

**SEMINOLE COUNTY GOVERNMENT
AGENDA MEMORANDUM**

SUBJECT: Infrastructure Challenges

DEPARTMENT: Public Works **DIVISION:** Road Operations & Stormwater

AUTHORIZED BY: [Signature] **CONTACT:** [Signature] **EXT** 5710
Gary Johnson, P.E. Mark E. Flomerfelt, P.E., Mgr.
Director, Dept Public Works Road Operations & Stormwater

Agenda Date <u>06/10/03</u> Regular <input type="checkbox"/> Consent <input type="checkbox"/> Work Session <input type="checkbox"/> Briefing <input checked="" type="checkbox"/> Public Hearing – 1:30 <input type="checkbox"/> Public Hearing – 7:00 <input type="checkbox"/>
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MOTION/RECOMMENDATION:

For informational purposes only

BACKGROUND:

The purpose of this briefing is to provide an overview of the evolving infrastructure challenges faced by the Road Operations and Stormwater Division of the Public Works Department. Several operational programs have been added or enhanced over the past few years, including Sidewalks, Landscape Maintenance, Mosquito Control and the expanding requirements of the surface water quality NPDES Program. In addition, with greater than normal rainfall over the past 16 months, lake, river, stream and groundwater levels continue to rise, impacting the effectiveness of existing storage and conveyance systems during storm events. The status of related issues, programs and revenues will be summarized along with accomplishments and consequences.

Reviewed by:
Co Atty: <u>N/A</u>
DFS: <u>N/A</u>
Other: <u>N/A</u>
DCM: <u>[Signature]</u>
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File No. <u>BPWS01</u>

Attachment: Slide Presentation

Infrastructure

Challenges

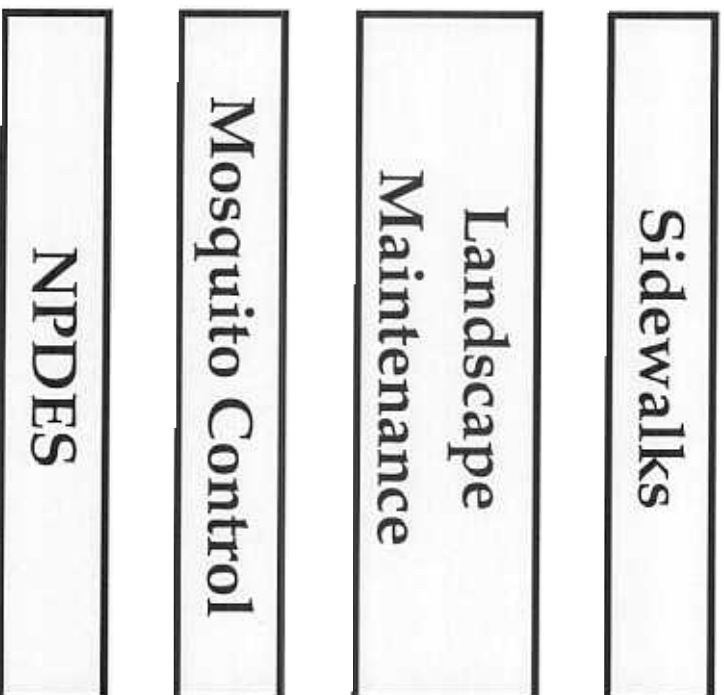
Road Operations & Stormwater Division

Department Of Public Works



Recently Added Operational Programs

Current Programs Include:

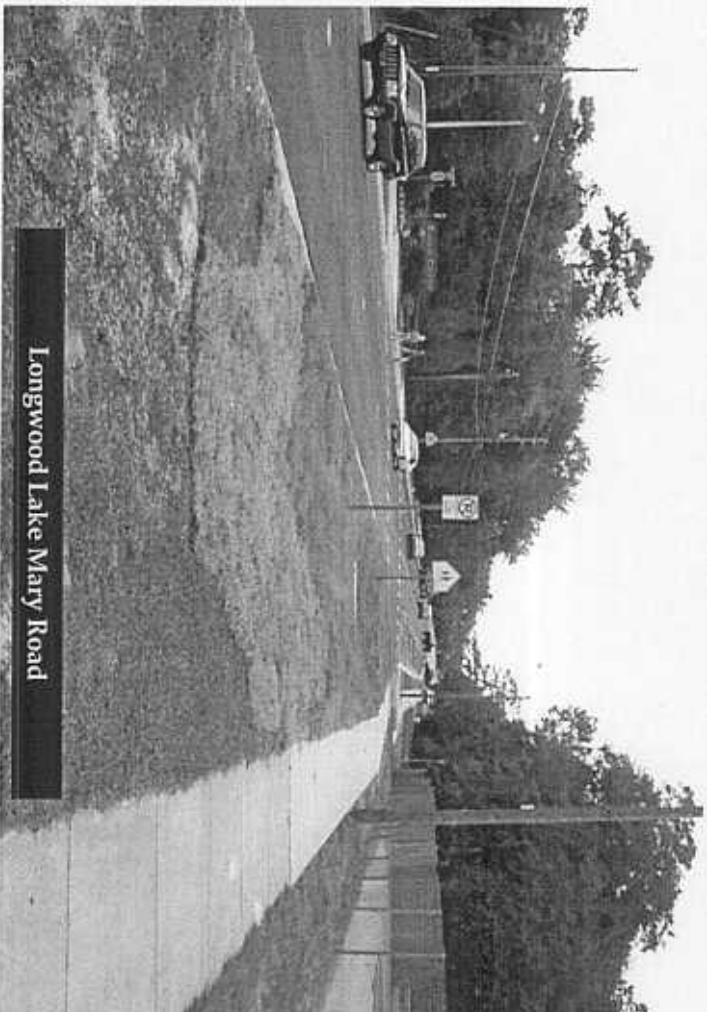


- Enhance Pedestrian safety
- Enhance Esthetics on collector roadways
- Reduce incidence of West Nile virus
- Comply with water quality regulations





Current Programs: Sidewalks



- 654 miles of existing sidewalk to maintain.
 - 40 to 60 miles per year of sidewalk added over next ten years.
 - 4 to 6 miles of existing sidewalk replaced per year.
- 400k to 500k for repair of sidewalks budgeted over next two years.





Current Programs: Landscaping



Example: C.R. 427 From General Hutchinson Blvd. to U.S. 17/92 = 2.1 miles

- Existing Two Lane maintenance costs (mowing) = \$2,500 per year
- Four Lane with Median maintenance costs (mowing, edging, fertilizer, bed maintenance and litter removal) = \$62,000 per year

\$2,500/yr versus \$62,000/yr

Prior Current





Current Programs: Mosquito Control 2003 Program



- Trap monitoring ongoing
- Spraying to begin late June
- 14 day cycle based on trap counts
- Limited Aerial Spraying

Ongoing commitment from transportation fund \$550,000 per year



NPDES Update

A different kind of challenge

5 Year Cycle - TMDL Watershed Approach

FY 01/02 Phase I. - Complete

- Preliminary Basin Evaluation

FY 02/03 Phase II. - Underway (complete September 2003)

- Coordinated Basin Monitoring

**Product: Assessment Report, verified
Impaired Waters List**

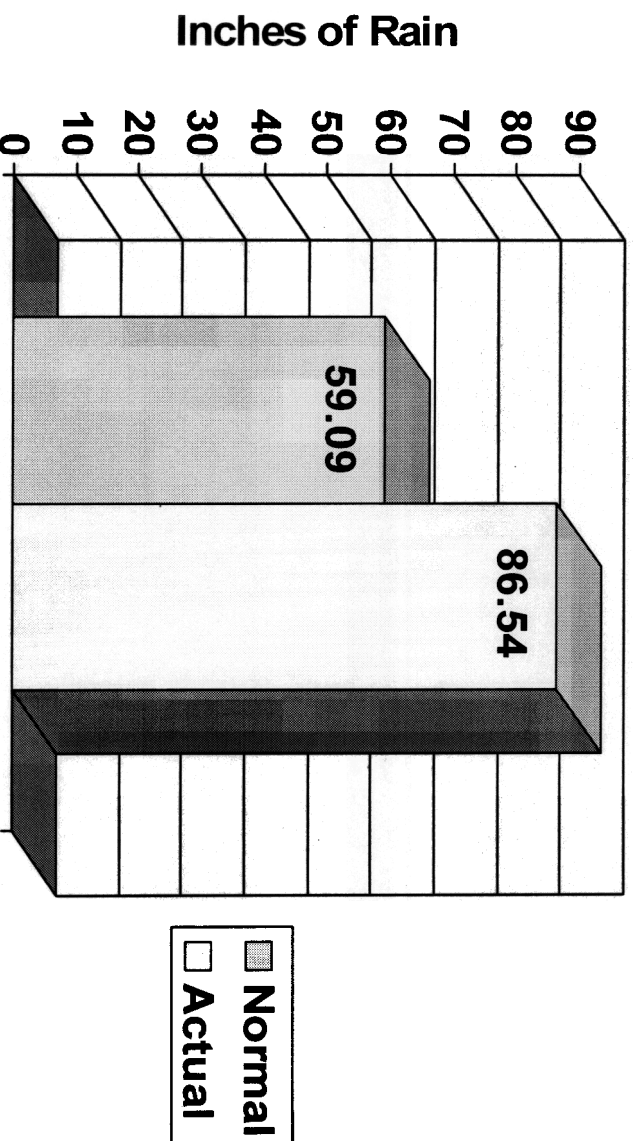
FY 03/04 Phase III. - Data Analysis & TMDL Development

FY 04/05 Phase IV. - Allocate Load Reductions with cities and others

- Develop Management Action Plan

FY 05/06 Phase V. - Implementation - Thru NPDES permit conditions

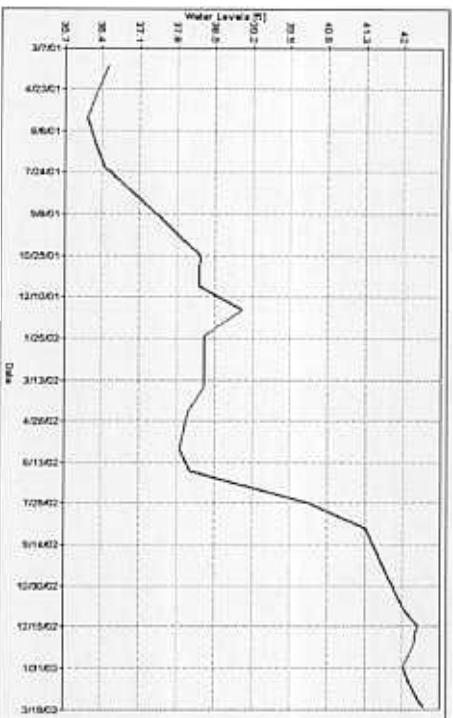




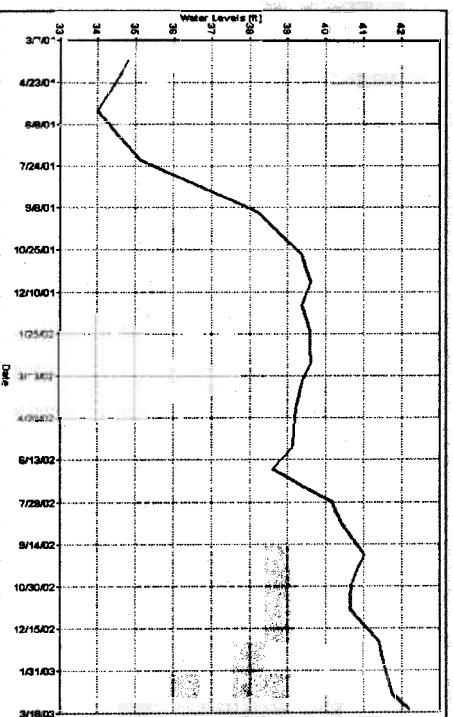
- For the last 16 months greater than normal rainfall has led to localized flooding. Already saturated ground has been unable to quickly absorb the extra water, generating large amounts of runoff and increasing the levels of our streams and lakes.
- Increase in Groundwater table is causing numerous pavement failures.



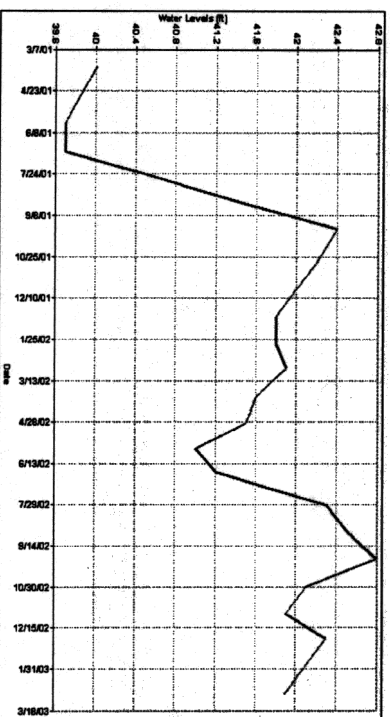
Rising Lake Levels



Silver Lake - Lake Jesup Basin (complete)



Sylvan Lake - Yankee Lake Basin funded 03/04

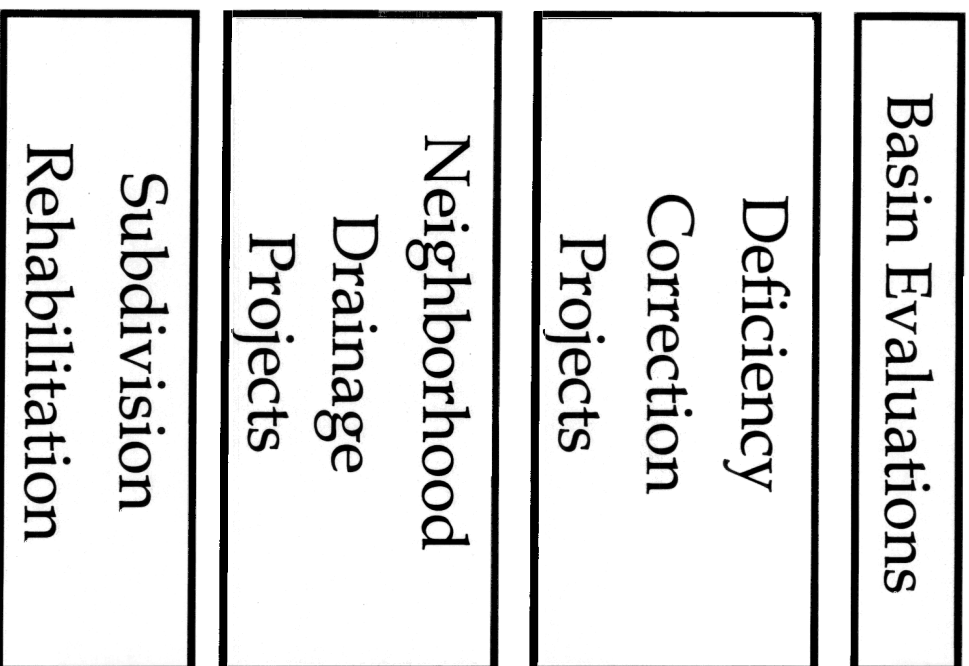


Lake Mills - Big Econlockhatchee Basin (not funded)

Rising Lake Levels over the last two years have occurred in Stormwater Basins for which Basin Evaluations have not been conducted.



Capital Improvement Program



- • • • •
- Ensure Public Safety • • • • •
- Enhance Water Quality • • • • •
- Meet NPDES/TMDL Requirements • • • • •
- Infrastructure Stewardship • • • • •

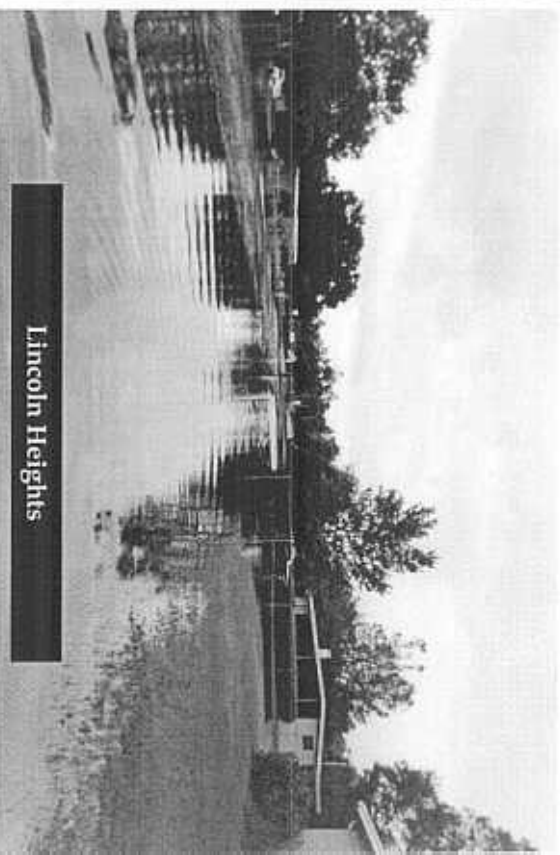




Deficiency Correction Projects

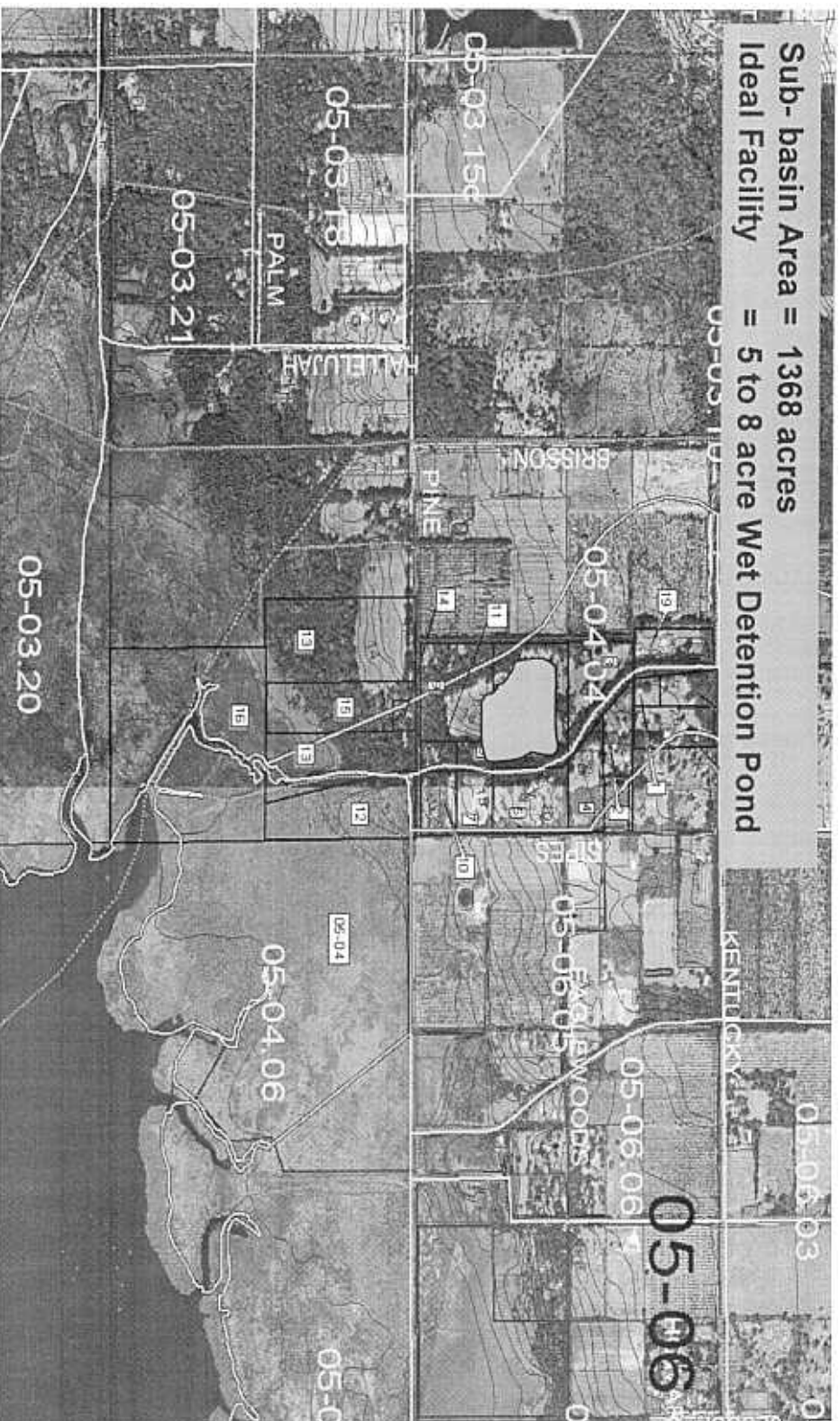
Primary Drainage System Only

97 Projects Not Funded



Navy Canal Regional Facility

One of several County Managed Projects which are State Funded



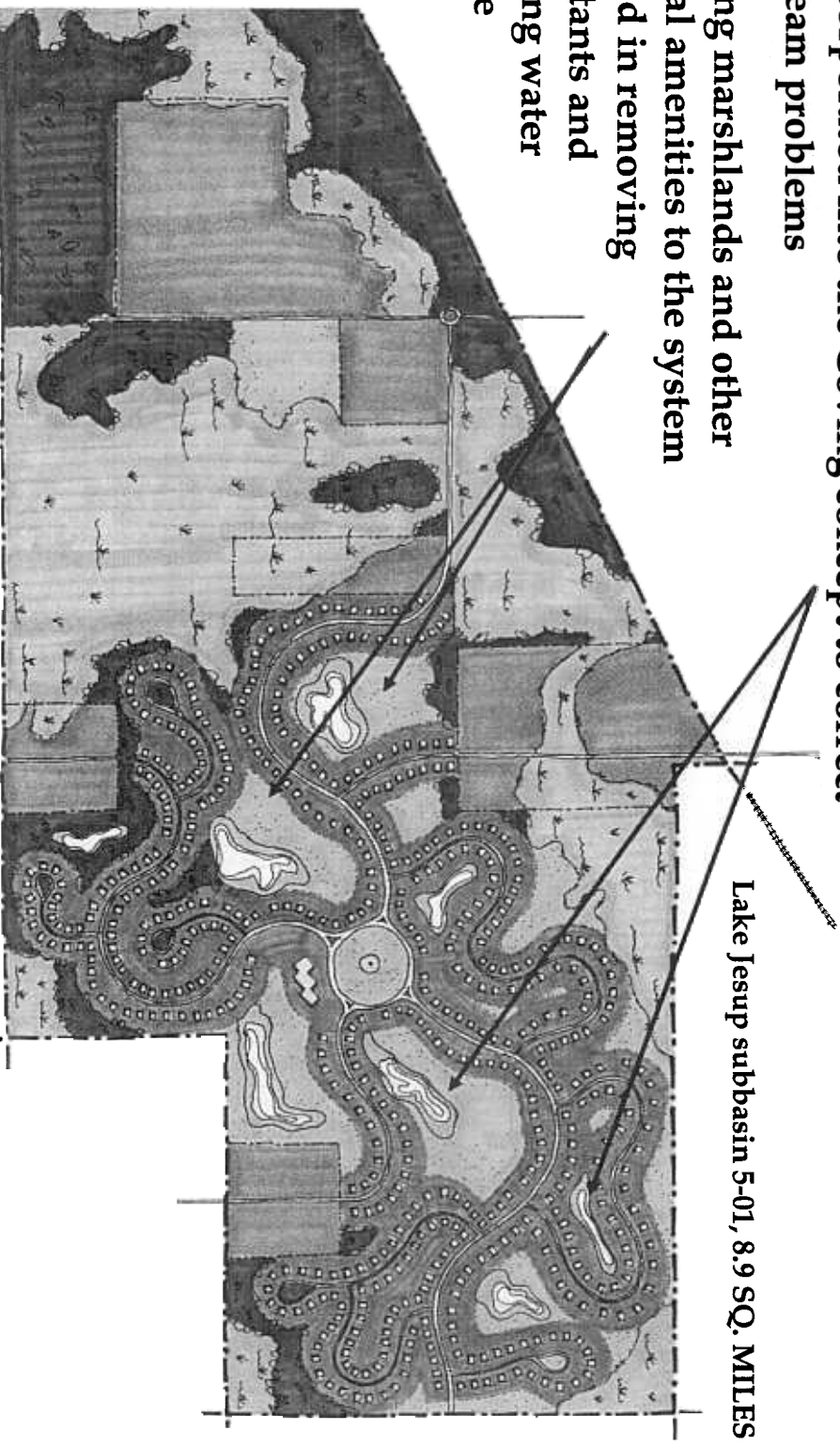
Future State Funding for projects like this may be jeopardized without County matching funds, due to competition from other Counties and Cities with matched funds.



Future Development Drainage Techniques

Features of Coving Community Example (Myrtle Street Area*)

- Enhancements to water quality and flood control could be incorporated into the Coving concept to correct upstream problems
- Adding marshlands and other natural amenities to the system can aid in removing pollutants and keeping water on site



Using Partnerships to Leverage Funds for Local Solutions
But no funds available for next two years

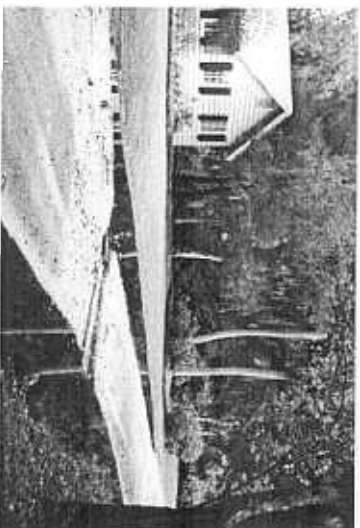


Neighborhood Drainage Projects

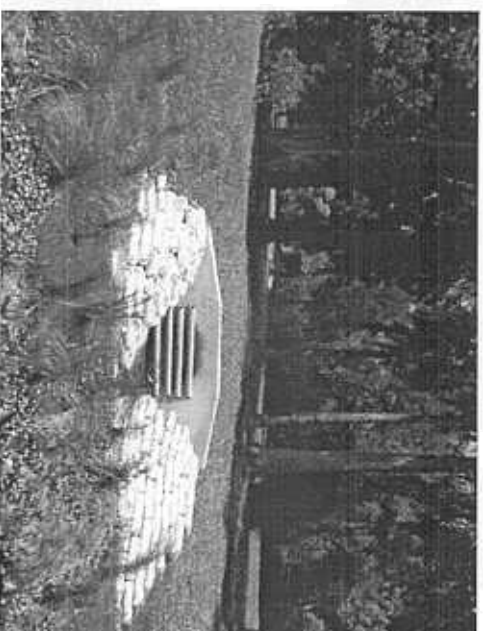
Indian Mound

Village

Completed 2000



Before

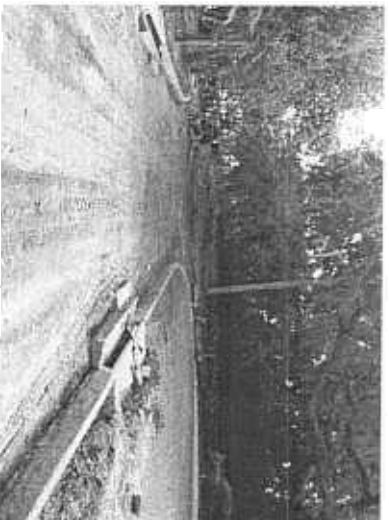


Complete



Before

- Storm Sewer/Roadway Reconstruction
- Water Quality Retrofit



During

- Small number of successful projects
- Very well received by residents



Neighborhood Projects Update

Transferred savings from completed projects have funded new projects.

Lake Mary B'vd./Sun Dr Evaluation	Construction Complete
Lake View Dr./Armory Lake	Construction Complete
Tiffany Woods	Construction Funded, Underway
Longwood Hills Rd.	R/W Underway Construction Funded
Osceola Curve 2	R/W Underway Construction Funded
Orange B'vd./Walden View Dr	Preliminary Design Funded, Underway
Mullet Lake Park Rd.	Preliminary Design Funded, Underway
S.R. 426 a Aloma Woods B'vd. Evaluation	Preliminary Design Funded, Underway
Oakhurst Outfall	Design Underway Construction Funded

Even Minor Projects take one to two years for Design, Permitting, R/W and Construction

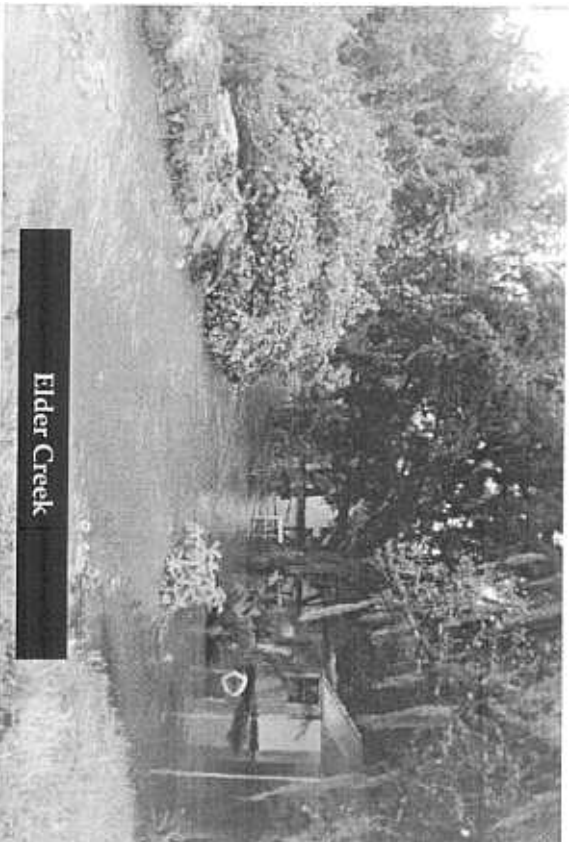


No further funding identified FY 02/03, FY 03/04 & FY 04/05

Neighborhood Drainage Projects

Additional 42 Projects Identified from Historical Problems

Types of Problems Include



Elder Creek



Ravenna Park

- Localized Flooding
- Erosion and Sedimentation



Subdivision Rehabilitation

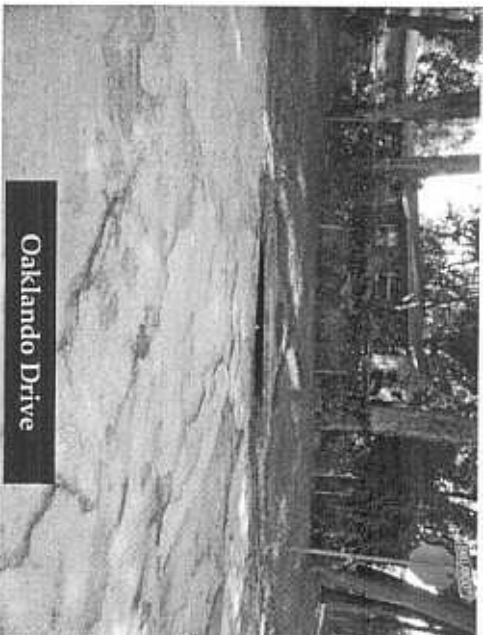
Reviewed 84 of 1,917 Subdivisions

Challenges Include

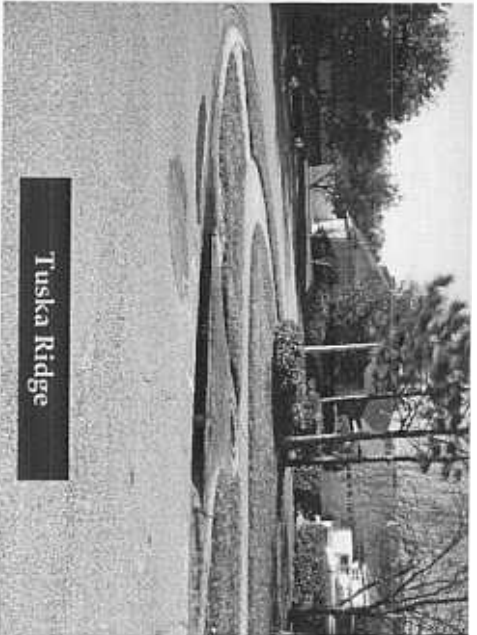
- Pipe Repair/Lining
- Underdrain Installation
- Manhole Repair/Lining
- RoadWay Reconstruction due to GWT
- Swale Restoration
- Water Quality Runoff Assessment

Considerations

- Aging subdivisions
- Large needs
- Emergency only



Oaklando Drive



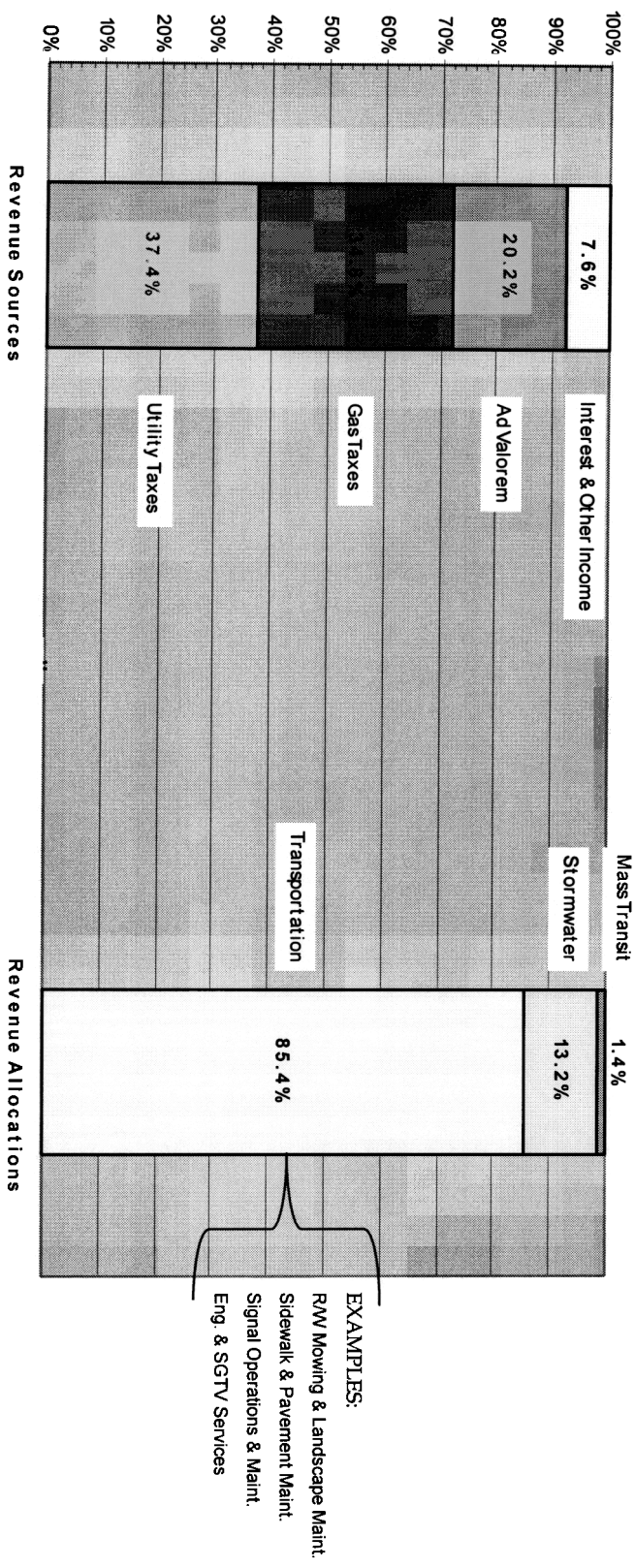
Tuska Ridge

Program does not fit within identified resources FY 03/04 & FY 04/05





Revenue Sources and Allocations



Approximately \$31M Recurring Annual Resources





Summary

Current programs consume currently allocated resources from Transportation Fund

Lacking additional funding sources, little can be done to address long term issues, partnership opportunities or capital needs

Projected 2 year budget has no funding for Capital projects
Deficiency Neighborhood and Rehabilitation.

