Water Facts; Chapter 114 City Codes that regulate shoreline alterations for vegetation, seawalls, revetments, docks and boathouses; Dock Permitting Summary; Parameters for New Docks; Variances have shifted from Board of Adjustments to the Lakes Boards,

Permitting Exemption for Emergency Repairs; Nonconforming Structures; Revetment & Seawall Permitting Summary.

The Fertilizer Ordinance was discussed. Ms. Volpe will provide a list of Orange County vendors to forward to the Board. Shoreline Vegetation; Summary of Aquatic Plant Removal Rules;Typical Access Corridor; Vegetation Removal Plan/Revegetation Plan Shoreline Planting Tips and What kinds of plants to use.

Ms. Cunningham would like to add as an action item, discussion of Chapter 114 for the canal. Ms. Eby clarified the Winter Park Code Chapter 114 specific language and powers of the board: 114-31(a)(4) - *the applicable lake board conducting reviews of proposed docks and boathouses shall have the authority to condition approval on: (i) the reduction of the width and size of docks and boathouses: (ii)the alteration of the location of dock and boathouses; (iii) alteration of the configuration of docks and boathouses; or (iv) any combination thereof; in such determination the applicable lake board may, among other relevant factors of safe navigation, consider the logistics of cues of boats awaiting clearance as well as the features of weirs, dams, drainage structures and stream drainage for any waterfront property.* Specifically, Killarney authority is 114-43 (7) which allows the Board it's authority in a quasi-judicial manner.

The prioritization list was discussed. Ms. Eby pointed out the dates on the prioritization list and stated, list will be updated as needed. The next meeting for the Board to Discuss prioritization will be May or June 2025.

Ms. Monahan will update the Board of any new developments on Lake Killarney.

Staff will check with David Zusi's schedule on presenting the Private Lift Station Maintenance Agreement.

c. Past & Upcoming Events

- Howell Branch Clean-up - 8/24 9a @ 2917 Temple Trail
- Fix it! Don't Pitch It - 9/7 9a @ Winter Park Events Center
- Orange County Lake Killarney Advisory Board Meeting - 9/12 5p @ Public Safety Building (500 N Virginia Ave)
- Paddleboard Clean-up - 9/14 9a @ Kraft Azalea to Dog Island
- Wood Duck Box Workshop - 9/14 9a @ MLK Jr. Park
- Sustainability Fair & EV Car Show - 9/21 9a @ West Meadow
- Get Hooked! - 10/5 7a @ MLK Pond
- 2024 Backyard Biodiversity Day - 10/19 9a @ Mead Garden
- Lake Shoreline Restoration - 10/19 9am @ Temple & Tuscany

d. Stormwater Management

- CIP Update
- Nicolet Pond, Killarney Dr. Pipe Replacement, & Lake Bell Weir Project Timeline
- Lake Front Construction Updates

Follow-up Items:

- Private Exfiltration Letter
- BMP Feasibility Study for Killarney Dr. Outfall Consolidation (when available)
- Outfall Condition Update

Ms. Monahan presented the Stormwater CIP for the entire city. Nicolet Pond is nearing completion. Before and after pictures will be provided. The Killarney Dr. pipe replacement scheduling was updated and the budget is ongoing for the project. Lake Bell Weir repair had organically acceptable injection points that create a seal and barrier to avoid seepage. There are currently no active Lake Killarney construction permits.

Ms. Minear explained the importance of the Killarney Dr. project by providing a visual of the street flooding after a heavy rain storm and the water going straight into the lake.

The private exfiltration letter is finalized. Mr. Marcotte advised the parking project at the Event Center is ongoing and will be presented at the Commission meetings. There is no defined plan on increasing the retention at MLK park at this time.

8. Board Comments

Ms. Cunningham commented on the street cleaning and vacuum trucks for storm pipes and the clogged drain at 211 Rippling Ln. Staff is preparing a request for quotes (RFQ) for street cleaning for the next budget year.

City Clerk Rene Cranis advised that Commissioner Weaver's and Commissioner Kruzada's board appointments end April 30, 2025.

a. Discussion of Public Comments Received

9. Upcoming Agenda Items

a. Upcoming Agenda Items

List of Orange County vendors
Private Lift Stations with David Zusi
Review of the Library

b. Summary of Meeting Action Items

Ms. Eby presented the summary of the meeting to include the copy of the Basin Study and the cycle for pipe cleaning for Lake Killarney.

10. Adjournment

The meeting adjourned at 12:01 p.m.

Approved by the board on
/s/ Bahiyyah Layton, Board Coordinator

Lake Killarney Board

agenda item 2.b

item type
Consent Agenda

meeting date
November 6, 2024

prepared by

approved by

subject
Approve the minutes of October 2, 2024.

motion | recommendation

background

alternatives | other considerations

fiscal impact

attachments
1. LKB-mins-2024-10-02 DRAFT EB

Lake Killarney Board
Regular Meeting Minutes

October 2, 2024 at 10:00 AM

City Hall Commission Chambers
401 S. Park Avenue

Present
Carolyn Minear, David L. Dickerson, Ellen Hencken, William Voecks, Brian King

Absent
Jason K. Ellison, Joyce D. Cunningham

Staff Present
Director of Natural Resources and Sustainability Gloria Eby, Assistant Director of Public Works Don Marcotte; Public Works Engineer Shannon Monahan, Lakes Division Manager Joseph Cordell, Administrative Assistant Victoria Tabor

1. Call to Order

David Dickerson called the meeting to order at 10:02 a.m.

2. Consent Agenda

3. Public Comments (for items not on the agenda):

4. Public Hearings (Public participation and comment on these matters must be in person.)

5. Action Items

6. Non-Action Items

a. Private Lift Station Update - David Zusi

David Zusi presented the private lift station update. Ordinances are in place and agreements are complete. Two positions are needed to fulfill the duties of inspecting and maintaining the records of the private lift stations. Questions were asked as to the requirements of the positions and the sewer collection system maintenance.

7. Staff Updates

a. Orange County Update

Not available

b. Lakes Management

The shoreline violation at Country Club was remedied. The other violation, Fairview dock will go to the Code board.

The Lake Killarney elevation data from 8/26 to 9/25 does not include the last hurricane.

Storm preparedness -the collars to the drain wells were pulled the day before the storm and put back the day after the storm, no significant lake elevation rise.

Water quality - update to include month of May 2024, spikes in TSI, phosphorus and nitrogen was noted for the north lobe.

Maintenance & Efforts - 415 gallons debris removed, 30 gallons trash removed

Ms. Eby attended the Lake Killarney Orange County Board meeting where a flyer was presented educating residents about storm drains flow pollution prevention. The Winter Park logo will be added to the flyer and sent to all Lake Killarney lakefront residents on the Winter Park side.

Prioritization list – A review was provided summarizing remaining items to complete are the exfiltration maintenance agreement, lake data dashboard, drainage basin and improvements and the hiring for the private lift station maintenance.

Staff is planning a treatment for pondweed located along the east side of Lake Drive which will help with navigation in the area. Staff will be spot treating hydrilla on the south side of the lake.

c. Past & Upcoming Events

Orange County Lake Killarney Advisory Board Meeting - 9/12 5p @ Public Safety Building (500 N Virginia Ave)

Get Hooked! - 10/5 7a @ MLK Pond

2024 Backyard Biodiversity Day - 10/19 9a @ Mead Garden

Lake Shoreline Restoration - 10/19 9a @ Temple & Tuscany

Household Hazardous Waste Drop-off - 11/9 9a @ Cady Way Pool

d. Stormwater Management

CIP was presented by Ms. Monahan.

Killarney pipe replacement is moving forward. A general resource permit from the St. John’s River Water Management District required additional information.

Pictures of the completed Nicolet pond were displayed.

Two lake front construction projects were noted, a shoreline alteration at 251 Rippling Ln. and a boat dock at 2150 Lake Dr.

Ms. Minear questioned Phase 1 and Phase 2 projects near her home. Ms. Monahan explained that there are approximately 7 outfalls that will be combined into 2.

Mr. Marcotte advised the budget was approved.

8. Board Comments

Mr. Voecks asked if backflow preventers are still required if irrigating from the lake. Mr. Voecks was referred to the Water & Wastewater department.

a. Discussion of Public Comments Received

9. Upcoming Agenda Items

a. Upcoming Agenda Items

A discussion of the basin study results being presented at the Commissioner's Work Session led to reminders of no public comments during work sessions.

The September minutes will be added to the next agenda.

b. Summary of Meeting Action Items

Staff will provide the copy of the agreement from David Zusi to the Board and a synopsis of the Basin Study Work Session.

10. Adjournment

The meeting adjourned at 10:46 p.m.

Approved by the board on
/s/ Bahiyyah Layton, Board Coordinator

Lake Killarney Board

agenda item 6.a

item type
Non-Action Items

meeting date
November 6, 2024

prepared by
Victoria Tabor, Administrative Coordinator II

approved by
Victoria Tabor, Administrative Coordinator II

subject
Stormwater Western Basin Study

motion | recommendation

background

alternatives | other considerations

fiscal impact

attachments
1. Western Basin Study Presentation

Stormwater Basin Studies
Commission Work Session

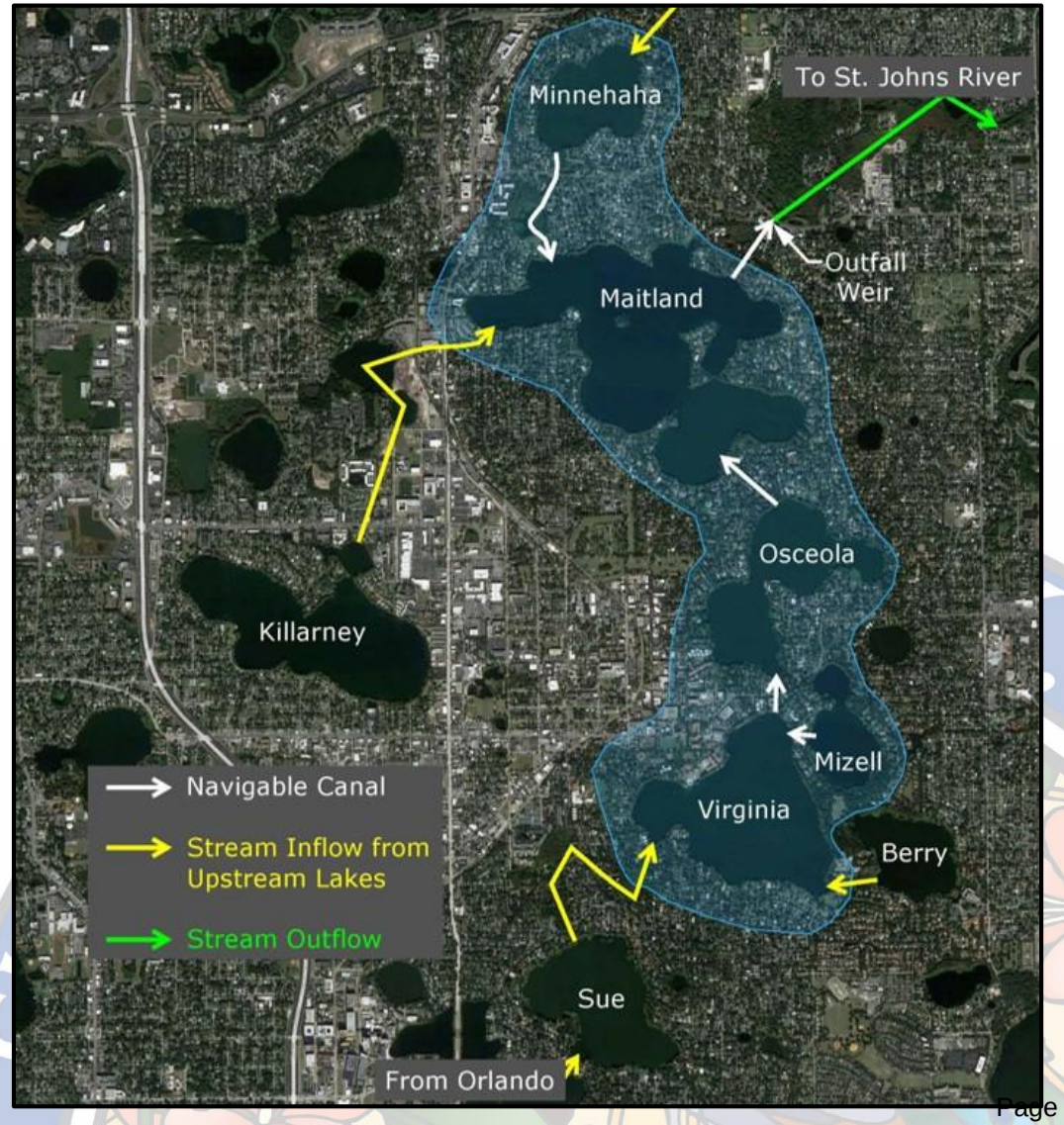
Prepared by:

Public Works and Transportation
Stormwater Management Division

Team Introductions

City Team

- Charles Ramdatt, PE
  Director of Public Works & Transportation
- Don Marcotte, PE
  Assistant Director, City Engineer
- Shannon Monahan, EI
  Project Manager
- Gloria Eby, MS
  Director of Natural Resources and Sustainability

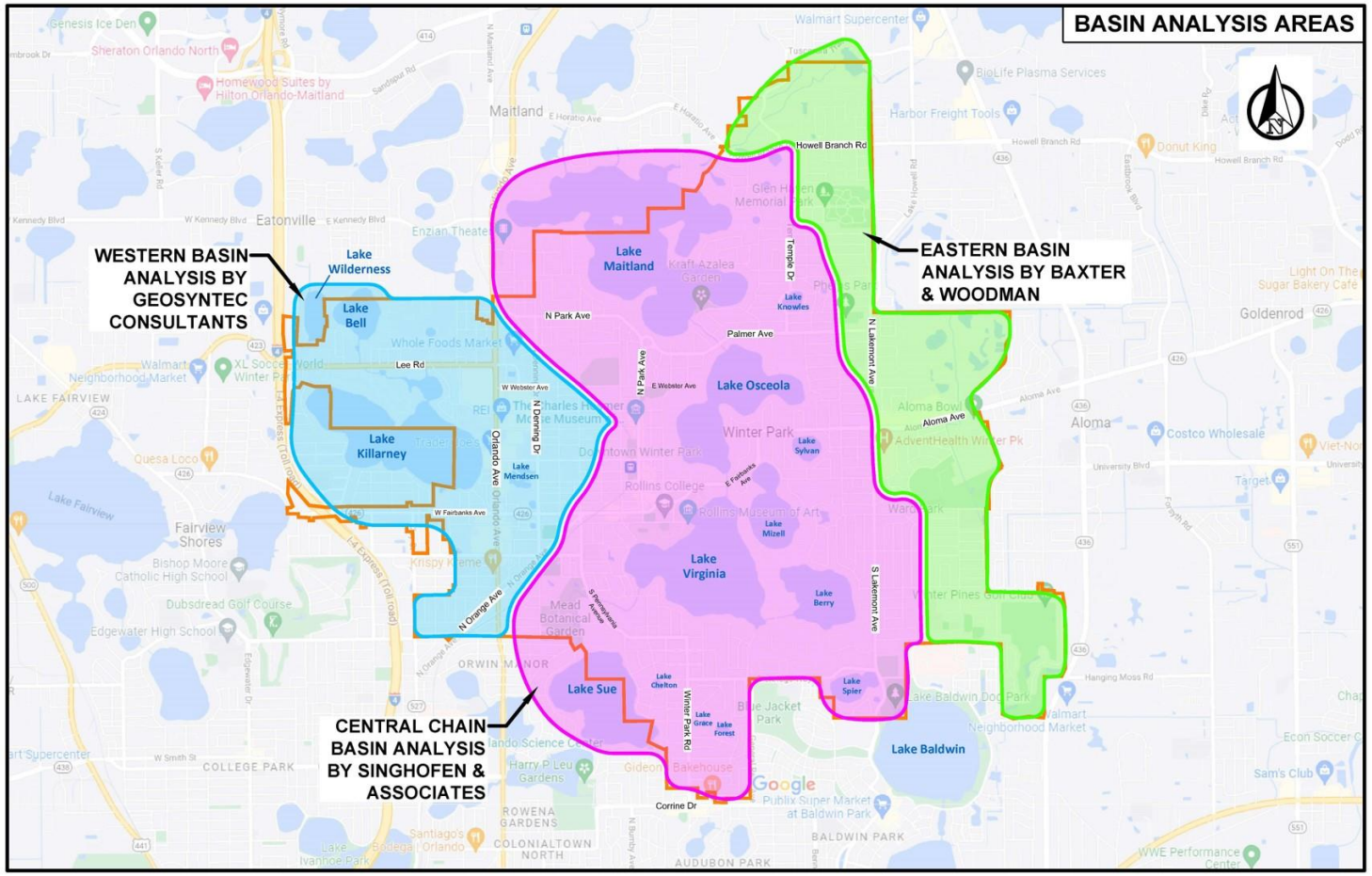


Team Introductions

Western Basin

Geosyntec Consultants, Inc.

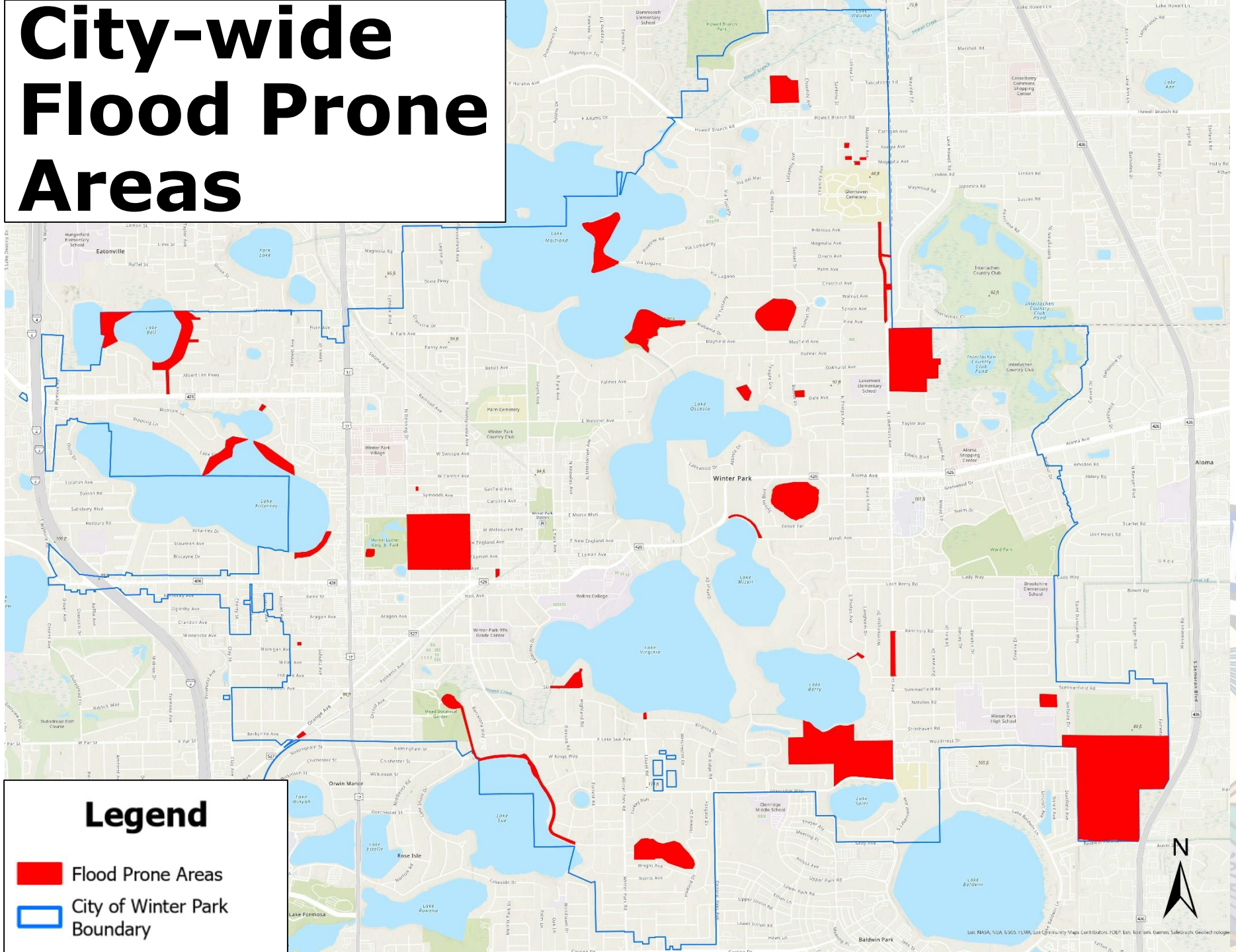
- Tom Amstadt, PE, CFM
  Principal, Project Director
- Gloria Teague, PE, CFM
  Senior Engineer, Project Manager



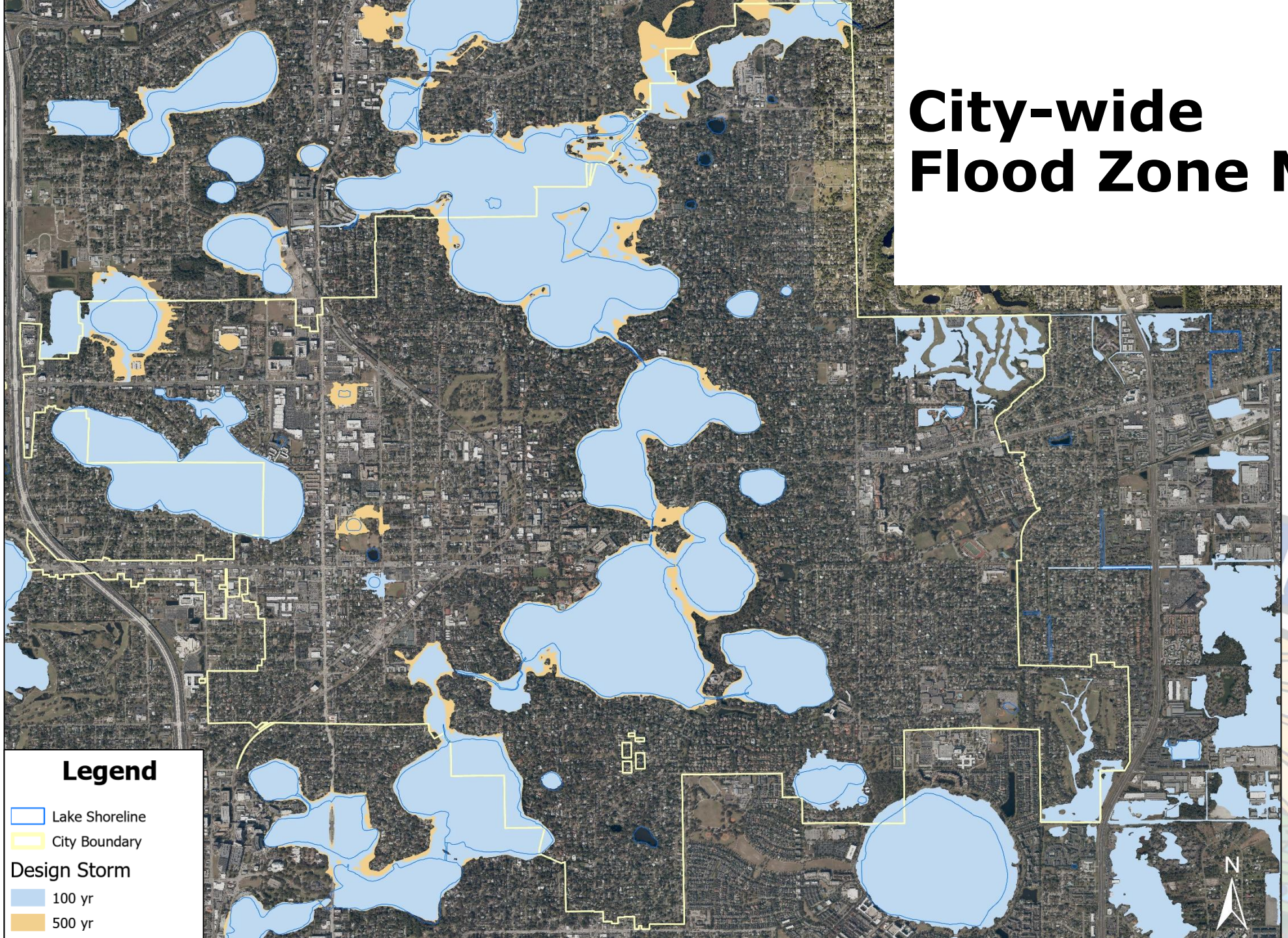
Study Motivation

- Frequent, intense storm events
- Major storm events such as Hurricane Ian
- Situational awareness for managers
- Enhanced flood management guide activities
- Improved base information for new development
- Opportunities to collaborate with neighboring municipalities

City-wide Flood Prone Areas



City-wide Flood Zone Map



Modeling Overview

- Design Storms
  - 2 yr, 24 hr
  - 10 yr, 6 hr
  - 10 yr, 24 hr
  - 25 yr, 6 hr
  - 25 yr, 24 hr
  - 100 yr, 24 hr
  - 500 yr, 24 hr (Hurricane Ian)
    - Used for model calibration

Mitigation Plan

Project Categories

- Upgrade and repair existing collection and conveyance facilities
- New collection and conveyance systems
- Upgraded and new water quality treatment and storage facilities
- Regional facilities for multi-jurisdictional benefits
- Flood zone validation
- Living stormwater model

Study Generated Alternatives

Western Basin

- Lake Mendsen:
  - Connection to Lake Rose
  - Pump station and lake expansion
- Canton Ave: Improved conveyance
- Lake Bell:
  - Connection to Park Lake
  - Reduced inflows from FDOT pond
- Lake Killarney: Improved conveyance to Lake Gem

- Combination of Lake Bell connection to Park Lake and improved conveyance from Lake Killarney to Lake Gem

Study Generated Alternatives

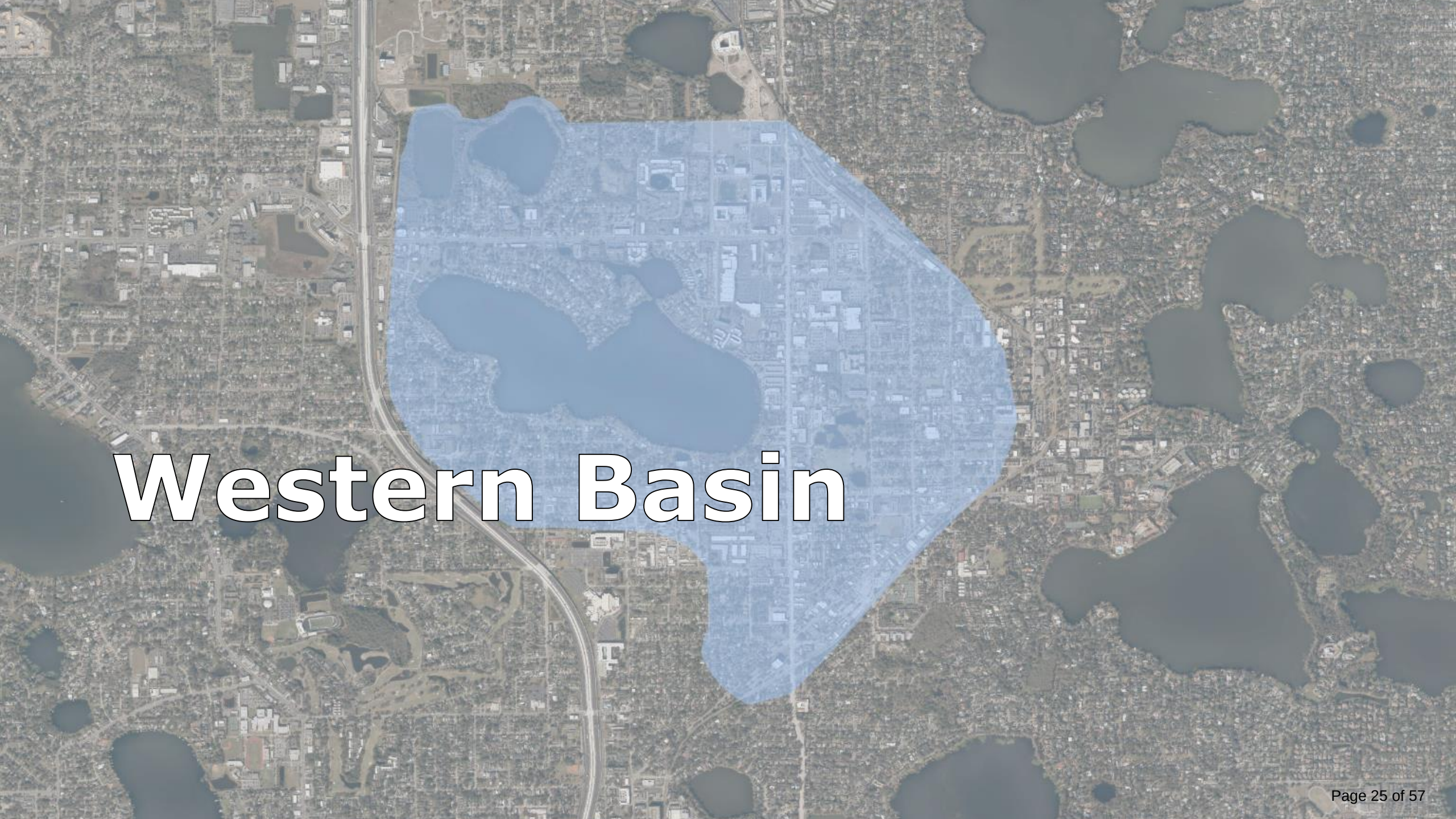
Central Basin

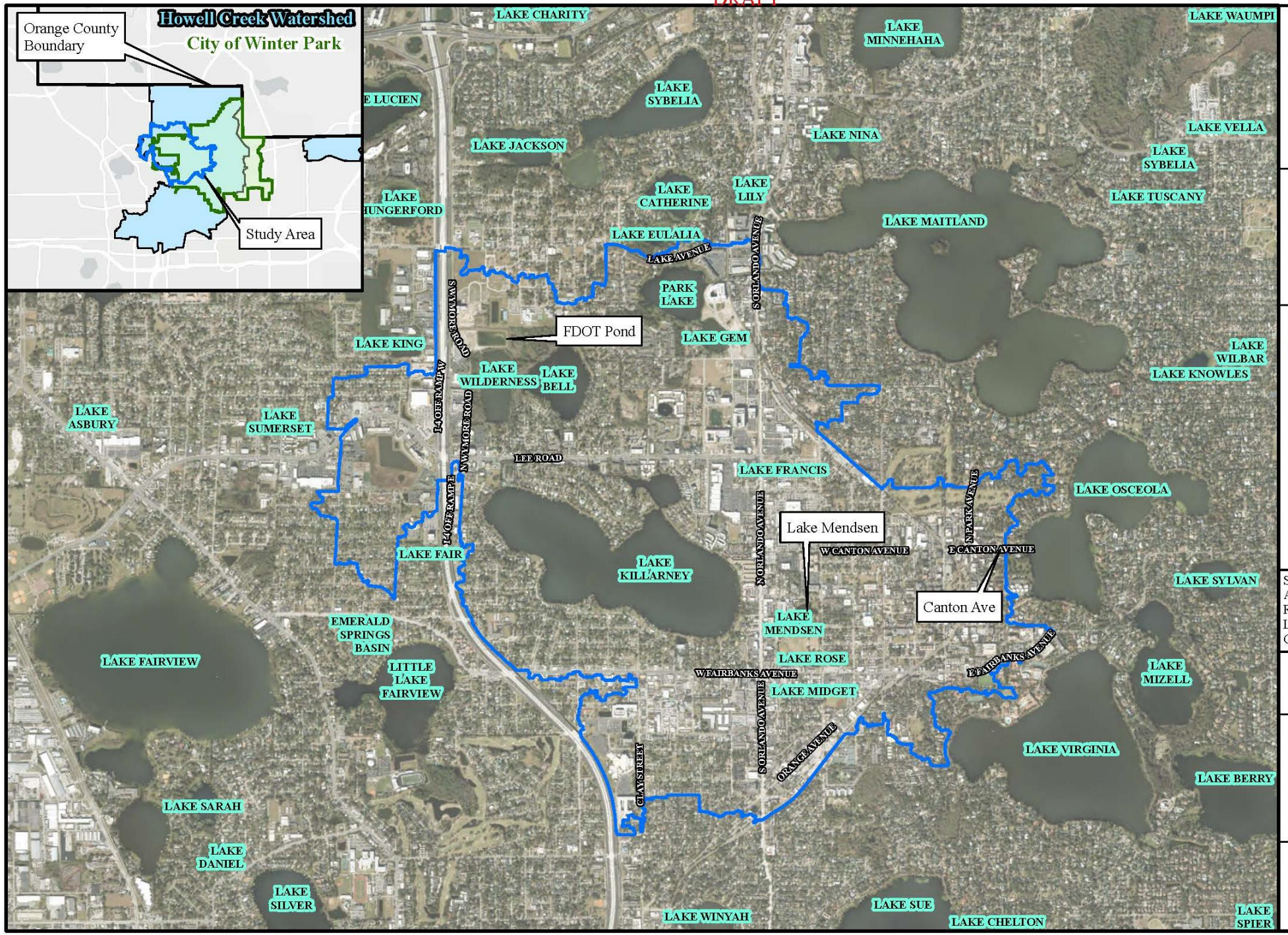
- Lake Interconnects:
  - Lake Knowles to Lake Maitland
  - Lake Sylvan to Lake Mizell
  - Lake Chelton to Lake Sue
  - Lake Grace to Lake Forest, and to Lake Sue
- Emergency Pumping Alternatives
- Chain of Lakes Control Structure

Eastern Basin

Winter Park Pines Sub basin

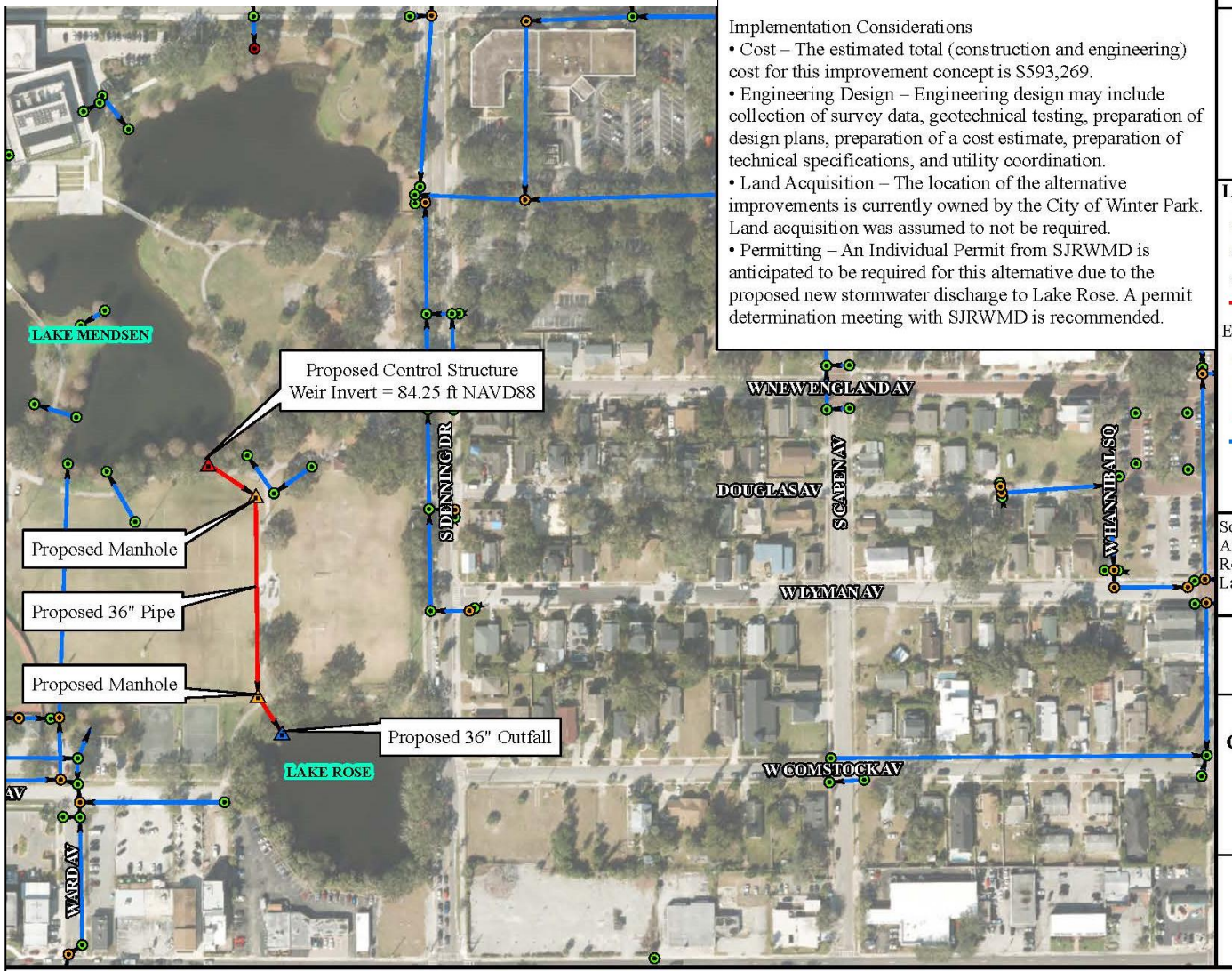
- Golfside Dr culvert replacement
- Lake Corrine Outfall Canal Regrading


Western Basin


Howell Creek Watershed
City of Winter Park
Orange County Boundary
Study Area
LAKE CHARITY
LAKE MINNEHAHA
LAKE WAUMPI
LAKE SYBELIA
LAKE JACKSON
LAKE NINA
LAKE VELLA
LAKE SYBELIA
LAKE HUNGERFORD
LAKE CATHERINE
LAKE LILY
LAKE TUSCANY
LAKE MAITLAND
LAKE EULALIA
LAKE AVENUE
SORLANDO AVENUE
PARK LAKE
FDOT Pond
LAKE GEM
LAKE KING
GOODBRED AVENUE
LAKE WILDERNESS
LAKE BELL
LAKE WILBAR
LAKE KNOWLES
LAKE ASBURY
LAKE SUMERSET
I-4 OFF RAMP W
NEWMORE ROAD
LEE ROAD
LAKE FRANCIS
LAKE OSCEOLA
I-4 OFF RAMP E
NORLANDO AVENUE
Lake Mendsen
N PARK AVENUE
W CANTON AVENUE
E CANTON AVENUE
LAKE FAIR
LAKE KILLARNEY
Canton Ave
LAKE SYLVAN
LAKE MENDSEN
EMERALD SPRINGS BASIN
LAKE FAIRVIEW
LITTLE LAKE FAIRVIEW
LAKE ROSE
W FAIRBANKS AVENUE
E FAIRBANKS AVENUE
LAKE MIZELL
LAKE MIDGET
SORLANDO AVENUE
ORANGE AVENUE
LAKE VIRGINIA
CLAY STREET
LAKE BERRY
LAKE SARAH
LAKE DANIEL
LAKE SILVER
LAKE WINYAH
LAKE SUE
LAKE CHELTON
LAKE SPIER
N
0 1,000 2,000
Feet
Legend
Study Area
Sources:
Aerial: ESRI, 2023
Roads: Orange County, 2020
Lakes: Orange County, 2020
City Boundary: Orange County, 2023
Exhibit
2
Site Map
Winter Park CRA Study Update and Lake Killarney Expansion Report
Geosyntec consultants

Lake Mendsen: Connection to Lake Rose

- New hydraulic connection between Lake Mendsen and Lake Rose.
- Includes new control structure
- Results in additional storage capacity and lowered flood stage of Lake Mendsen
- Estimated cost: $593,269



Problem
- Peak stages at Lake Mendsen result in potential roadway flooding along Denning Drive starting at the 2-year, 24-hour design storm event.

Benefit
- Decrease in peak stage mitigating roadway flooding on Denning Drive during storm events.

Implementation Considerations
- Cost – The estimated total (construction and engineering) cost for this improvement concept is $593,269.
- Engineering Design – Engineering design may include collection of survey data, geotechnical testing, preparation of design plans, preparation of a cost estimate, preparation of technical specifications, and utility coordination.
- Land Acquisition – The location of the alternative improvements is currently owned by the City of Winter Park. Land acquisition was assumed to not be required.
- Permitting – An Individual Permit from SJRWMD is anticipated to be required for this alternative due to the proposed new stormwater discharge to Lake Rose. A permit determination meeting with SJRWMD is recommended.

CITY OF WINTER PARK, FLORIDA
ESTABLISHED 1882
CITY OF CULTURE AND HERITAGE

N

0 100 200 Feet

Legend
- Proposed Manhole
- Proposed Structure
- Proposed Control Structure
- Proposed Pipe

Existing Stormwater Structures
- Inlet/Outlet
- Manhole
- Control Structure
- Existing Pipe

Sources:
Aerial: ESRI, 2023
Roads: Orange County, 2020
Lakes: Orange County, 2020

Exhibit 15

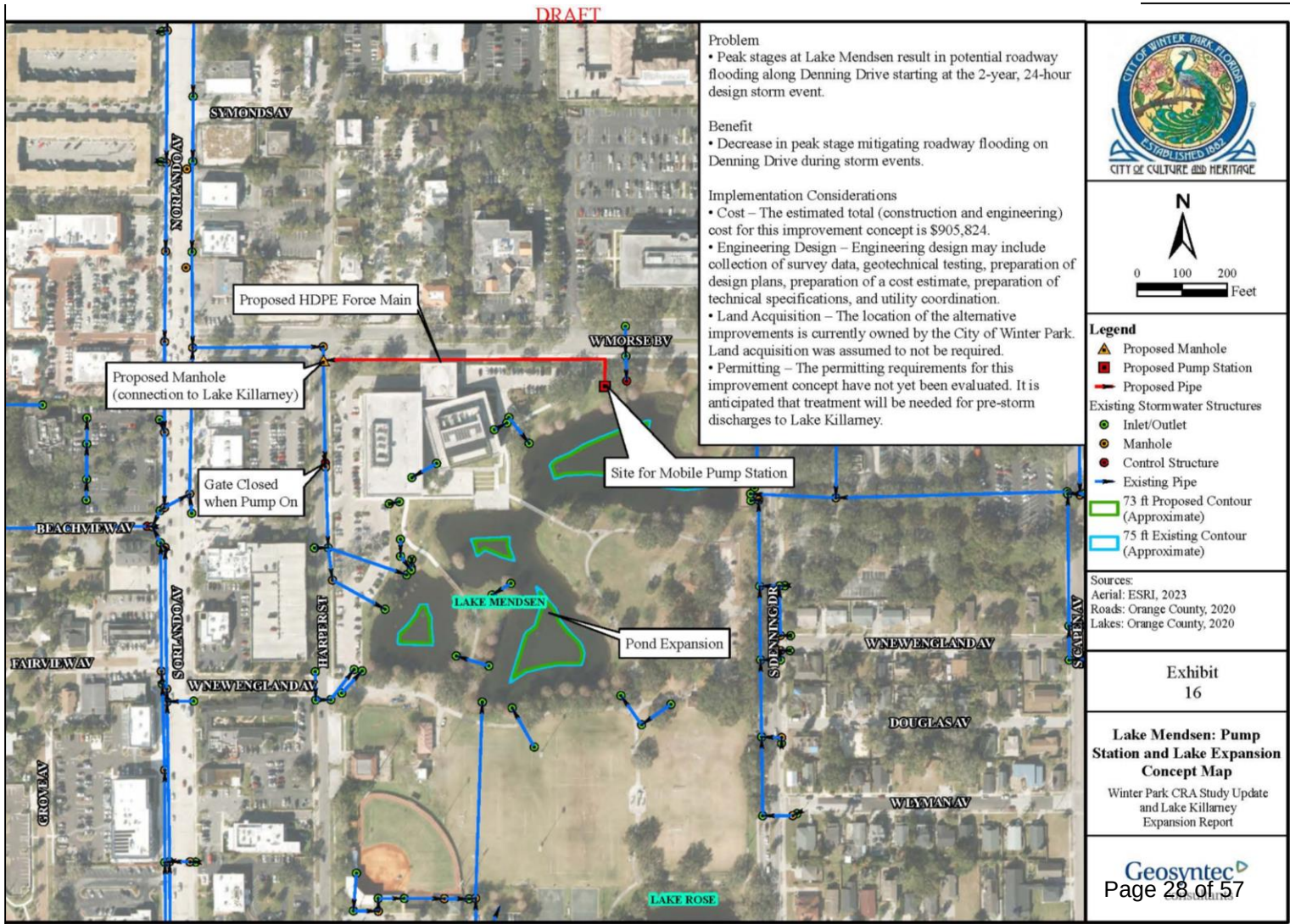
Lake Mendsen: Connection to Lake Rose Concept Map

Winter Park CRA Study Update and Lake Killarney Expansion Report

Geosyntec

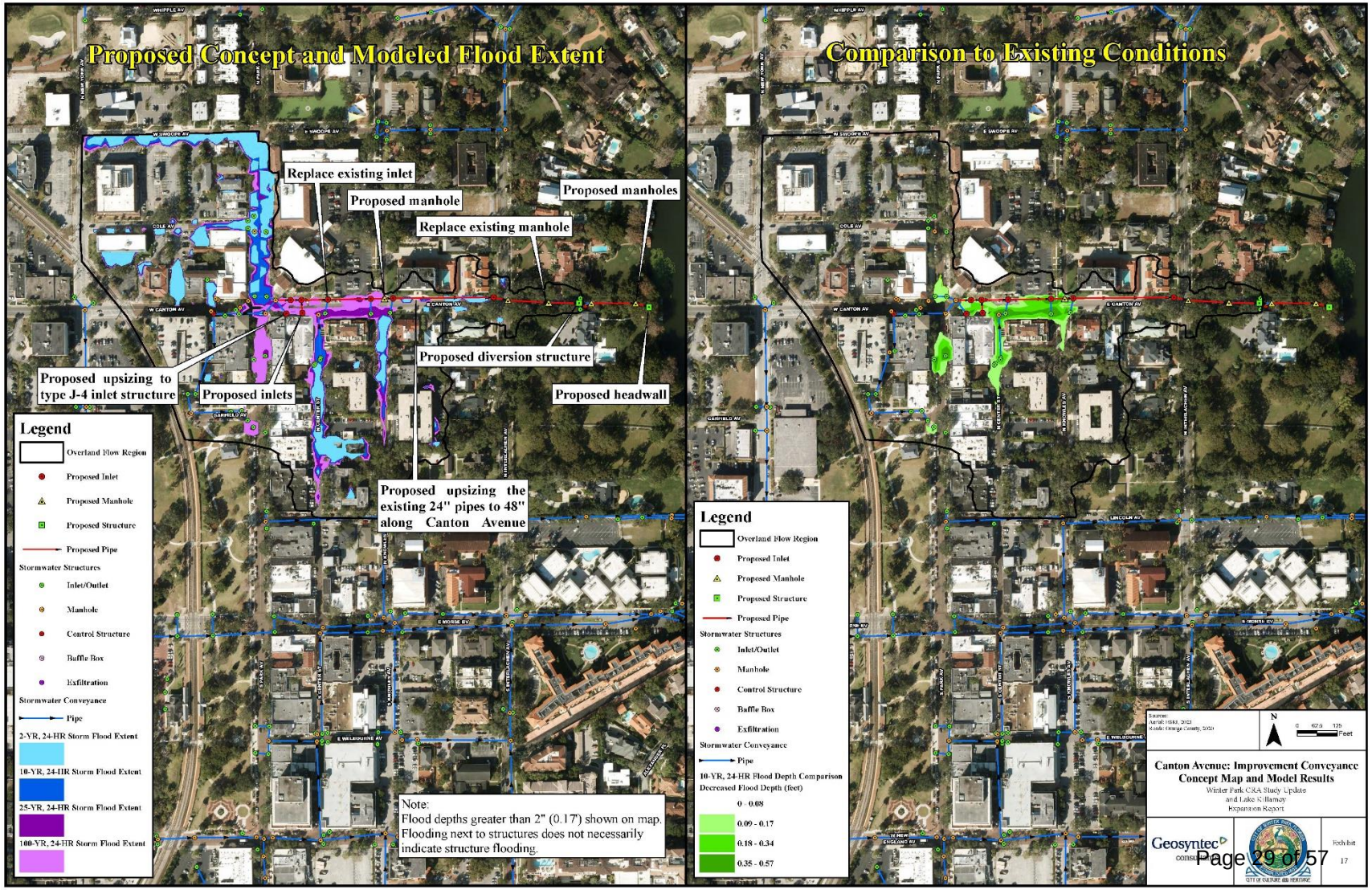
Lake Mendsen: Pump station and lake expansion

- Increase depth of Lake Mendsen by 2 feet
  - Provides 1.8 ac-ft of additional storage
- New infrastructure to allow for additional pre-storm drawdown using the City's mobile pump
- Estimated cost: $905,824



Canton Ave: Improved conveyance

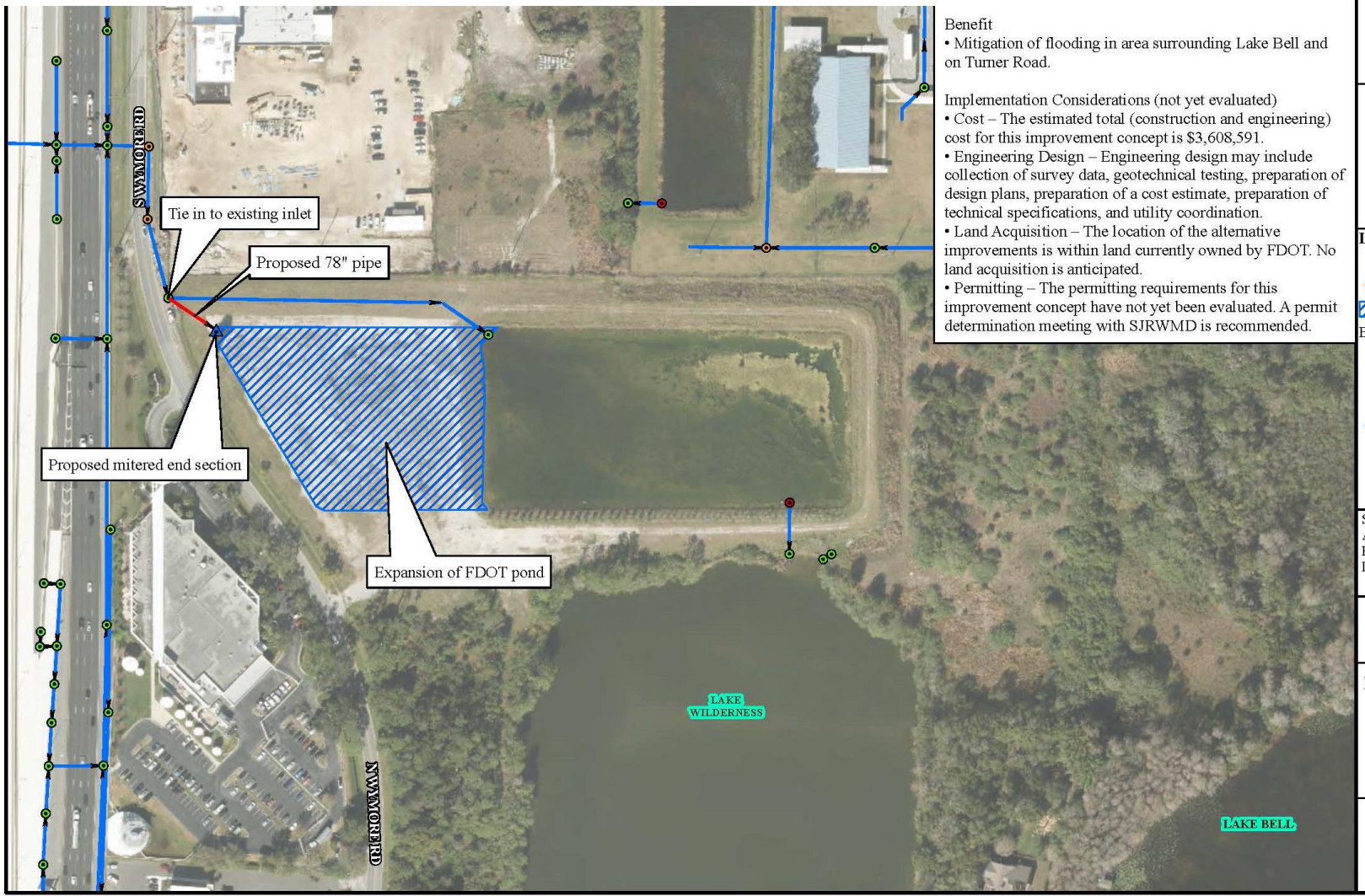
- Upsize main trunk line serving Canton Ave
- Additional and upsized inlets
- Results in increased capture and conveyance capabilities, reducing roadway flooding
- Estimated cost: $2,936,419



Lake Bell: Reduced inflows from FDOT pond

- Expansion of existing FDOT-owned pond north of Lake Wilderness
- Results in additional 23 ac-ft of storage
- Cost estimate: $3,608,591
  - Does not include land cost

*Multi-jurisdictional Project



Benefit
• Mitigation of flooding in area surrounding Lake Bell and on Turner Road.

Implementation Considerations (not yet evaluated)
• Cost – The estimated total (construction and engineering) cost for this improvement concept is $3,608,591.
• Engineering Design – Engineering design may include collection of survey data, geotechnical testing, preparation of design plans, preparation of a cost estimate, preparation of technical specifications, and utility coordination.
• Land Acquisition – The location of the alternative improvements is within land currently owned by FDOT. No land acquisition is anticipated.
• Permitting – The permitting requirements for this improvement concept have not yet been evaluated. A permit determination meeting with SJRWMD is recommended.

CITY OF WINTER PARK, FLORIDA ESTABLISHED 1862
CITY OF CULTURE AND HERITAGE

N

0 80 160 Feet

Legend
- Proposed Structure
- Proposed Pipe
- Proposed Pond

Existing Stormwater Structures
- Inlet/Outlet
- Manhole
- Control Structure
- Existing Pipe

Sources:
Aerial: ESRI, 2023
Roads: Orange County, 2020
Lakes: Orange County, 2020

Exhibit 19

Lake Bell: Reduced Inflows from FDOT Pond Concept Map

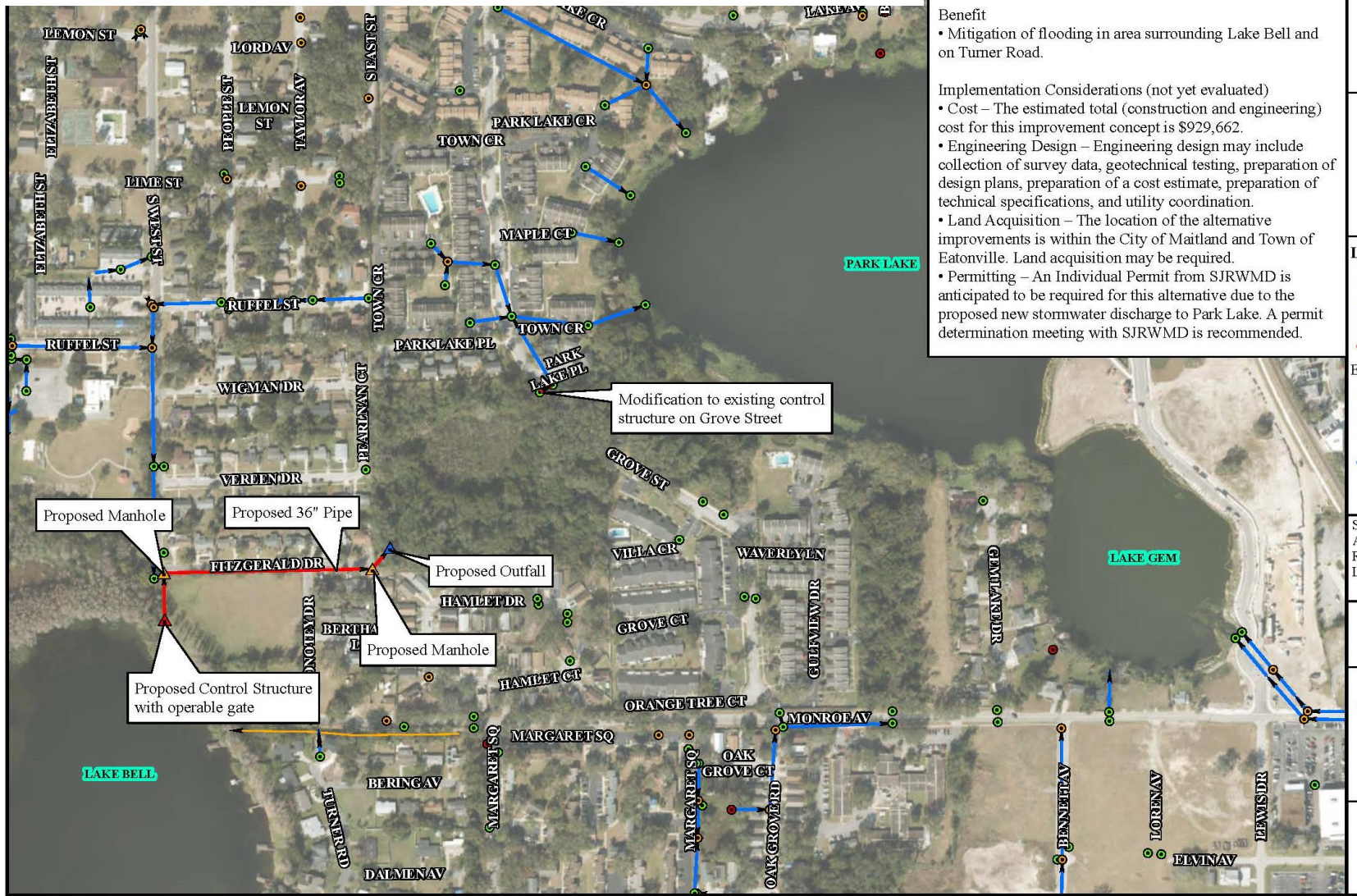
Winter Park CRA Study Update and Lake Killarney Expansion Report

Geosyntec consultants

Lake Bell: Connection to Park Lake

- New hydraulic connection between Lake Bell and Park Lake
- Includes new control structure with an operable gate
- Estimated cost: $929,662

*Multi-jurisdictional Project



Problem
- Reported flooding in area surrounding Lake Bell and on Turner Road.

Benefit
- Mitigation of flooding in area surrounding Lake Bell and on Turner Road.

Implementation Considerations (not yet evaluated)
- Cost – The estimated total (construction and engineering) cost for this improvement concept is $929,662.
- Engineering Design – Engineering design may include collection of survey data, geotechnical testing, preparation of design plans, preparation of a cost estimate, preparation of technical specifications, and utility coordination.
- Land Acquisition – The location of the alternative improvements is within the City of Maitland and Town of Eatonville. Land acquisition may be required.
- Permitting – An Individual Permit from SJRWMD is anticipated to be required for this alternative due to the proposed new stormwater discharge to Park Lake. A permit determination meeting with SJRWMD is recommended.

CITY OF WINTER PARK, FLORIDA
ESTABLISHED 1852
CITY OF CULTURE AND HERITAGE

N

0 150 300 Feet

Legend
- Proposed Manhole
- Proposed Structure
- Proposed Control Structure
- Proposed Pipe

Existing Stormwater Structures
- Inlet/Outlet
- Manhole
- Control Structure
- Existing Pipe

Sources:
Aerial: ESRI, 2023
Roads: Orange County, 2020
Lakes: Orange County, 2020

Exhibit 18

Lake Bell: Connection to Park Lake Concept Map

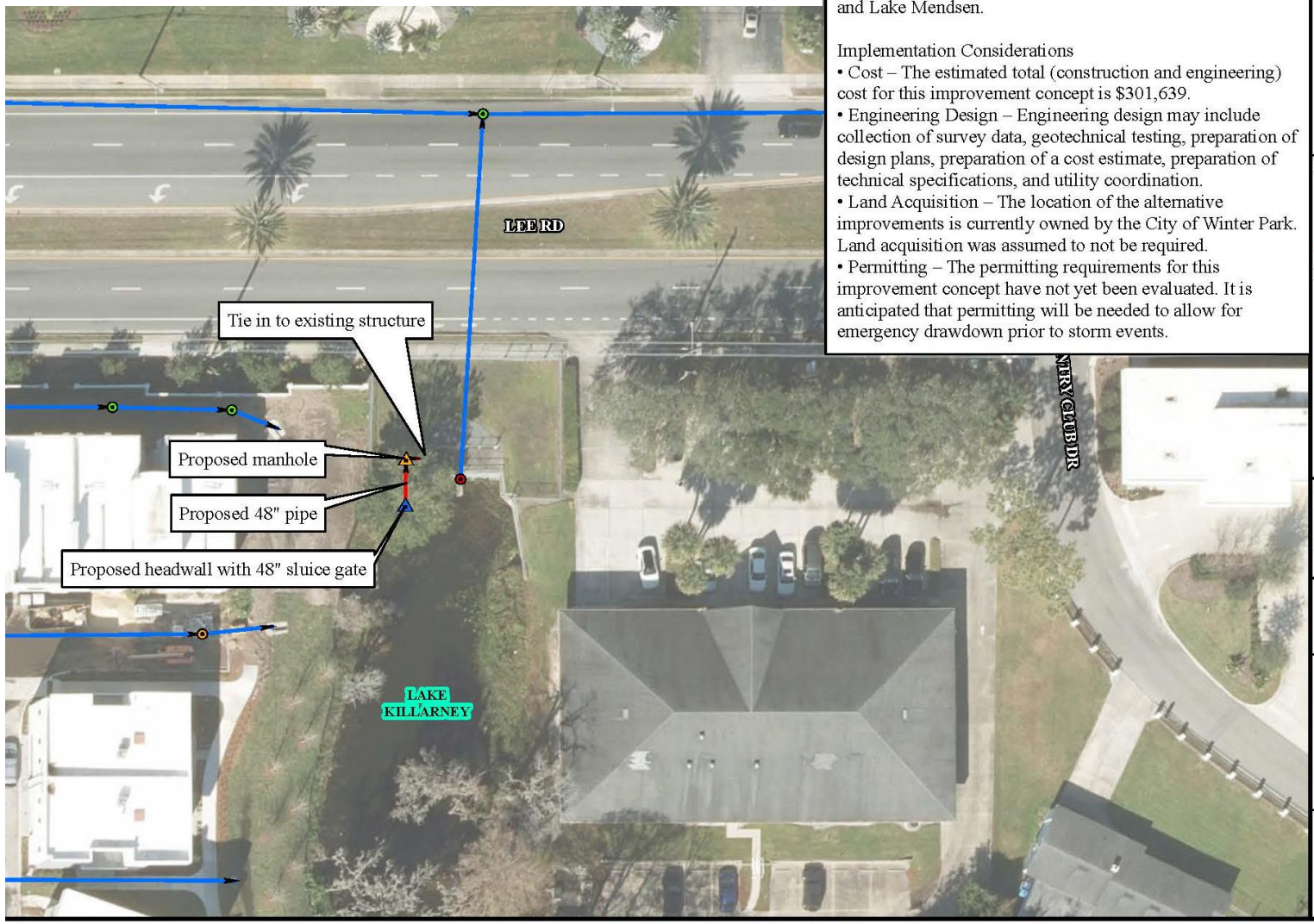
Winter Park CRA Study Update and Lake Killarney Expansion Report

Geosyntec consultants

Lake Killarney: Improved conveyance to Lake Gem

- New 48-inch bypass to the existing outfall structure on Lake Killarney
- Includes operable gate
- Intended for increased rate of pre-storm drawdown
- Estimated cost: $301,639

*Multi-jurisdictional Project



Problem
• Reported flooding in multiple areas surrounding Lake Killarney. Drawdown via drainwells requires 8 days which is not effective for pre-storm drawdown.

Benefit
• Mitigation of flooding in area surrounding Lake Killarney. Lowered lake level/increased storage availability prior to storm events to prepare for incoming flows from Lake Bell and Lake Mendsen.

Implementation Considerations
• Cost – The estimated total (construction and engineering) cost for this improvement concept is $301,639.
• Engineering Design – Engineering design may include collection of survey data, geotechnical testing, preparation of design plans, preparation of a cost estimate, preparation of technical specifications, and utility coordination.
• Land Acquisition – The location of the alternative improvements is currently owned by the City of Winter Park. Land acquisition was assumed to not be required.
• Permitting – The permitting requirements for this improvement concept have not yet been evaluated. It is anticipated that permitting will be needed to allow for emergency drawdown prior to storm events.

CITY OF WINTER PARK, FLORIDA
ESTABLISHED 1862
CITY OF CULTURE AND HERITAGE

N

0 20 40 Feet

Legend
- Proposed Manhole
- Proposed Structure
- Proposed Pipe

Existing Stormwater Structures
- Inlet/Outlet
- Manhole
- Control Structure
- Existing Pipe

Sources:
Aerial: ESRI, 2023
Roads: Orange County, 2020
Lakes: Orange County, 2020

Exhibit
20

Lake Killarney: Improved Conveyance to Lake Gem Concept Map

Winter Park CRA Study Update and Lake Killarney Expansion Report

Geosyntec consultants

Combined Improvement
Lake Bell & Lake Killarney

- Includes the following previously mentioned alternatives
  - Lake Bell connection to Park Lake
  - Improved conveyance from Lake Killarney to Lake Gem
- Intended for larger, less frequent storm events
- Estimated cost: $1,231,301

*Multi-jurisdictional Project

Estimated Project Cost Overview

Western Basin	
Project	Cost
Killarney Drive - Drainage & Street Improvements - Phase 1	$ 280,000
Lake Mendsen: Connection to Lake Rose	$ 593,269
Lake Bell: Connection to Park Lake	$ 929,662
Lake Mendsen: Pump Station and Lake Expansion	$ 4,604,678
Canton Avenue: Improved Conveyance	$ 2,936,419
Lake Bell: Reduced Inflows from FDOT Pond	$ 3,608,591
Lake Killarney: Improved Conveyance to Lake Gem	$ 301,639
Lake Bell Connection to Park Lake and Killarney Bypass	$ 1,231,301
Central Basin	
Project	Cost
Palmer Ave at Old England - Drainage Improvement	$ 500,000
Lake Grace: Temporary Pumping Operation	$ 150,000
Lake Knowles Connection to Lake Maitland	$ 2,250,243
Lake Sylvan Connection to Lake Mizell	$ 1,114,714

Central Basin	
Project	Cost
Lake Chelton Connection to Lake Sue	$ 597,359
Lake Grace Connection to Lake Sue	$ 1,983,055
Lake Grace Connection to Lake Forest and Sue	$ 2,391,260
Lake Knowles Emergency Pumping	$ 272,000
Lake Grace Emergency Pumping	$ 180,000
Stirling Bridge Replacement	$ 1,400,000
Lake Forest Emergency Pumping	$ 180,000
Eastern Basin	
Project	Cost
Mayflower - Drainage Ditches Dredging	$ 170,000
N Lakemont Seminole County Ditch Piping- Phase 1	$ 1,000,000
Golfside Dr Culvert Replacement	$ 583,579
Lake Corrine Outfall Canal Regrading	$ 5,848,937
Winter Park Outfall Canal Regrading	$ 3,800,000
City Wide Projects	
Project	Cost
Storm Sewer Conveyance Improvements	$ 5,000,000

TOTAL

$ 27,734,000 - $ 41,906,000

Upcoming FY 25 CIP

Basin Color Guide

Western	Central	Eastern

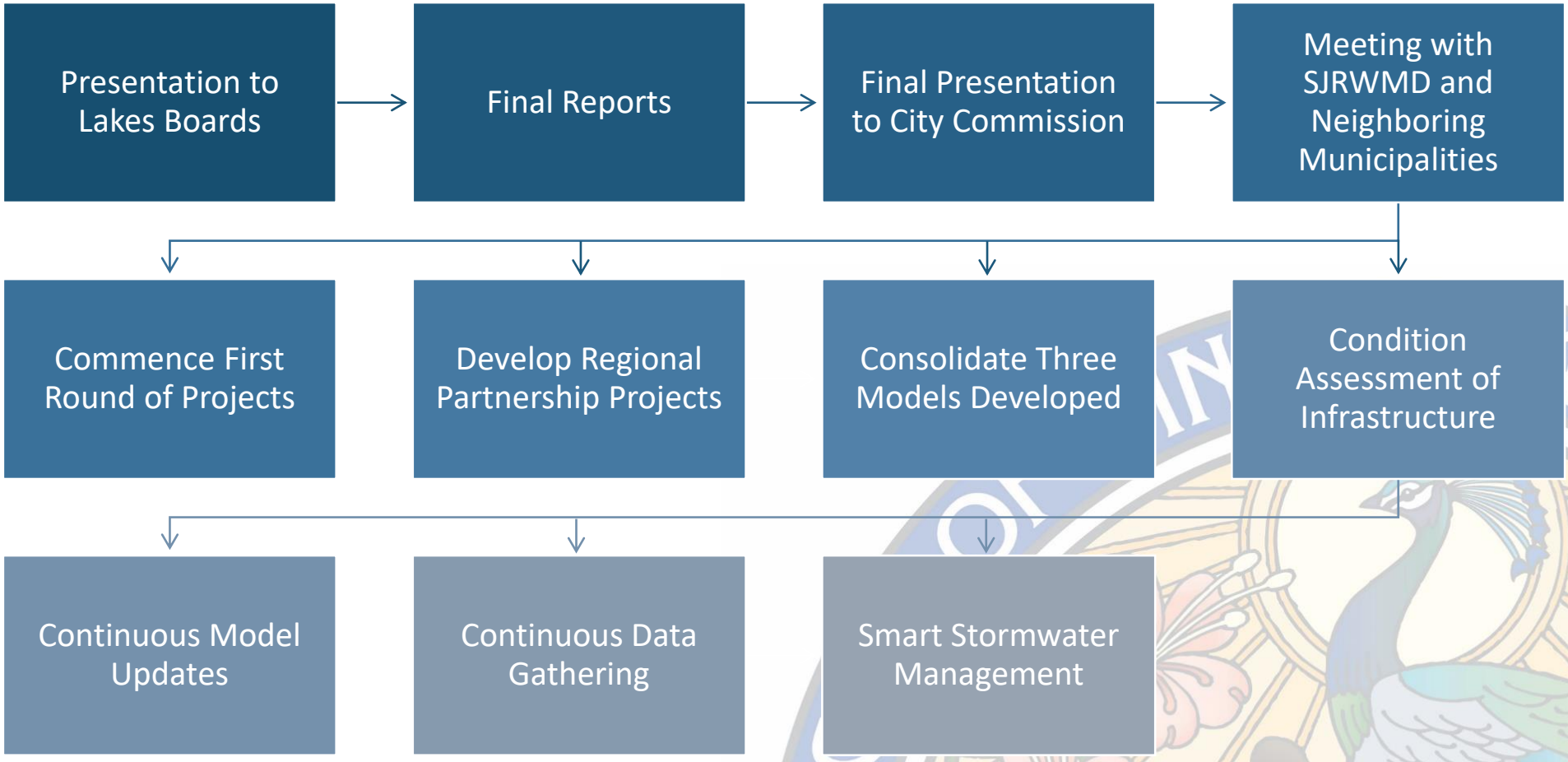
Continued from FY24			Proposed FY25			Study Generated Projects FY25		
Project	**Description**	**Existing Funds**	**Project**	**Description**	**Cost**	**Project**	**Description**	**Cost**
CDS Unit on Fawsett Road*	Hydrodynamic separator to reduce nutrient load to Lake Sue.	$ 200,000.00	Killarney Drive - Drainage & Street Improvements - Phase 1*	New, upsized outfall with nutrient removal to replace two existing, failing outfalls. Also includes new inlets for improved capture.	$ 280,000.00	Lake Mendsen: Connection to Lake Rose	Installation of hydraulic connection from Lake Mendsen to Lake Rose for Lake Rose to provide supplemental storage during storm events. Decreases peak stage of 2-yr 24-hr storm event by 0.8 ft, below Denning Dr.	$ 593,269.00
Stirling Bridge Replacement*	Design for the replacement of the existing Stirling Bridge.	$ 224,575.00	Palmer Ave at Old England - Drainage Improvements - Phase 1*	New, upsized outfall with nutrient removal to replace existing, undersized outfall. Also includes inlet replacements with additional capacity at intersection of Palmer and Old England.	$ 250,000.00	Golfside Dr Culvert Replacement	Increase to the size of the pipe that connects the drainage ditches on either side of Golfside Dr. Reduces upstream peak stage by 0.5 ft for 100-yr 24-hr event.	$ 583,579.00
N Lakemont Seminole County Ditch Piping - Phase 1*	Phase one of a partner project with Seminole County to construct an additional outfall to relieve the ditch that serves the Arbor Park Neighborhood.	$ 533,806.00	Mayflower - Drainage Ditches Dredging	Debris and sediment removal to restore flow capacity in ditch system that serves the Mayflower property and Pineview Cir neighborhood.	$ 170,000.00	Lake Grace: Temporary Pumping Operation	3,000 gpm pump and quick connection to discharge to Lake Sue. Decreases Peak Stage of Lake Grace by 14-27 inches for 500-yr 24-hr event, depending on time of deployment.	$ 150,000.00
				TOTAL	$ 700,000.00	Lake Bell: Connection to Park Lake	Installation of control structure with operable gate on Lake Bell and modification to control structure on Grove Street to allow for pre-storm drawdown via emergency releases to Park Lake. Meets level-of-service for 100-yr 24-hr event.	$ 929,662.00
						Storm Sewer Conveyance Improvements*	City-wide investigation and repair of storm sewer conveyance system city using stormwater inspection camera.	$ 700,000.00
							Central	$ 400,000.00
							Western	$ 150,000.00
							Eastern	$ 150,000.00
							TOTAL	$ 2,956,510.00

* Considered prior to Basin Studies

Project Sequence: Completed to Date

- First Draft of Improvement Alternatives
- St Johns River Water Management District (SJRWMD) Regional Discussions
- Review of First Draft Improvements with SJRWMD
- Updates to Draft Improvements
- City Commission Work Session

Anticipated Project Sequence



Questions/Comments?

Lake Killarney Board

agenda item 7.a

item type
Staff Updates

meeting date
November 6, 2024

prepared by
Victoria Tabor, Administrative Coordinator II

approved by
Victoria Tabor, Administrative Coordinator II

subject
Orange County Update

motion | recommendation

background

alternatives | other considerations

fiscal impact

attachments
None

Lake Killarney Board

agenda item 7.b

item type
Staff Updates

meeting date
November 6, 2024

prepared by
Victoria Tabor, Administrative Coordinator II

approved by
Victoria Tabor, Administrative Coordinator II

subject
Lakes Management

- Lake Elevations
- Storm Preparedness
- Water Quality
- Killarney Canal
- Hydrilla & Pondweed Treatment
- Maintenance & Efforts

motion | recommendation

background

alternatives | other considerations

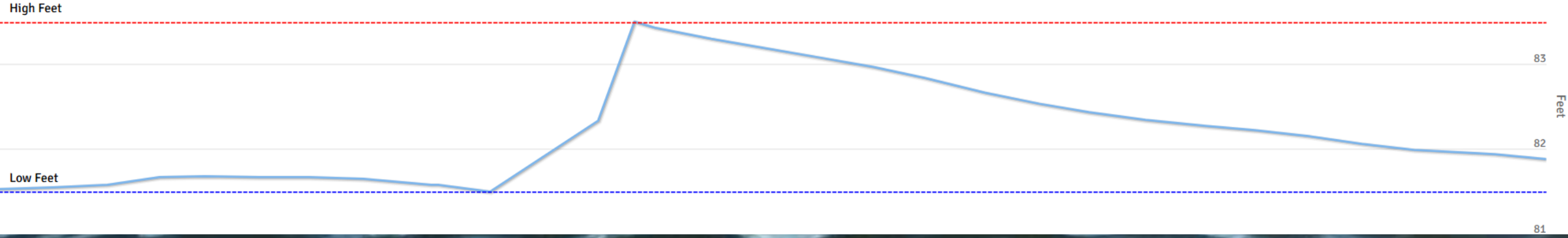
fiscal impact

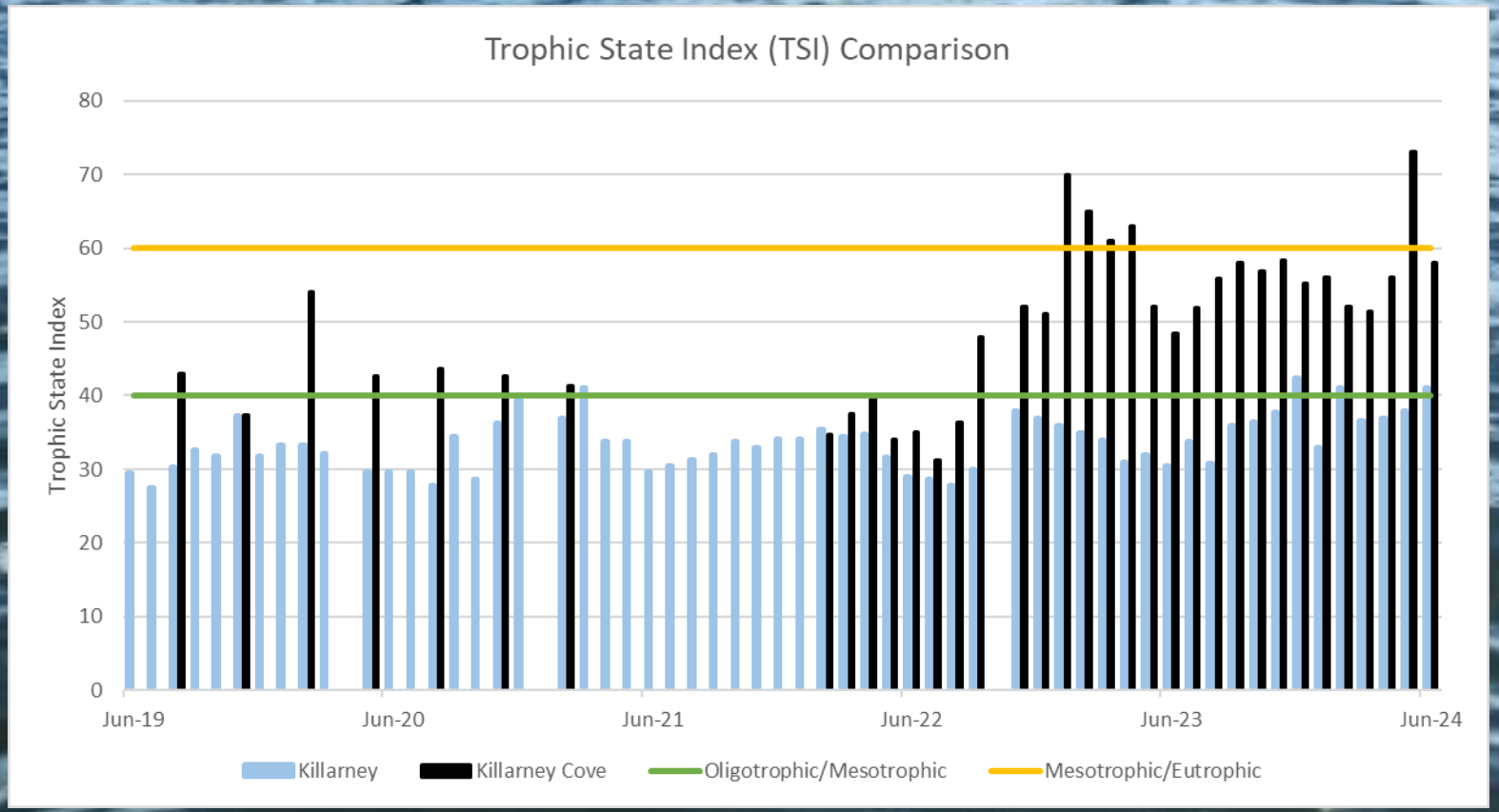
attachments
1. Lake Update 11.2024

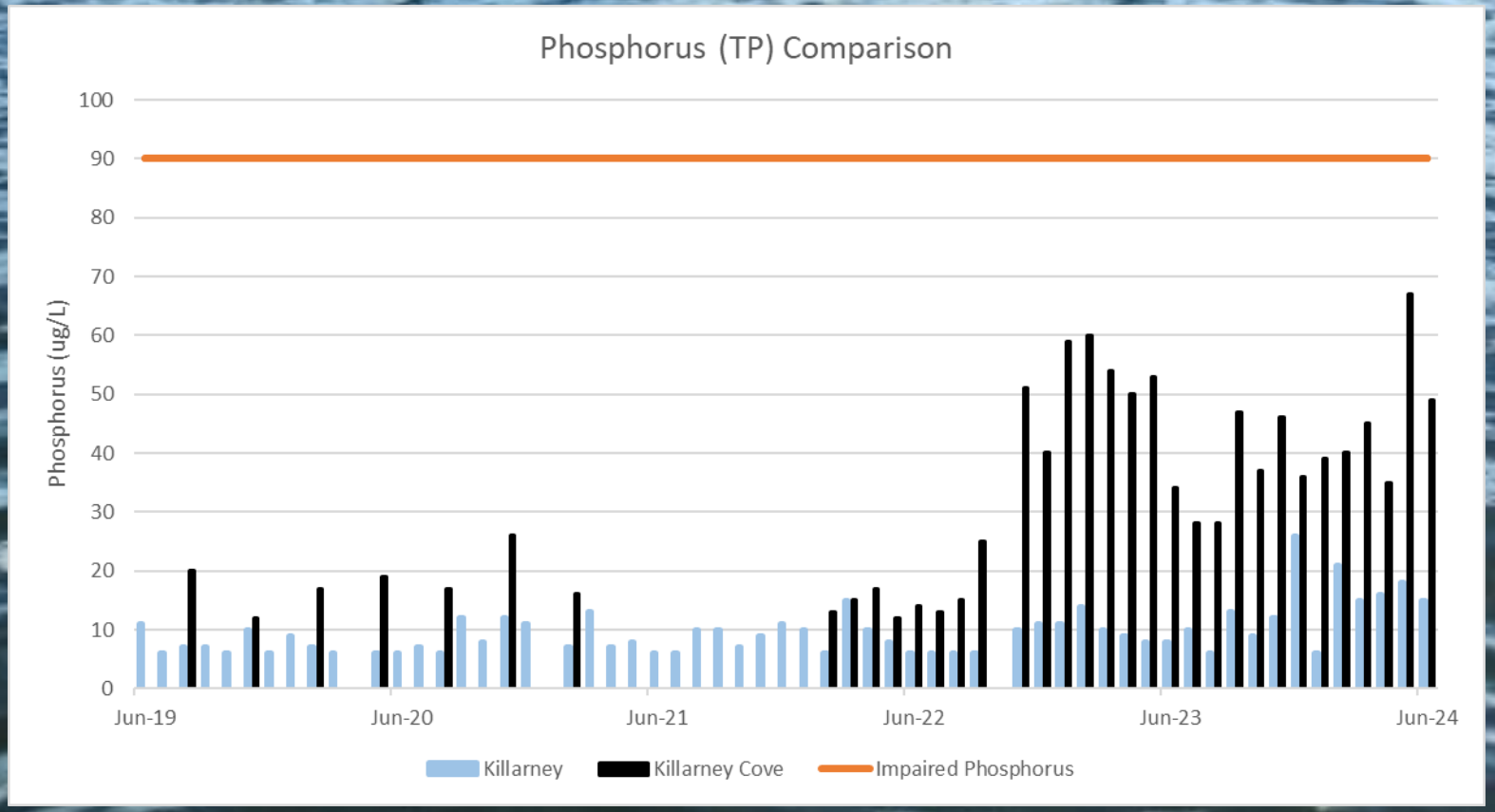
LAKE UPDATE:

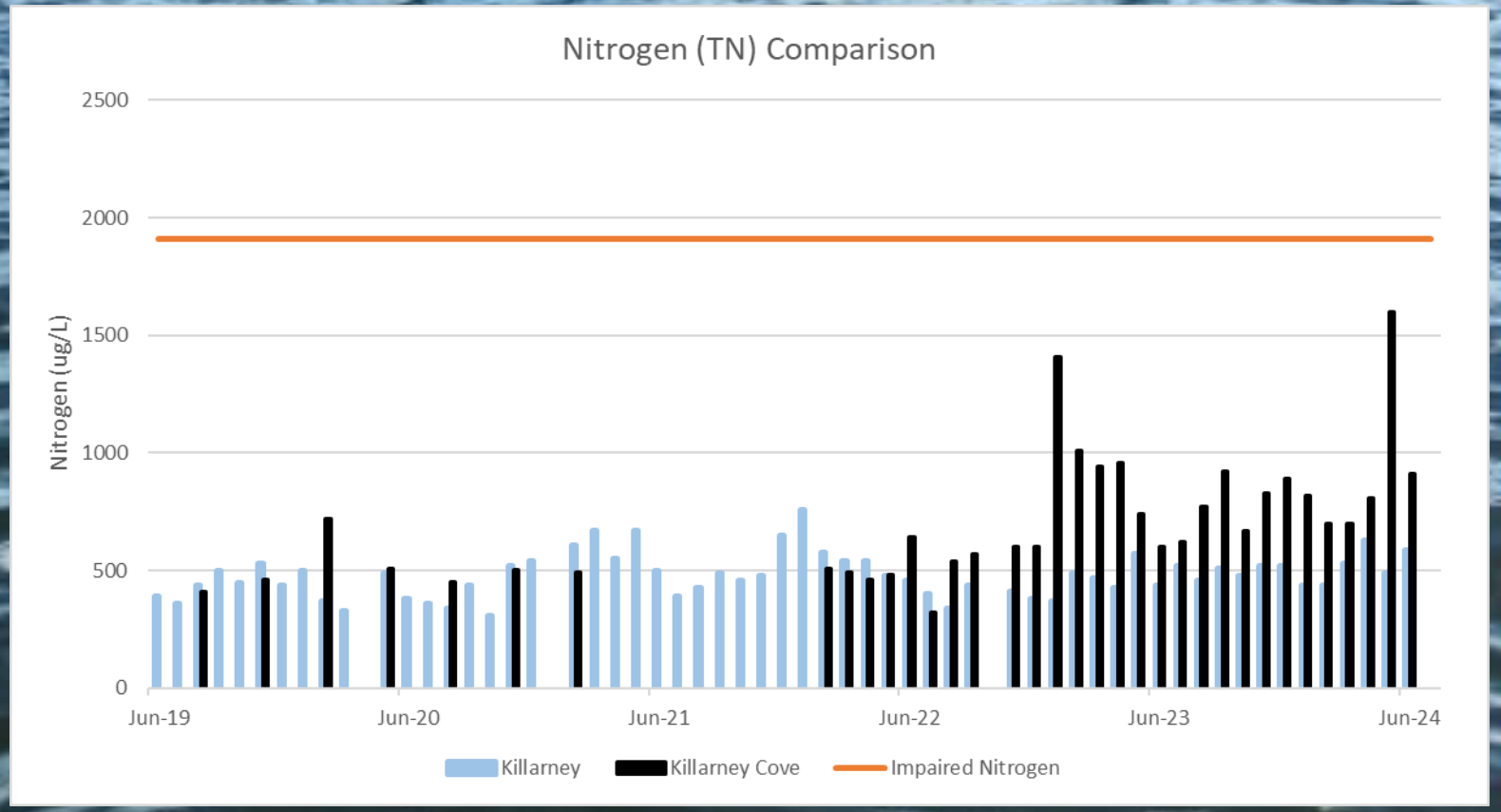
- Elevations
- Storm Preparedness
- Water Quality
- Killarney Canal
- Hydrilla and Pondweed
- Maintenance and Efforts:
  - 545 gal Debris Removed
  - 130 gal Trash Removed
  - 590 gal Tree Debris Removed
- Upcoming Events

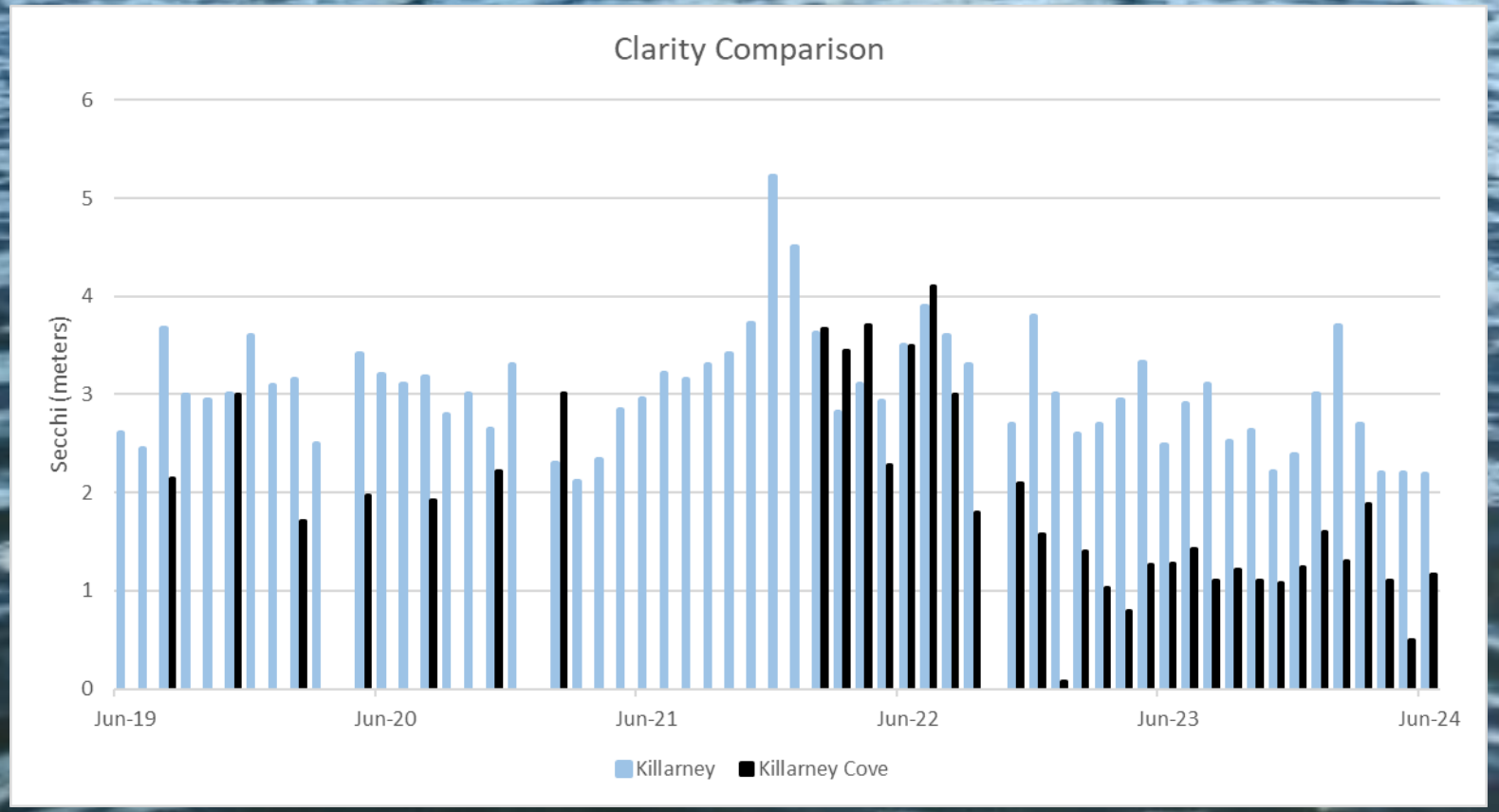
Lake Killarney Elevation




Trophic State Index (TSI) Comparison
Trophic State Index
80
70
60
50
40
30
20
10
0
Jun-19
Jun-20
Jun-21
Jun-22
Jun-23
Jun-24
Killarney
Killarney Cove
Oligotrophic/Mesotrophic
Mesotrophic/Eutrophic


Phosphorus (TP) Comparison
Phosphorus (ug/L)
100
90
80
70
60
50
40
30
20
10
0
Jun-19
Jun-20
Jun-21
Jun-22
Jun-23
Jun-24
Killarney
Killarney Cove
Impaired Phosphorus


Nitrogen (TN) Comparison
2500
2000
1500
1000
500
0
Nitrogen (ug/L)
Jun-19
Jun-20
Jun-21
Jun-22
Jun-23
Jun-24
Killarney
Killarney Cove
Impaired Nitrogen


Clarity Comparison
Secchi (meters)
6
5
4
3
2
1
0
Jun-19
Jun-20
Jun-21
Jun-22
Jun-23
Jun-24
Killarney
Killarney Cove

Killarney Canal

Hydrilla and Pondweed

Lake Killarney Board

agenda item 7.c

item type
Staff Updates

meeting date
November 6, 2024

prepared by
Victoria Tabor, Administrative Coordinator II

approved by
Victoria Tabor, Administrative Coordinator II

subject
Upcoming Events

- Household Hazardous Waste Drop-off - 11/9 9a @ Cady Way Park
- Lakes Shoreline Restoration - 11/16 9a @ Lake Rose

motion | recommendation

background

alternatives | other considerations

fiscal impact

attachments
None

Lake Killarney Board

agenda item 7.d

item type
Staff Updates

meeting date
November 6, 2024

prepared by
Victoria Tabor, Administrative Coordinator II

approved by
Victoria Tabor, Administrative Coordinator II

subject

Stormwater Management

- CIP Update
- Killarney Dr. Pipe Replacement Project Timeline
- Lake Front Construction Updates

Follow-up Items:

- Private Exfiltration Letter
- BMP Feasibility Study for Killarney Dr. Outfall Consolidation (when available)
- Outfall Condition Update

motion | recommendation

background

alternatives | other considerations

fiscal impact

attachments

1. SW Update 11.24 Lake Killarney Board

Stormwater Staff Update

Lake Killarney Board

Stormwater CIP – Fiscal Year 2025

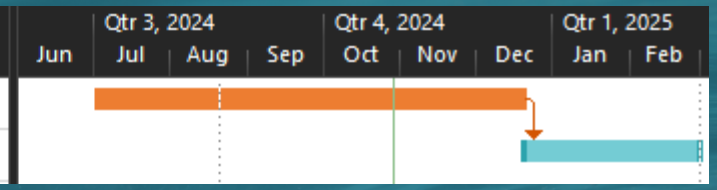
CIP Title & Description	Original Year Funded	Current Balance	Status/Comments
Drainage Improvements - Recent years of unusually heavy rainfall events have revealed several substandard drainage conditions in various locations throughout the City.	Annually Funded	$100,000	Several in-house drainage improvements projects for 2023-24 - **Completed** replacement of 70ft of 24 inch RCP crossing Joeline Court, and 120ft of 18 inch HDPE at the north end of Laurel Road. **Upcoming** - add another inlet and pipe at 1622 Arbor Park Drive, increase pipe size at 1642 Arbor Park Drive, storm pipe replacement/relocate at 2601 & 2631 Temple Drive.
			1) Stormwater Outfall Dredging - The City recently entered a new contract, dredging on several stormwater outfalls started in Aug 2023, and will continue as needed.
			2) Shultz Ave Pipe Repair
			3) Cherokee Ave drainage improvements
Seminole County Ditch Piping (along Arbor Park Dr) – Drainage ditch behind the homes along Arbor Park Drive has a shared drainage basin with Seminole County. Funding is provided for the design and construction to pipe the ditch.	2016	$733,295	The Interlocal Agreement was approved by the City Commission and by the Seminole County Commission. 60% plans completed and submitted to Seminole County. Phase I permit application has been submitted to SJRWMD.
Stirling Bridge Replacement	2024	$224,575	Updates required for price estimate.
Fawsett Road CDS Unit	2024	$200,000	Seeking permit exemption with SJRWMD.
Killarney Dr - Drainage & Street Improvements	2025	$280,000	Combine failing outfalls into one outfall, includes new inlets.
Palmer Ave at Old England - Drainage Improvements-Phase 1	2025	$250,000	Replacement outfall at Old England Ave, north of Palmer Ave. Includes new inlets.
Mayflower - Drainage Ditches Dredging	2025	$170,000	Dredging of drainage ditches that begin at the Mayflower property to the north.
TOTALS			
3023406 ACTIVE STORMWATER CIP's		$1,957,870.00	**BALANCE TOTAL**

Staff Update - Infrastructure Projects

Lake Killarney Board

Killarney Dr Pipe Replacement – Estimated Schedule

Task Name	Start	Finish
Permitting	July 2024	Dec 2024
Construction	Dec 2024	Feb 2025



Stormwater Staff Update

Lake Killarney Board
Current Lakefront Construction

Stormwater Staff Update

Lake Killarney Board

- Follow-up items:
  - Private Exfiltration Letter
  - BMP feasibility study for Killarney Dr Outfall Consolidation (when available)
  - Outfall Condition Update

Lake Killarney Board

agenda item 8.a

item type
Board Comments

meeting date
November 6, 2024

prepared by
Victoria Tabor, Administrative Coordinator II

approved by
Victoria Tabor, Administrative Coordinator II

subject
Discussion of Public Comments Received

motion | recommendation

background

alternatives | other considerations

fiscal impact

attachments
None

Lake Killarney Board

agenda item 9.a

item type
Upcoming Agenda Items

meeting date
November 6, 2024

prepared by
Victoria Tabor, Administrative Coordinator II

approved by
Victoria Tabor, Administrative Coordinator II

subject
Upcoming Agenda Items

motion | recommendation

background

alternatives | other considerations

fiscal impact

attachments
None

Lake Killarney Board

agenda item 9.b

item type
Upcoming Agenda Items

meeting date
November 6, 2024

prepared by
Victoria Tabor, Administrative Coordinator II

approved by
Victoria Tabor, Administrative Coordinator II

subject
Summary of Meeting Action Items

motion | recommendation

background

alternatives | other considerations

fiscal impact

attachments
None