



Orlo Vista Flood Mitigation Project Update

*Community Meeting –
November 15, 2022*



Geosyntec 
consultants



Tom Amstadt, PE, CFM Mark Ellard, PE, CFM, D.WRE

- **Webex Meeting Etiquette**
 - Microphones will be muted to avoid background noise and interruptions
 - Please use the meeting chat feature to ask questions “to everyone”
 - Please be respectful of others
 - Questions and comments will be addressed after the presentation

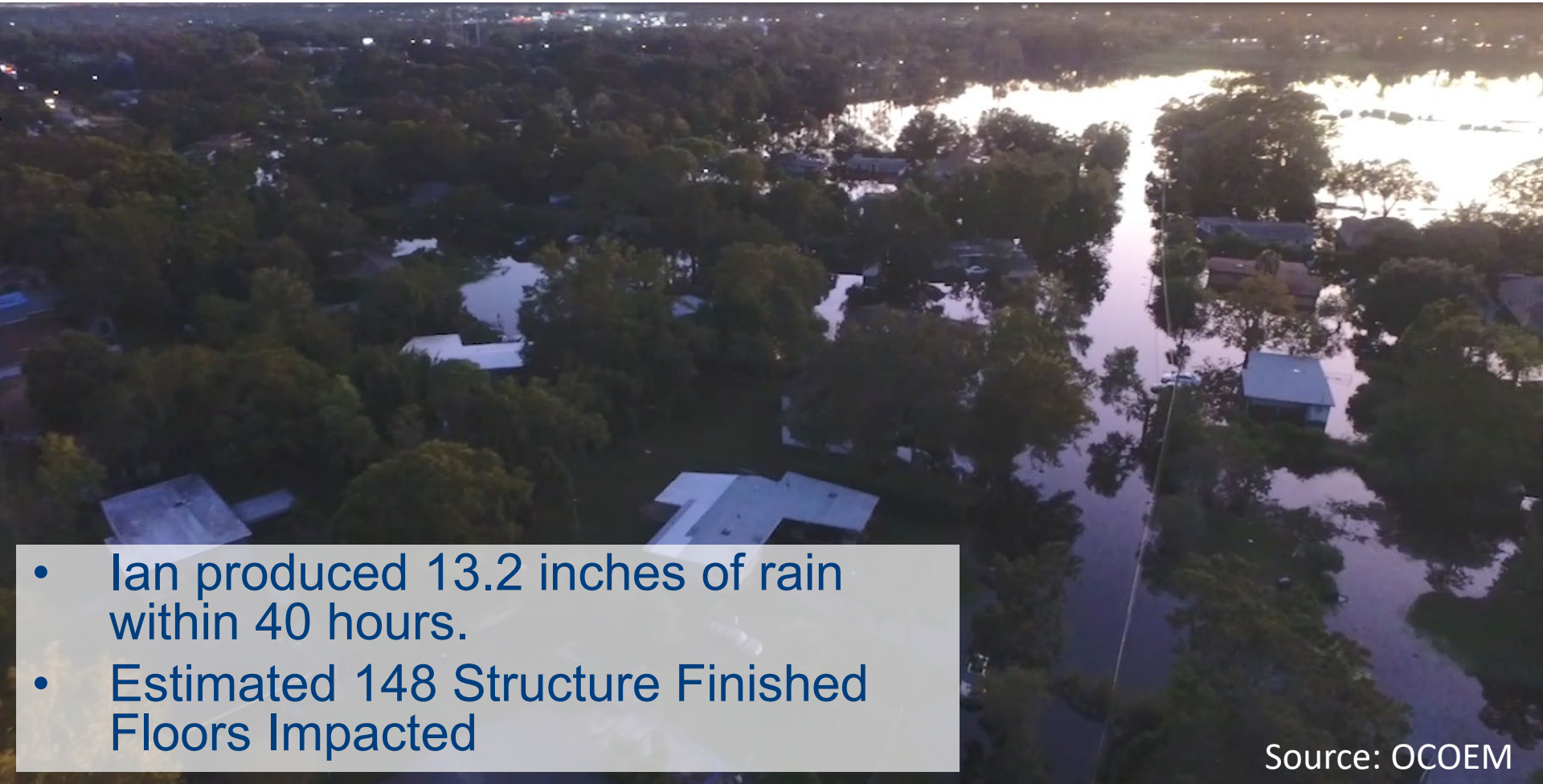


Hurricane Irma – Sep. 11, 2017



- Irma produced 9.1 inches of rain within 28 hours, causing major flooding

Hurricane Ian – Sep. 28, 2022



- Ian produced 13.2 inches of rain within 40 hours.
- Estimated 148 Structure Finished Floors Impacted

Source: OCOEM

Orlo Vista & Shingle Creek Watershed

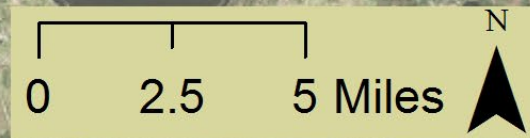
Orlo Vista Study Area
1.75 sq. mi.

Shingle Creek Watershed
Orange County
83.9 sq. mi.

Shingle Creek Watershed
Osceola County
31.0 sq. mi.

ORANGE
OSCEOLA

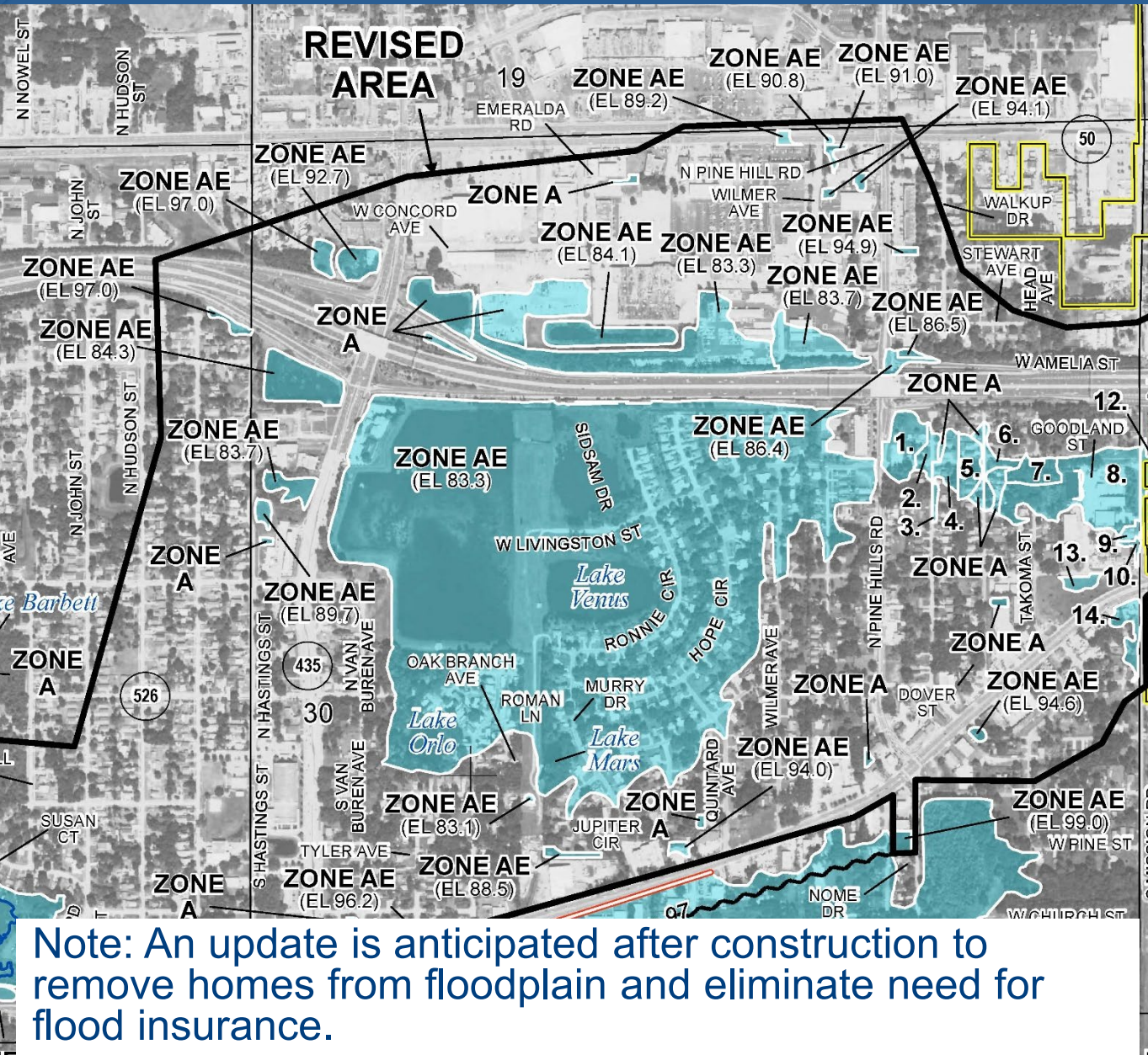
Lake
Tohopekaliga



- **Clog Prevention**
 - Installed skimmer to reduce floating debris
 - Treated floating vegetation and cut back trees
 - Repaired intake grate
 - Canal sediment cleaning
- **Pump Station**
 - Pumps assessed and in good condition
 - Upgrade automatic on/off float system
 - Emergency generator maintained regularly
- **Pre-Storm Pumping**
 - Mobile pumps to drawdown ponds
- **Flood Warning System**
 - Predict evacuation needs



Flood Insurance Rate Map (FIRM) Update



SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee See Notes. Zone X

SCALE

NOTE: BASEMAP IMAGERY WAS OBTAINED FROM NAIP IN 2016.

Map Projection:
NAD 1983 StatePlane Florida East FIPS 0901 Feet;
Western Hemisphere; Vertical Datum: NAVD 88

1 inch = 1,000 feet 1:12,000

0 500 1,000 2,000 Feet

0 150 300 600 Meters

FEDERAL EMERGENCY MANAGEMENT AGENCY

National Flood Insurance Program

FLOOD INSURANCE RATE MAP

ORANGE COUNTY, FLORIDA
and Incorporated Areas

PANEL 240 OF 750

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
ORANGE COUNTY	120179	0240	F
ORLANDO, CITY OF	120186	0240	F

REVISED TO REFLECT LOMR EFFECTIVE: March 11, 2020

VERSION NUMBER: 2.1.3.0
MAP NUMBER: 12095C0240F
MAP REVISED: SEPTEMBER 25, 2009

Note: An update is anticipated after construction to remove homes from floodplain and eliminate need for flood insurance.

Vertical Pond Expansion Design



Legend

- Pump Station
- Parcels
- County Drainage Easement

Proposed Infrastructure

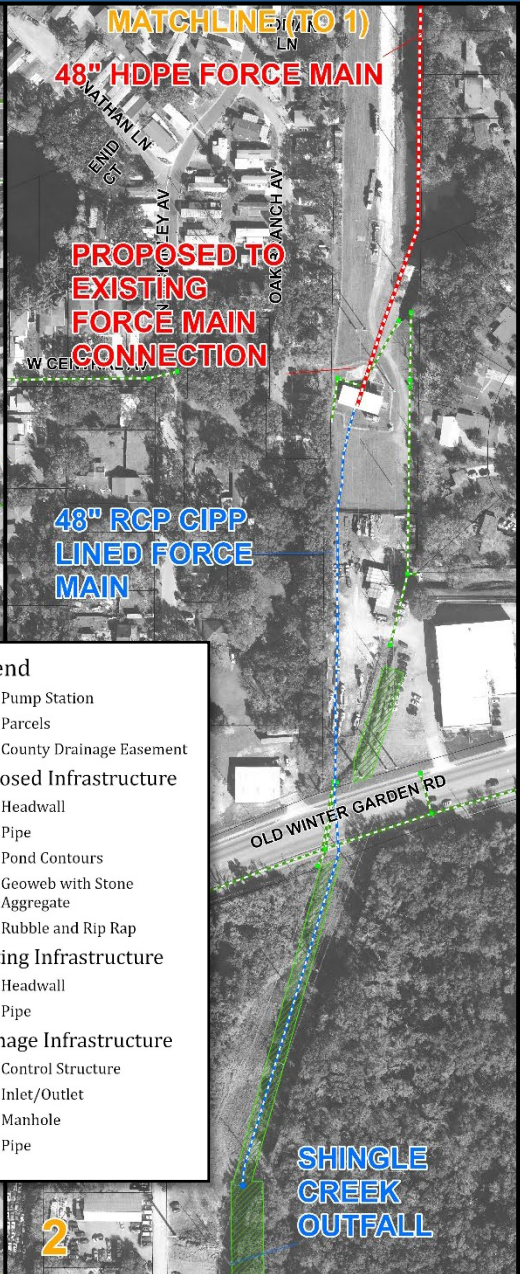
- Headwall
- Pipe
- Pond Contours
- Geoweb with Stone Aggregate
- Rubble and Rip Rap

Existing Infrastructure

- Headwall
- Pipe

Drainage Infrastructure

- Control Structure
- Inlet/Outlet
- Manhole
- Pipe

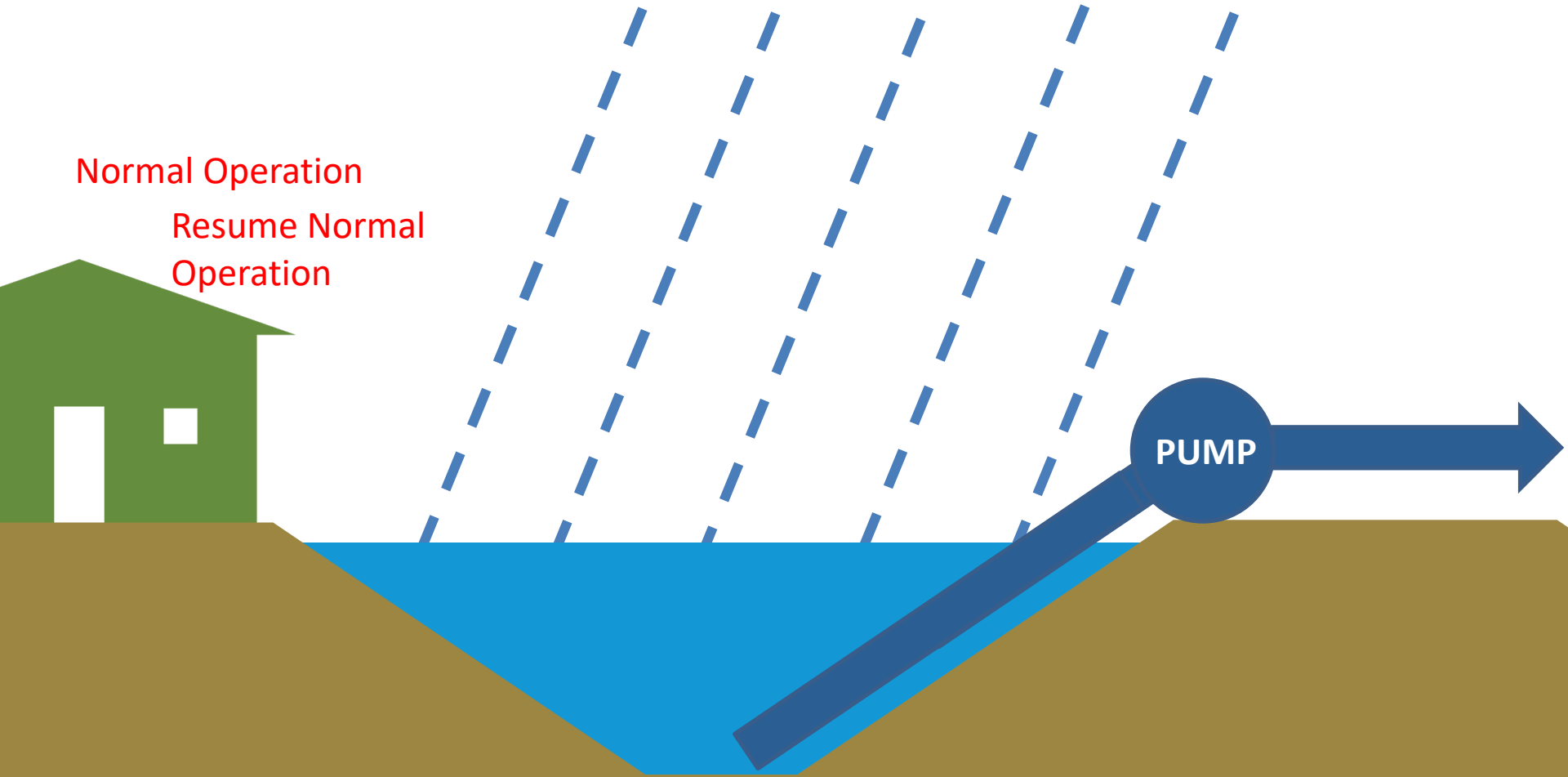


1

2

Proposed Pump Station Control Plan

Normal Operation
Resume Normal
Operation



- **Benefits**

- Mitigates structure flooding through 100 year storm (lan was approximately 200 year storm)
- Designed to not displace residents
- Designed to not impact downstream areas

- **Status**

- Design & South Florida Water Management District (SFWMD) Permitting Complete
- Florida Department of Emergency Management (FDEM) Environmental Assessment Complete
- Rights of Entry Acquired (properties along Ronnie Circle)
- Grant funding approved

Project Cost and Funding – Construction Phase



FEMA



FLORIDA
DEPARTMENT of
ECONOMIC
OPPORTUNITY

Hazard Mitigation
Grant Program
(HMGP)

Community
Development Block
Grant (CDBG)



\$16.7 Million

\$2.5 Million

\$4.3 Million

- **Hazard Mitigation Grant Program (HMGP) Funding**
 - 75% Federal – 25% Local Cost Share
 - HMGP Grant Phasing
 - Phase 1 – Engineering Design, \$1.1 Million (complete)
 - Phase 2 – Construction, \$23.4 Million
 - **\$7.5 Million** HMGP Phase 2 Funding Initially Approved in Feb 2022
 - Additional **\$9.2 Million** Federal Funding Earmarked in October 2022

- **Hazard Mitigation Grant Program (HMGP) Funding**

December 2018	Orange County was granted funding for the Design Phase (Phase I) of the Orlo Vista Flood Mitigation Project by FEMA.
June 2020	<p>Orange County submitted Phase I final deliverables to FDEM for their review, evaluation and consideration for funding for Phase II – Construction.</p> <p>Phase II includes Construction Work, Construction Administration, Construction Engineering and Inspection (CEI) services to support the construction process and grant management services.</p>
July 10, 2020	<p>Orange County was informed that in order to complete the Environmental and Historic Preservation (EHP) review (as part of the final deliverables review), the project would require an Environmental Assessment (EA).</p> <p>An EA evaluates the potential direct and indirect environmental impacts to the Orlo Vista community including Physical, Water, Coastal, Biological, Cultural and Socioeconomic impacts.</p> <p>The EA started in July 2020 and it was completed by FDEM in December 2021.</p>

- **Hazard Mitigation Grant Program (HMGP) Funding**

February 22, 2022	FDEM informed Orange County that FEMA had awarded Orange County funding for the Construction Phase (Phase II) at a 75% Federal match (\$7.5M). The grant agreement was approved by the BCC on April 2022.
October 13, 2022	Orange County submitted a request to FDEM for a budget increase based on the lowest bid received (\$13M cost overrun).
October 27, 2022	FDEM informed Orange County that FEMA had awarded Orange County additional funding for the Construction Phase (Phase II) at a 71.3% Federal match (\$9.2M in additional funding).

- **Community Development Block Grant (CDBG)**

June 2020	Orange County submitted a CDBG-DR grant application to DEO for funding the 25% "Local Share" portion (or \$2.5M)
February 4, 2022	Orange County received the grant agreement, which was approved by the BCC in April 2022.

Once both grant agreements were approved by the BCC, we initiated the bidding processes.

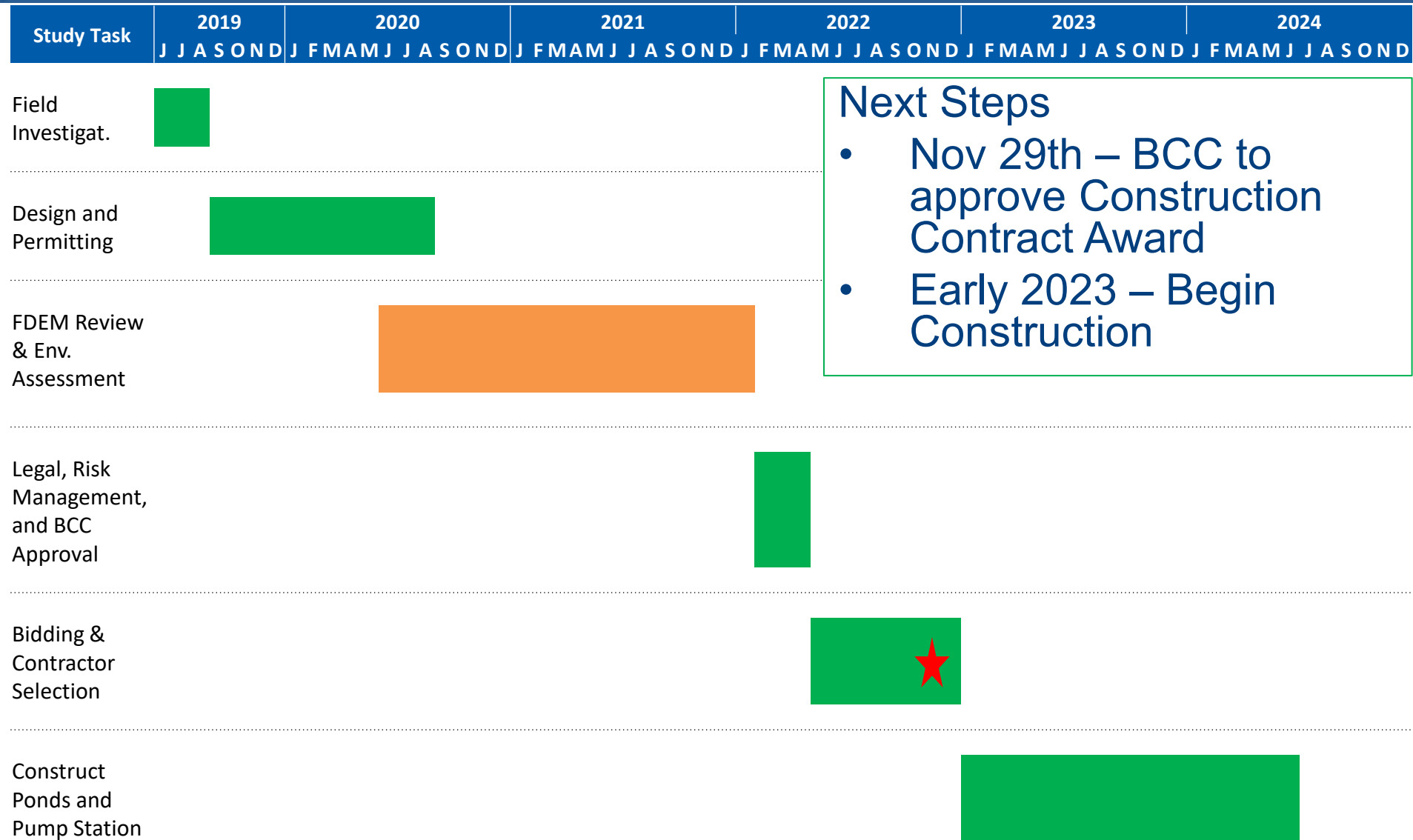
- **Construction Engineering Inspection (CEI) Services:**
 - **May 17, 2022:** Orange County issued the Request For Proposals (RFP)
 - **May 27, 2022:** Pre-Proposal Conference
 - **June 16, 2022:** Receipt of Proposals, no proposals were received.
 - **July 28, 2022:** New date for Proposals. One proposal was received.
 - **August 17, 2022:** Procurement Committee
 - **September 27, 2022:** BCC Approval
 - **October 11, 2022:** Kick-off and Negotiations. Currently, Procurement is negotiating prices with Civil/Site Services

- **Construction Services:**
 - **June 13, 2022:** Orange County issued the Invitation for Bids (IFB)
 - **June 21, 2022:** Pre-Bid Conference
 - **August 18, 2022:** Receipt of Bids
 - Two bids were received:
 - ✓ **Thalle Construction CO., Inc. (8/25/2022)** bid of **\$21,551,322 (+78%)**
 - ✓ **Carr & Collier Inc. (8/25/2022): \$23,877,077 (+97%)**
 - **September 13, 2022:** Updated Engineer's Cost Estimate of **\$19,477,816**
 - **September 16, 2022:** Orange County submitted a request for a project budget increase to FEMA-HMGP for \$13.4 Million. This project increase request was prompted by the receipt of construction bids.
 - **October 13, 2022:** A revised request for a project increase was submitted to FEMA.
 - **October 26, 2022:** FEMA earmarked \$9.2 Million budget increase. Orange County will cover \$4.3 Million.
 - **November 29, 2022:** Contract will be presented to the BCC for approval.

If everything goes as planned, the construction should be starting in early 2023.



Project Schedule



Next Steps

- Nov 29th – BCC to approve Construction Contract Award
- Early 2023 – Begin Construction

★ Current Month





- **Orange County Public Works Stormwater Management Division**
 - Mike Drozeck, PE, CFM – Stormwater Division Manager
 - Daniel Negrón, PE, CFM – Chief Engineer
 - Liliana Ramirez, CFM – Project Manager
- **Geosyntec Team: Orlando, FL**
 - Tom Amstadt, PE, CFM – Project Manager
 - Mark Ellard, PE, CFM, D.WRE – Project Director

- Use Webex Chat to submit questions and comments
- Alternatively email questions to Liliana.Ramirez@ocfl.net

QUESTIONS

