



BURNT STORE DRAINAGE STUDY

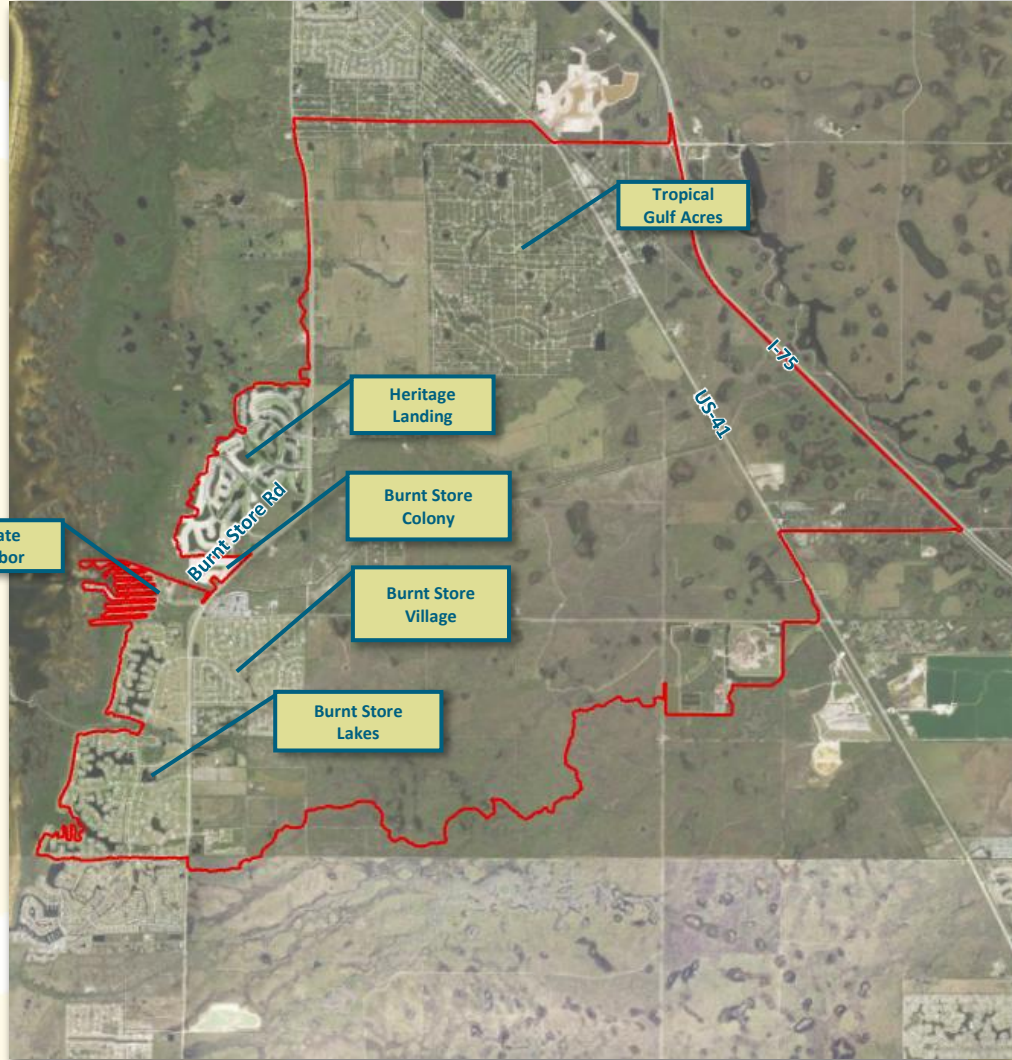
PUBLIC MEETING #1

Kimley»Horn


CHARLOTTE COUNTY
FLORIDA

PROJECT OVERVIEW

- Burnt Store Watershed
- Inflow from Various Boundary Conditions
- Model Design Storm and "Real-Life" Storm
- Assess Future Conditions
- Develop Improvements



ABOUT US



**Logan Norris, P.E.
Project Manager**




**Olivia Austin, E.I.
Modeling and GIS
Analyst**




**Kellie Clark, P.E.
Quality Control
and Assurance**

PROJECT GOALS

1  Analyze Existing Watershed

2  Coordinate with Stakeholders and Community

3  Develop Accurate, Calibrated Model for the Watershed

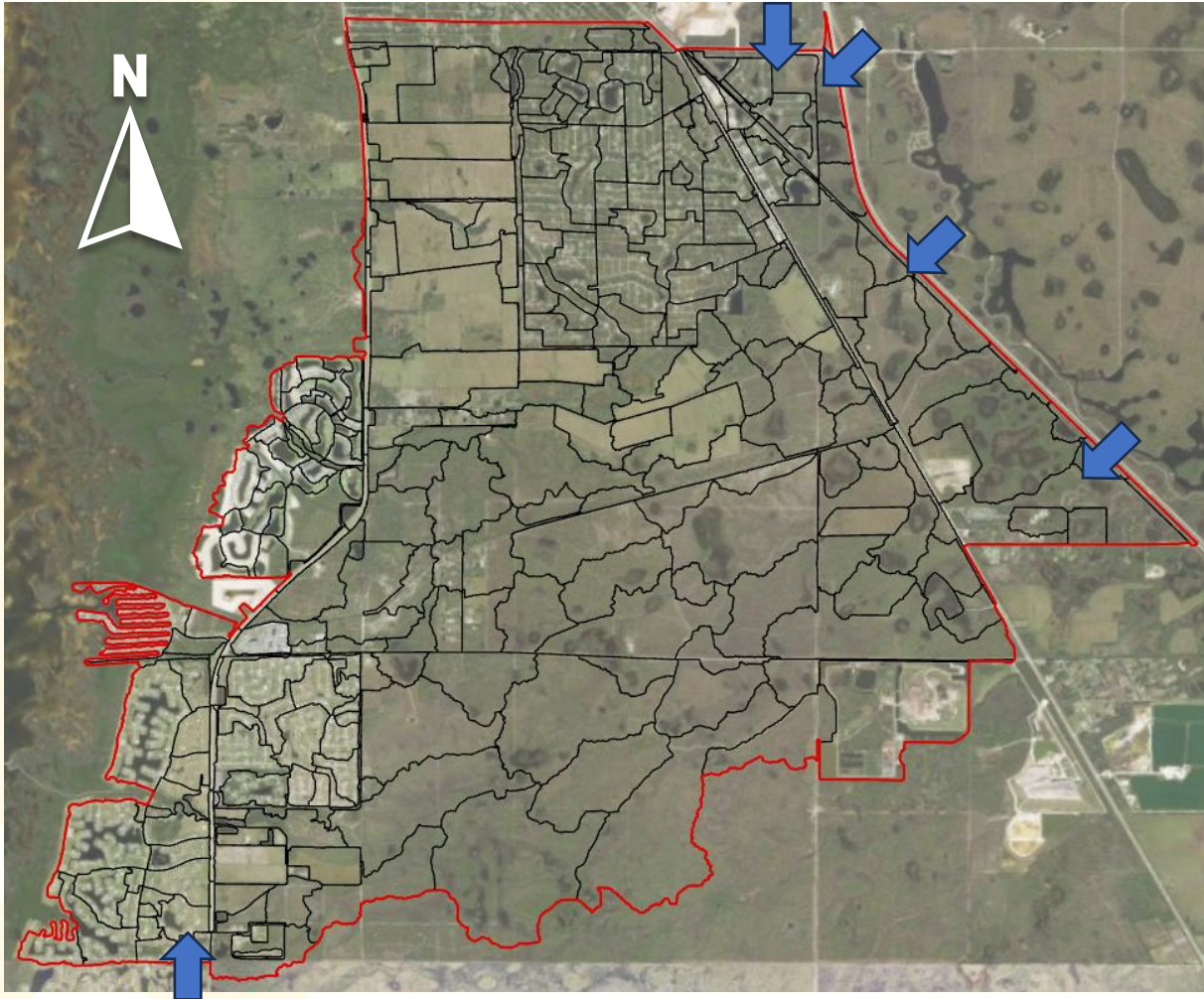
4  Determine effect of buildout and future conditions within the Watershed

5  Improve flooding Level of Service within the Watershed

6  Assist County with Project Prioritization

PROJECT SCHEDULE

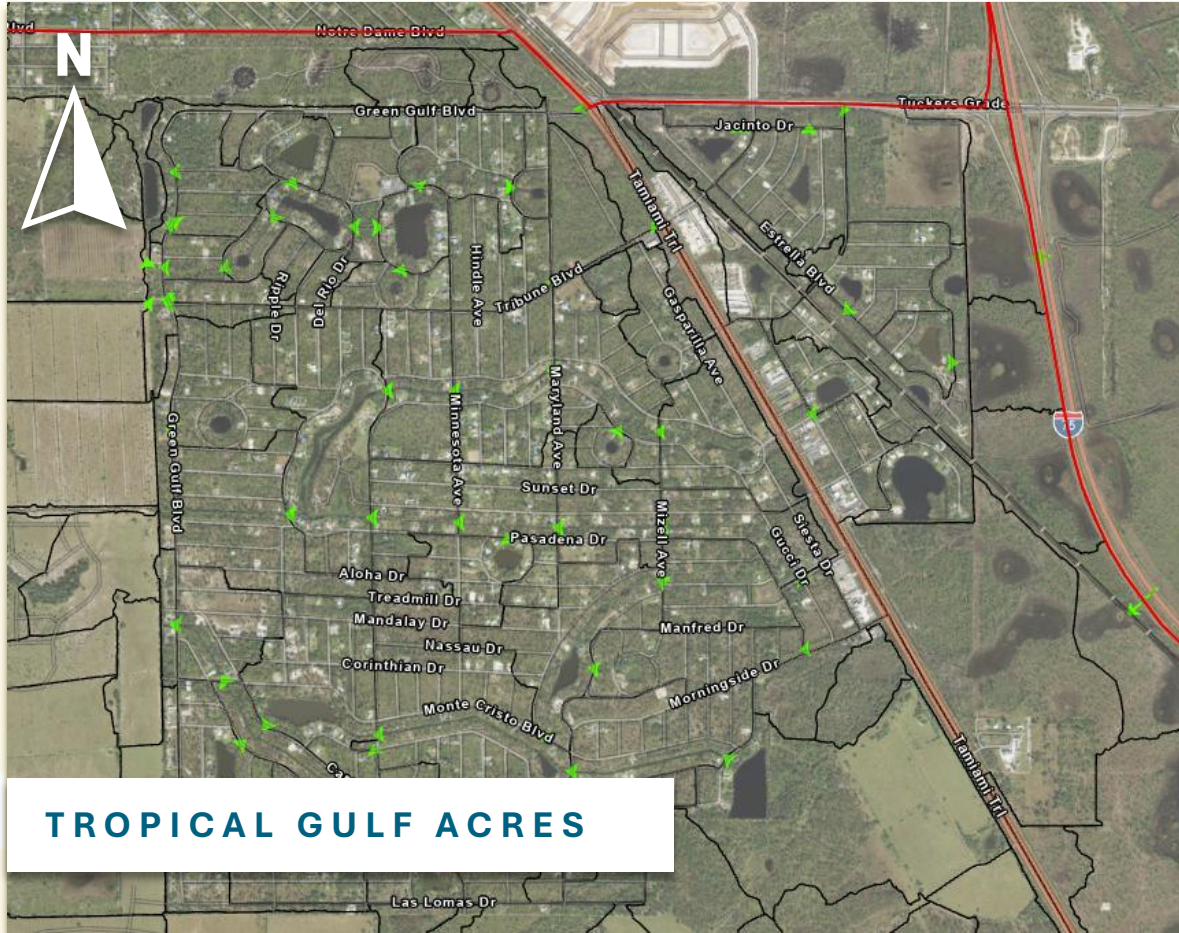
- Data collection, data gaps analysis, public involvement plan, preliminary existing conditions model
 - Date Complete: 07-22-2025
- Existing conditions model calibration and completion
 - Approximate date of completion (public meeting #2): Sep 2025
- Future Conditions Model, Alternatives analysis, level of service analysis, benefit/cost analysis
 - Approximate date of completion (public meeting #3): March 2026
- Project complete: April 2026



MODEL WATERSHED

- Model Area of approx. 18,000 Acres
- Several Creeks and Culvert Crossings under Burnt Store Road
- Impacted Communities
 - Tropical Gulf Acres
 - Heritage Landing
 - Burnt Store Village
 - Burnt Store Lakes
 - Pirate Harbor
 - Burnt Store Colony
- Inflow from Boundary Conditions

DATA COLLECTION FIELD VERIFIED PIPES

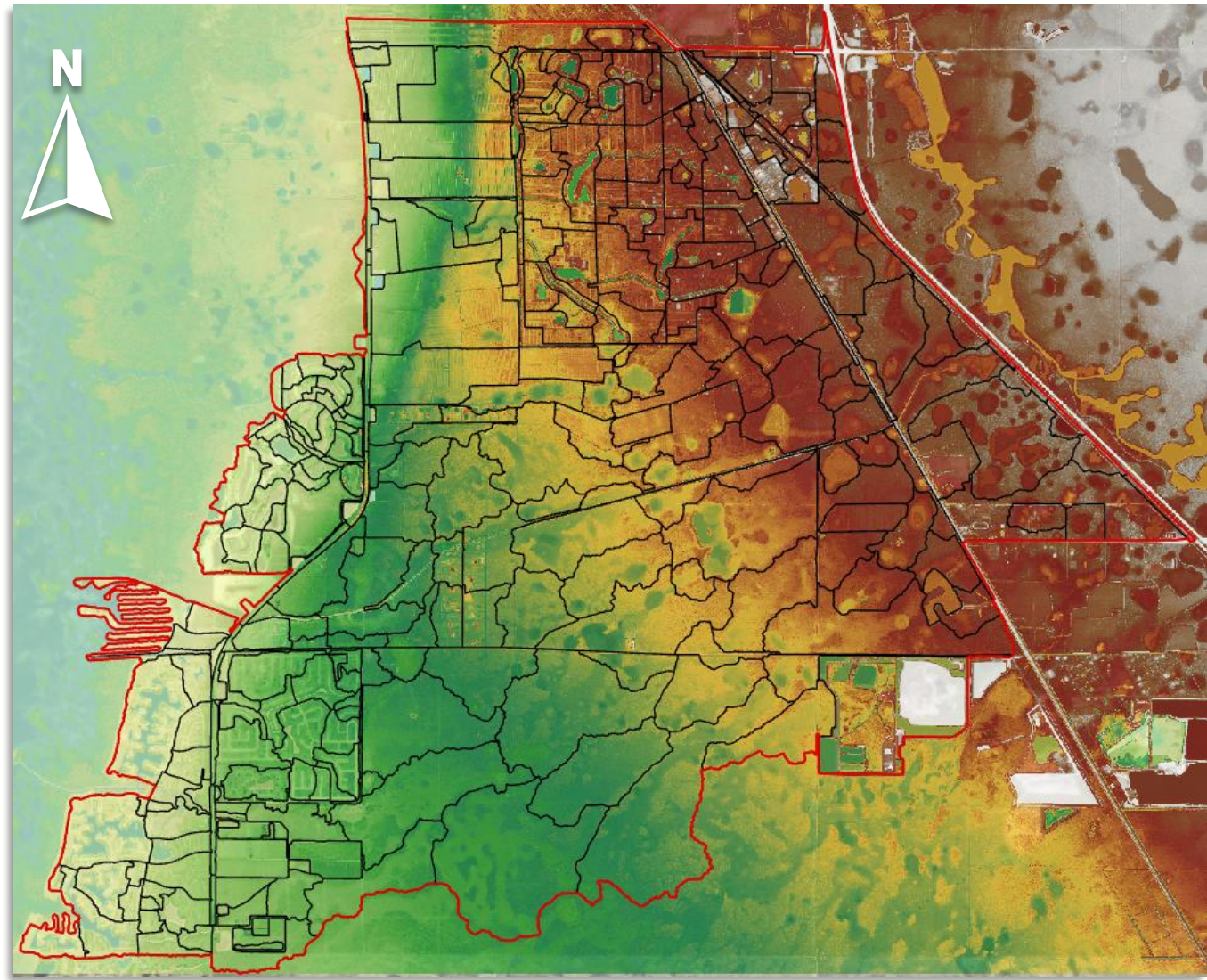


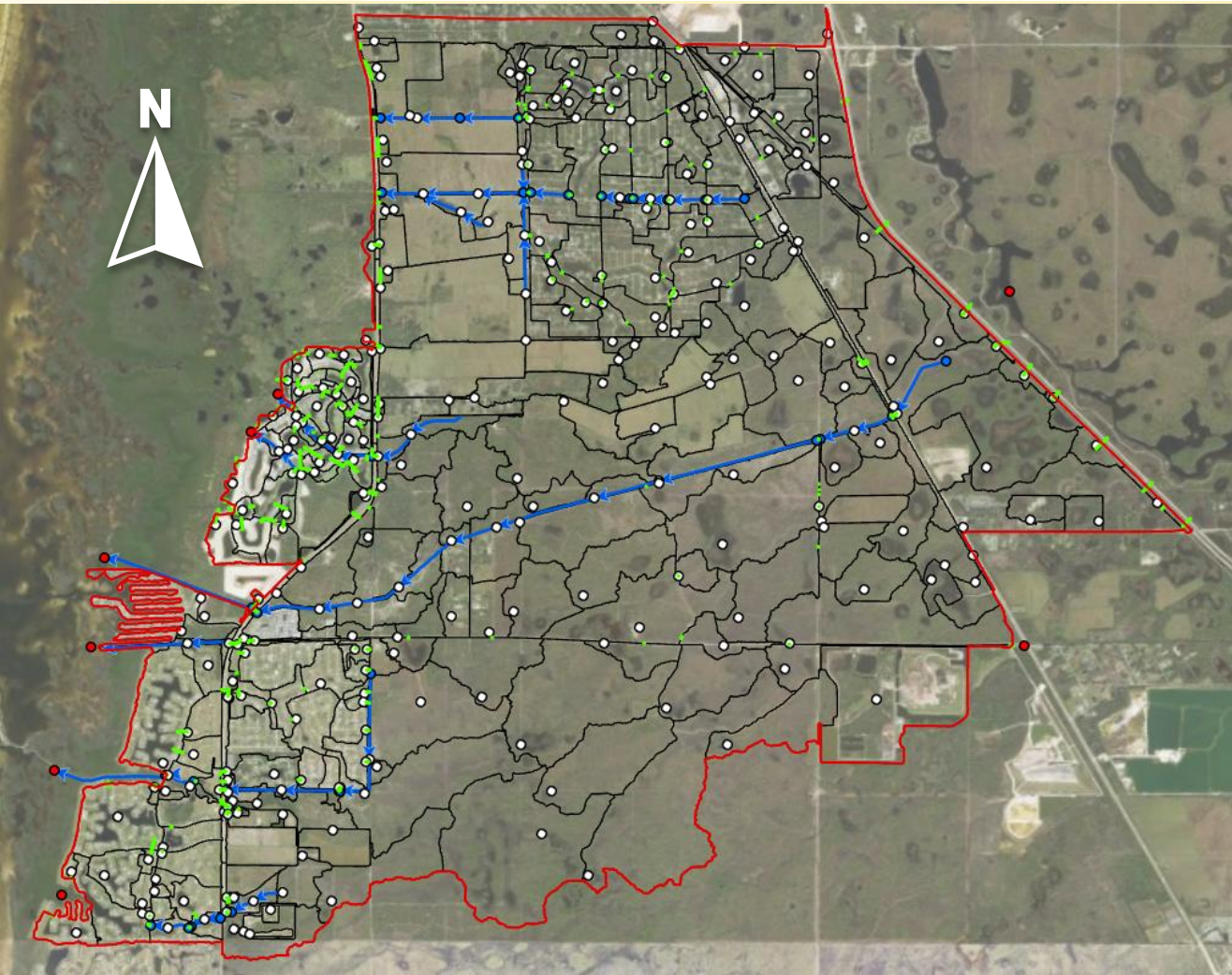
DATA COLLECTION FIELD VERIFIED PIPES



MODEL DEVELOPMENT DIGITAL ELEVATION MODEL

- Used to:
 - Develop Contributing Drainage Areas - Basins
 - Quantify Storage
 - Develop Cross-Sections determine flow path
 - Evaluate Results
- Reflects latest Lidar data and As-Built elevations from Burnt Store Road Expansion



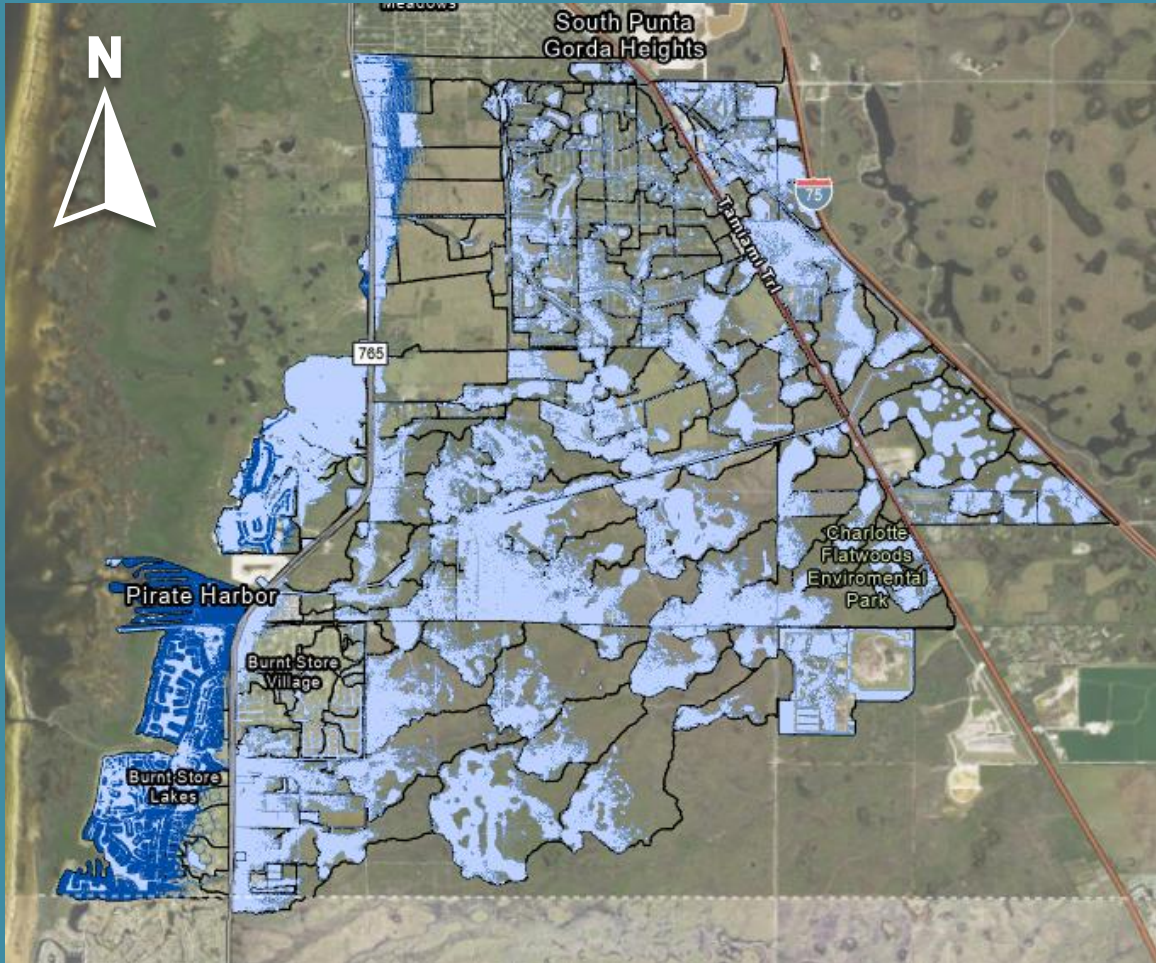


MODEL DEVELOPMENT MODEL SCHEMATIC

- Basins – Contributing Drainage Areas
- Nodes – Storage Areas
- Links – Connections
 - Pipes
 - Channels
 - Control Structures
 - Weirs
- Inflow

DRAFT MODEL RESULTS OPEN TO PUBLIC FEEDBACK

- Model Results are based on 100yr design storm with 11.2 in Rainfall
- Modeled Floodplains are based on where elevation of water in the model is higher than the modeled ground elevation
- Input on where draft model results do and don't align with observed flooding is welcome and desired





NEXT STEPS MODEL CALIBRATION

- "Real storm" will be input into the existing model for calibration
- The model will be refined by using rainfall data, available flood stage data, and/or observational information
- Input from community is vital in this step



NEXT STEPS

FUTURE CONDITIONS

- The existing conditions model will be modified to include future considerations such as:
 - Future Planned Development
 - Turnleaf
 - Starling
 - Firelight
 - Other Areas in County Burnt Store Area Plan
 - Development Buildout
 - Stronger Tidal Conditions
 - More Intense Rainfall



NEXT STEPS ALTERNATIVES ANALYSIS

- 3 proposed projects will be identified per future conditions model results
- Proposed projects will be input in the model to determine modeled flooding benefit
- Model can be used as baseline for future studies



NEXT STEPS

FUTURE PUBLIC MEETINGS

- 2 Additional Public Meetings
 - After Model is Calibrated and Complete
 - Anticipated September 2025
 - Nearing Project Completion
 - Anticipated March 2026



WE WELCOME INPUT

- Questions on Project
- Testimonial on Flooding Location
- Location of problematic structures
- Feedback on preliminary model results
- Questions on potential improvement strategies

**Please visit us at the front to
provide your input and
feedback.**

Thank you!