

Southwest Florida Water Management District

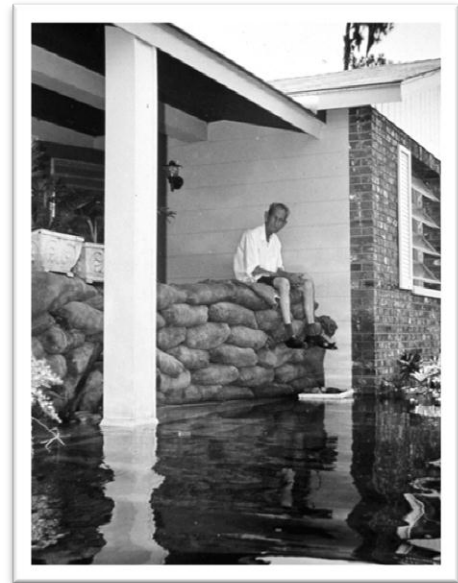
Watershed Management Program

J.P. Marchand, P.E., Manager

Engineering and Watershed Management Section

May 22, 2014

1960



1995, 1998, 2004



2012

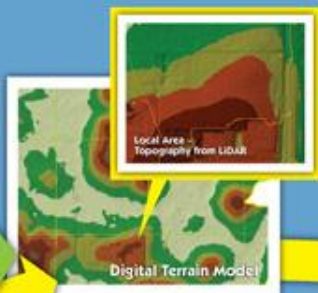


Understanding and Managing the Watershed





New Topography



Digital Topographic Information



Watershed Evaluation



Digital Flood Insurance Rate Maps



New Development



Watershed Management Program

Maintenance of Watershed Parameters and Models

Implementation of Best Management Practices (BMPs)



Watershed Management Plan

- Level of Service Determination
- Surface Water Assessment
- BMP Alternative Analysis



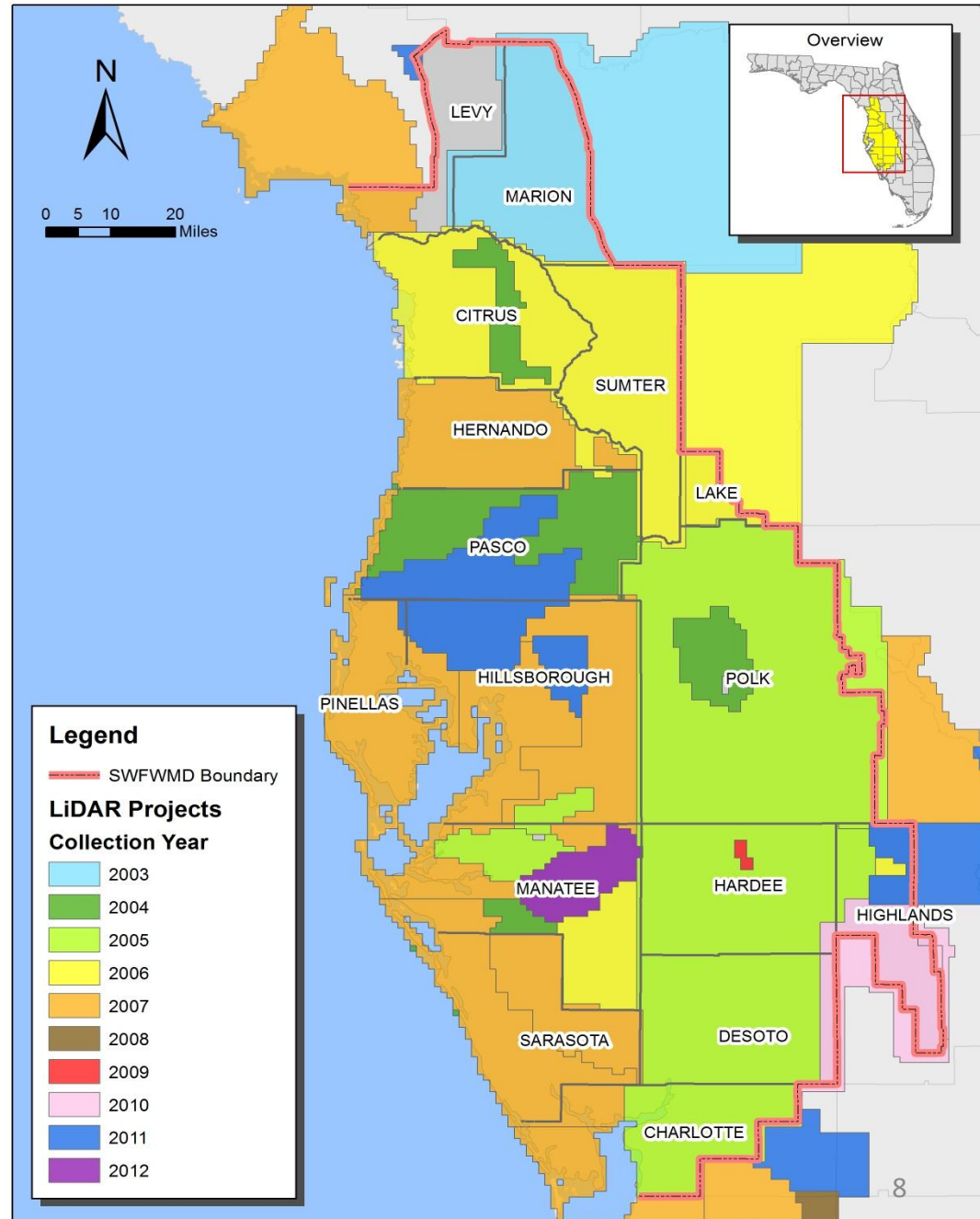
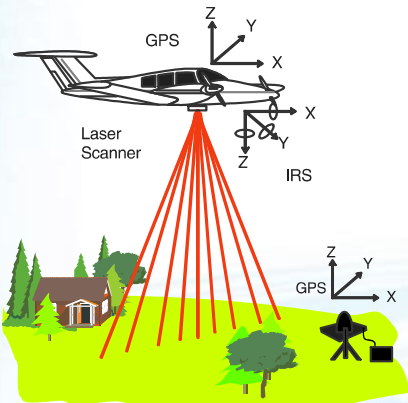
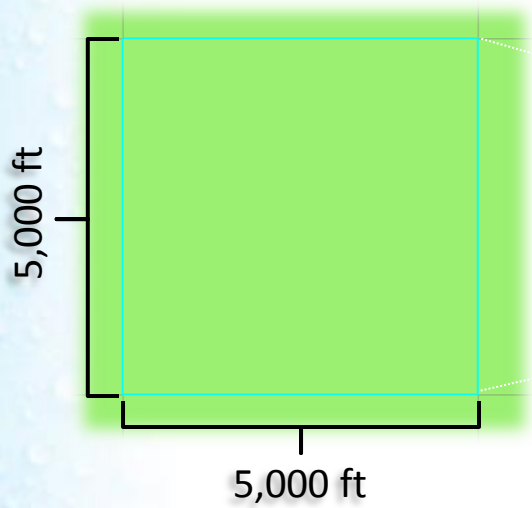
Watershed Evaluation

“Become One with the Watershed”

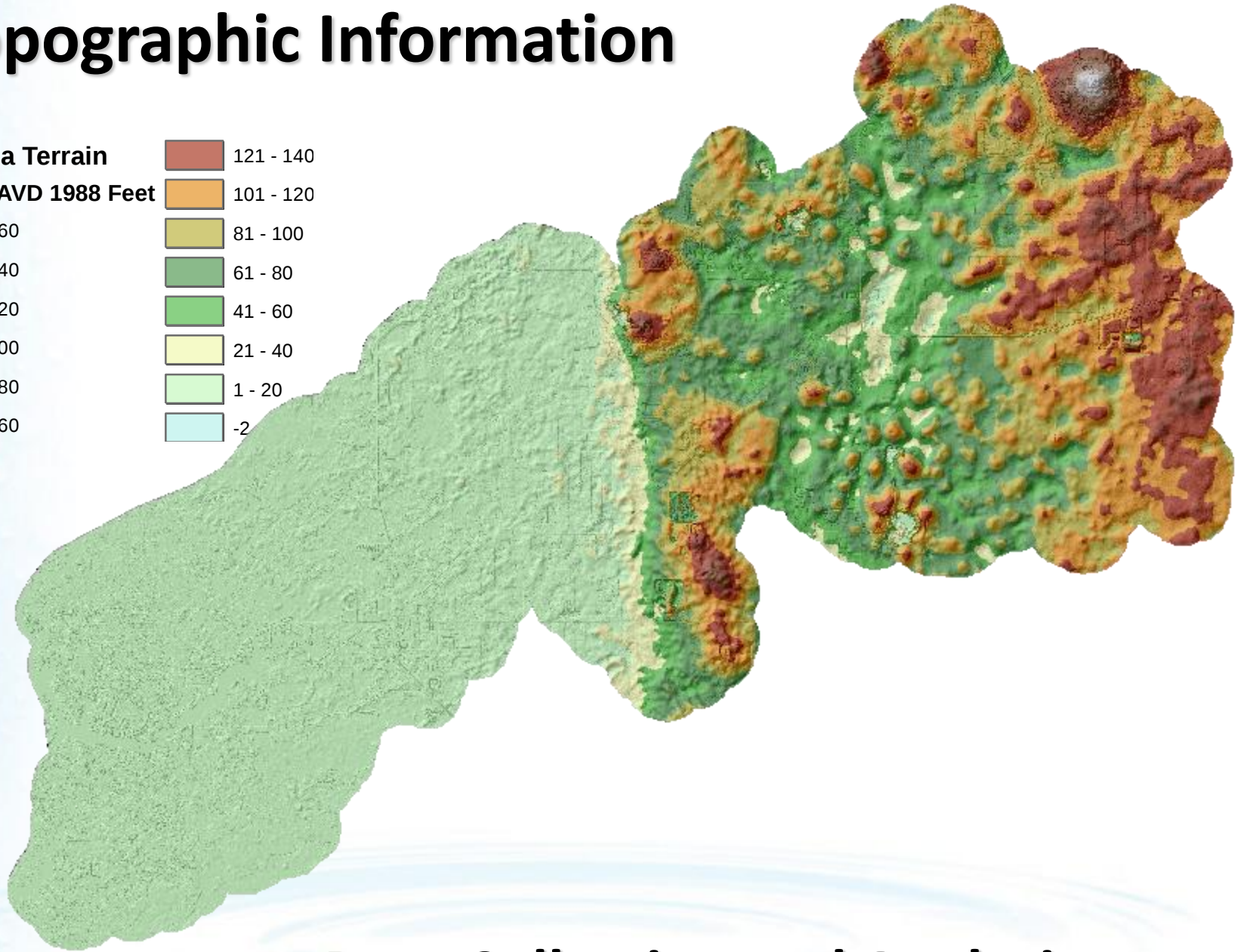
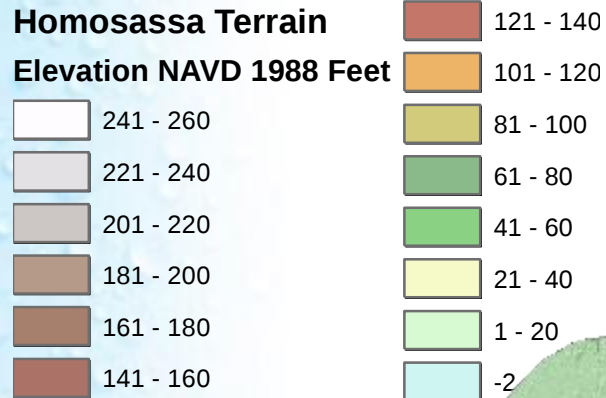
- Topographic Information
- Data Collection
- Desktop Analysis & Evaluation
- Field Work
- Watershed Geodatabase
- Stormwater Infrastructure

LiDAR

Light Detection And Ranging



Topographic Information



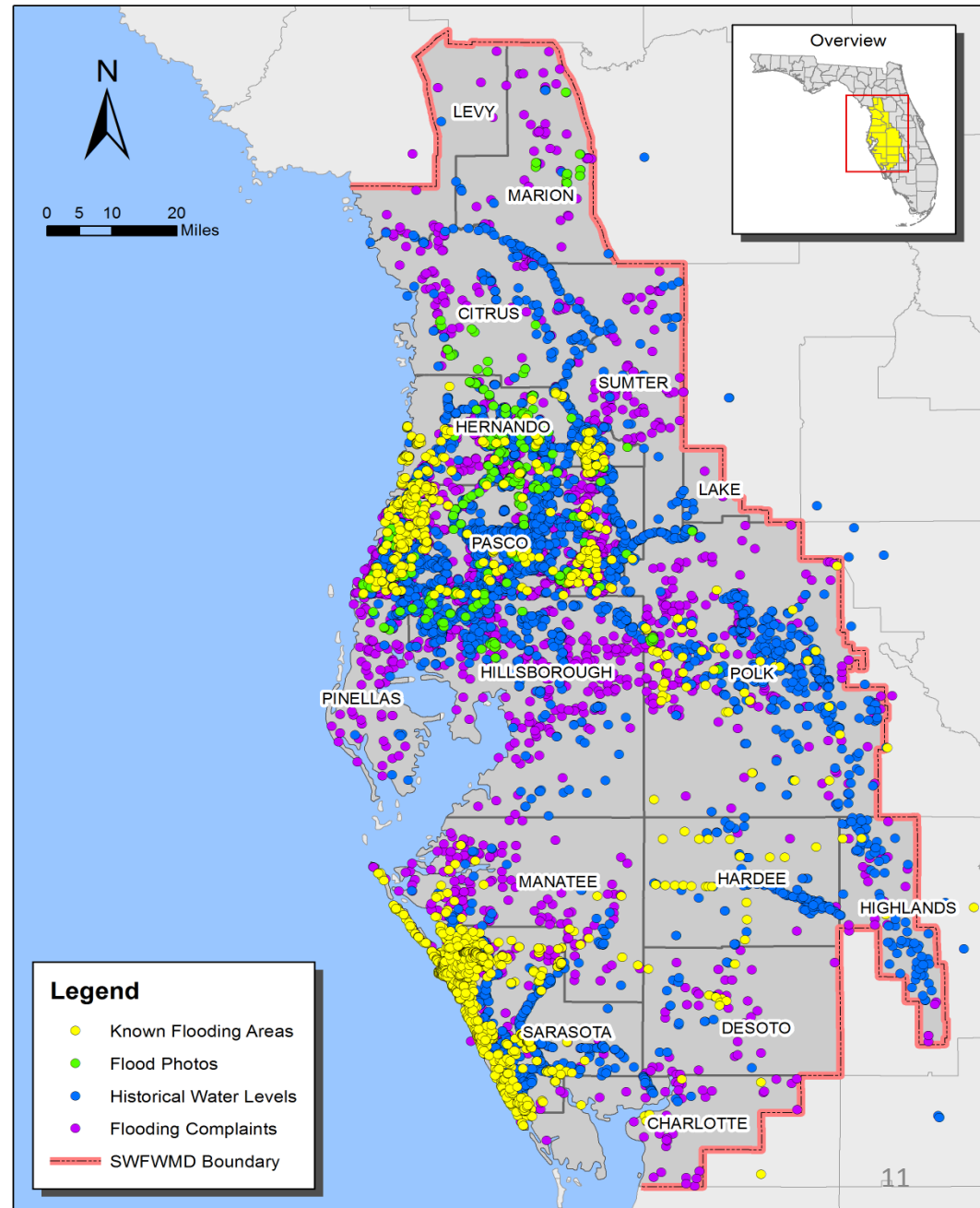
Data Collection and Analysis



Data Collection and Analysis

Historical Water Level Database

- Known Flooding Areas
- Flood Photos
- Historical Water Levels
- Flooding Complaints



Hydraulic Structures

Culvert/Pipe inverts, Weir crests, Ground points, etc.

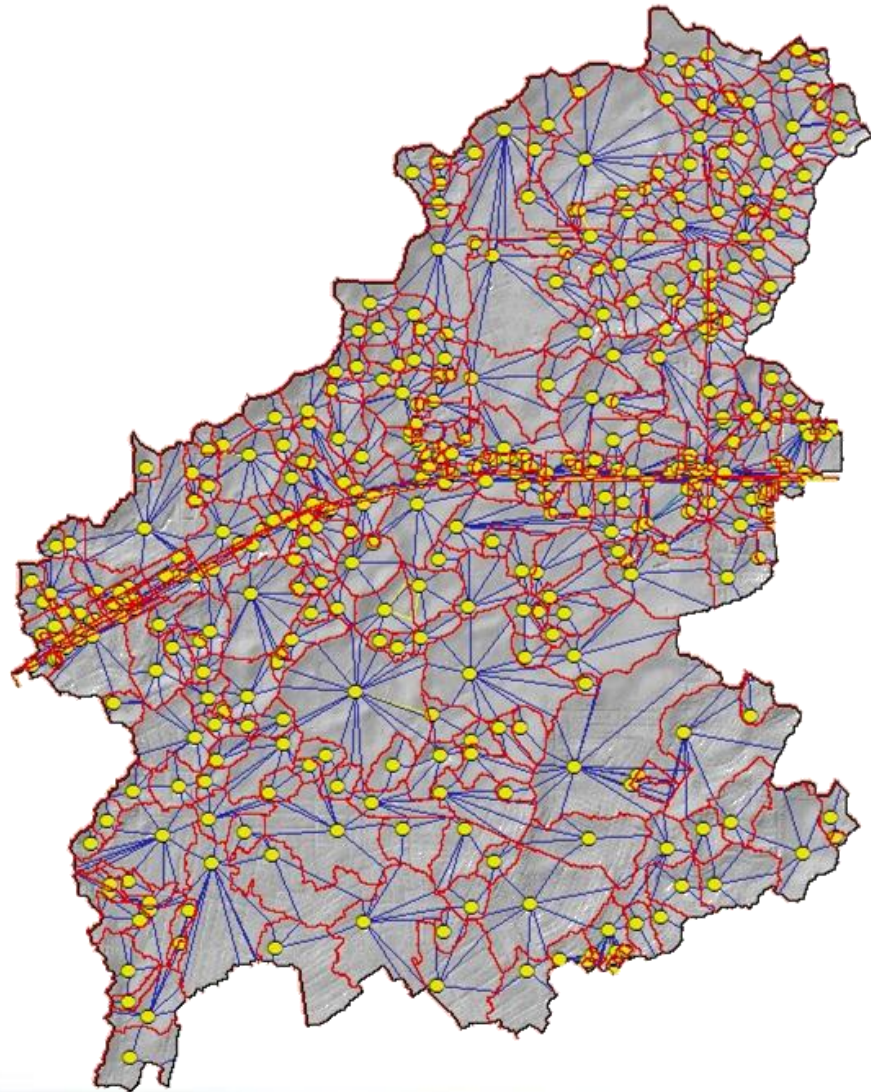


Watershed Management Plan

- Model Development
- Floodplain Analysis/Delineation
- Peer Review
- Public Meeting

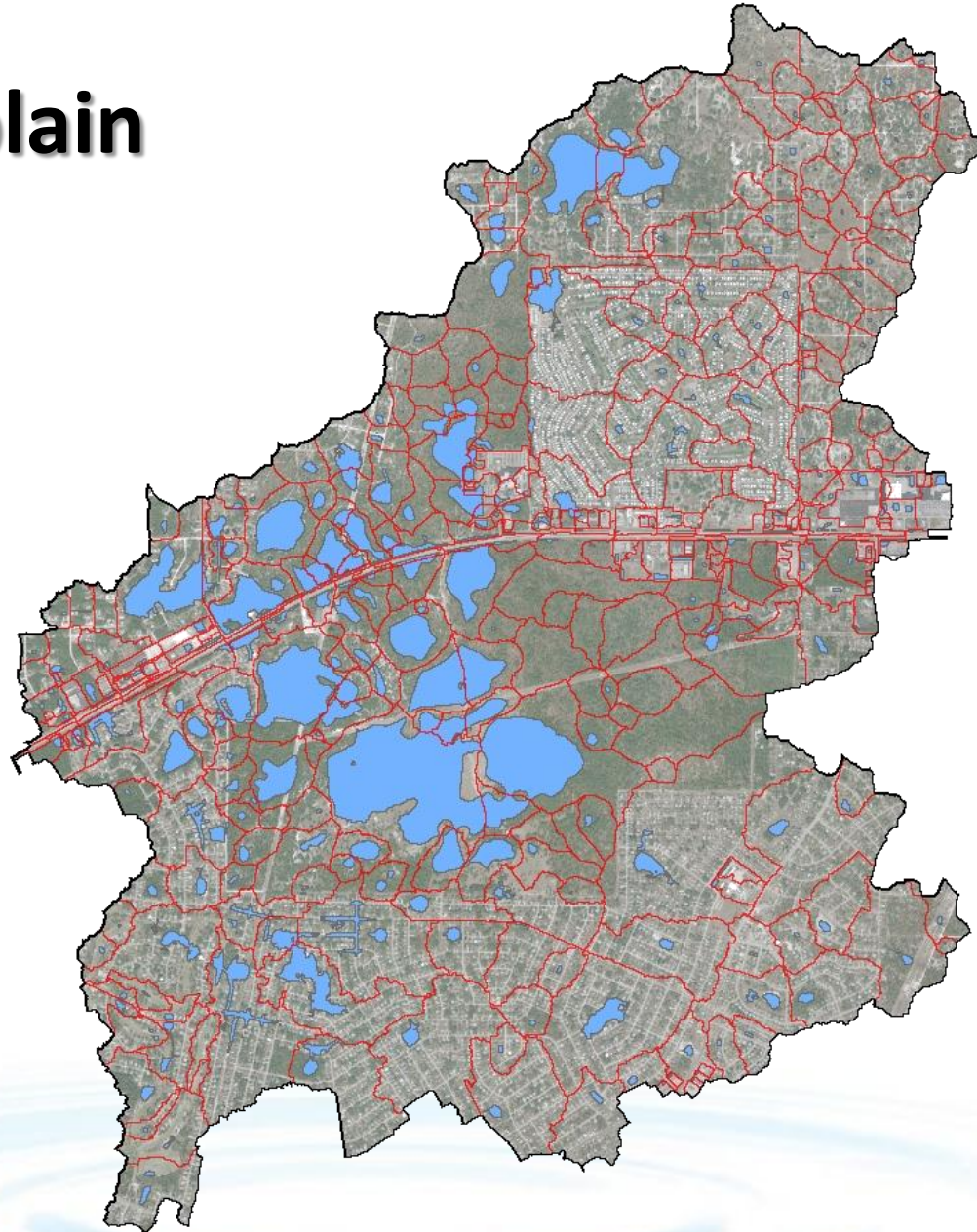
Model

- ❖ 412 Subbasins
- ❖ 435 Junctions
- ❖ Reaches
 - ❖ 80 Pipes
 - ❖ 1265 Weirs
 - ❖ 16 Drop Structures
 - ❖ 265 Percolation Links



Model Development

Floodplain



Peer Review

- Independent review
- Occur at :
 - Watershed Evaluation
 - Watershed Parameterization
 - Model Development/Floodplain Delineation
 - Open house / public comments

A Critical Step in the Process : Public Input

You are invited to attend! For more details, visit

<http://www.watermatters.org/floodplain>

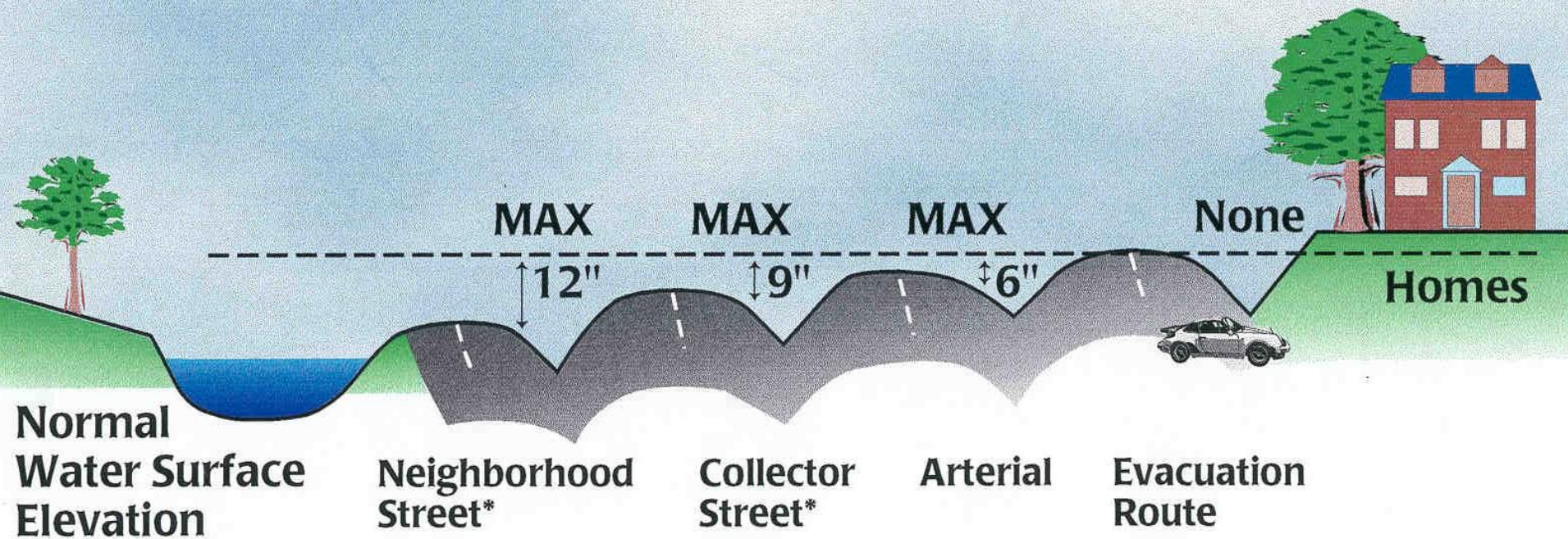


Alternative Analysis Tasks

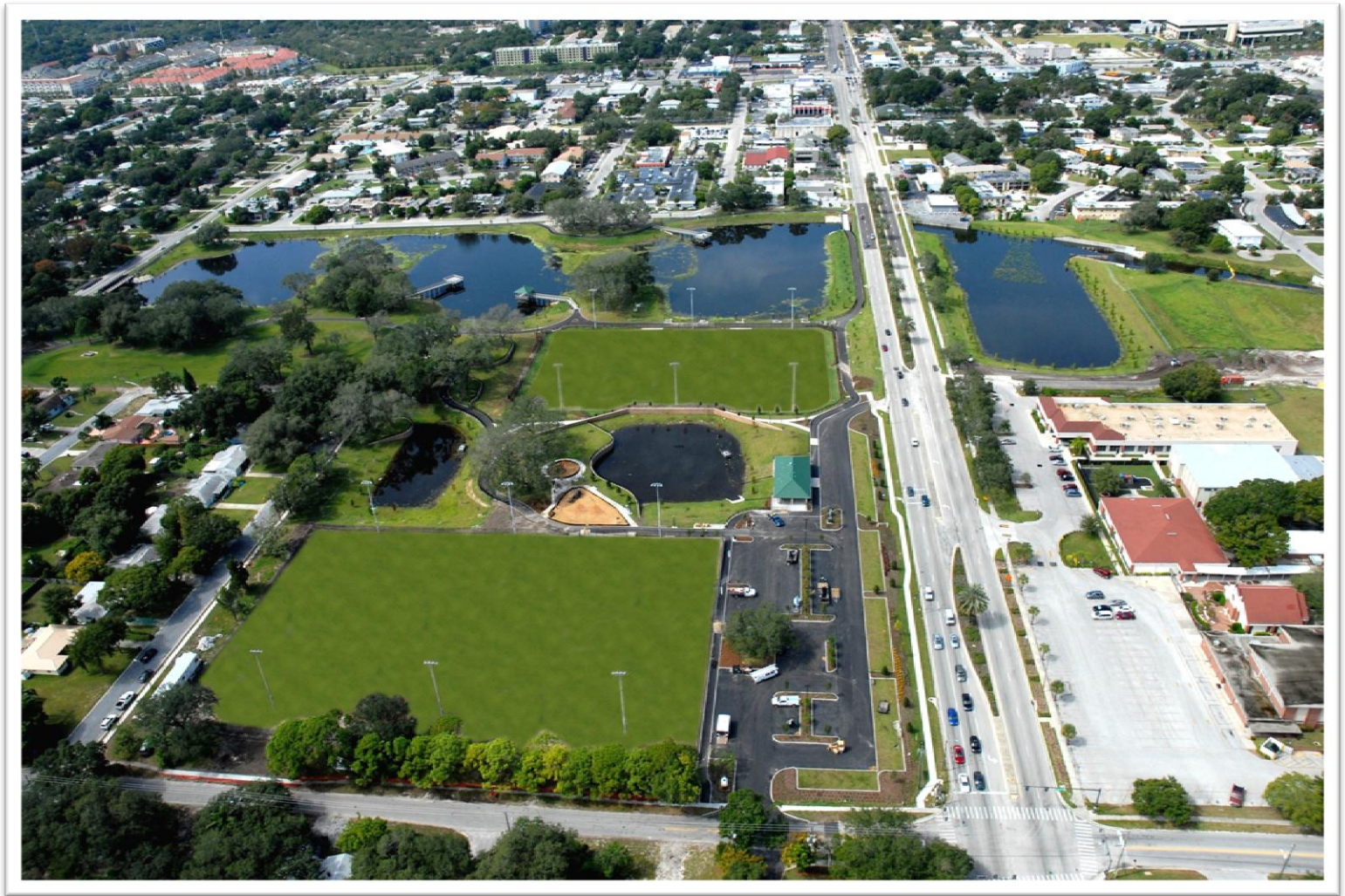
- Level of Service Determination
- Surface Water Resource Assessment
 - Pollutant Loading Model
- Flood Protection Alternative Analysis

Figure 2

Example Levels of Service Acceptable Flooding Criteria for the 100-Year Storm



* Neighborhood and collector streets should be passable for the 10 and 25-year storm flood, respectively.



Flood Protection Alternatives

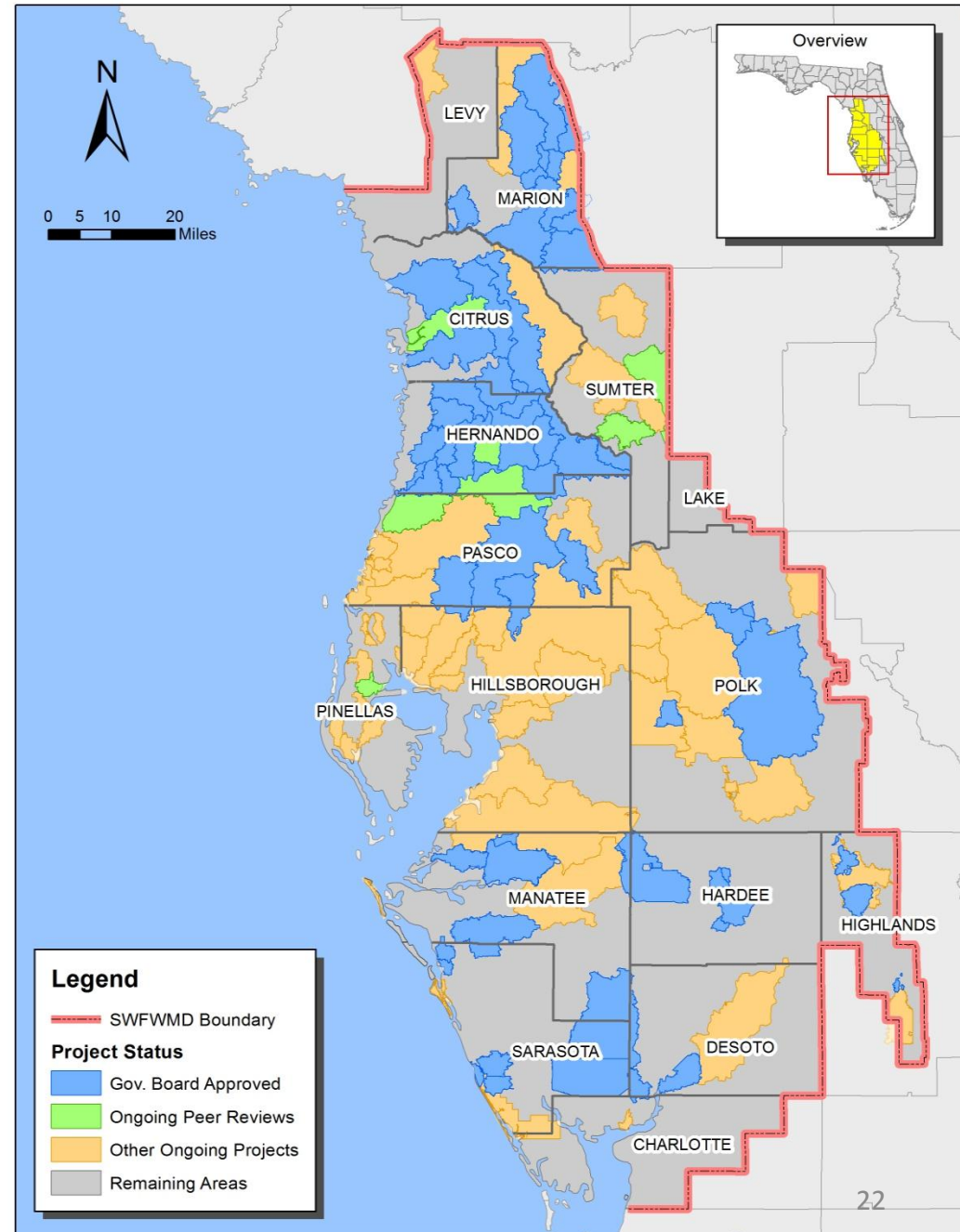
Surface Water Resource Assessment

- GIS based water quality assessment
- Spreadsheet pollutant loading model

WMP

Watershed Management Program

*Completed and Ongoing
Watershed Management Plans*



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