Meeting Agenda

- Project status
- Overview of stormwater drainage system
- Causes of flooding and alternatives
- Water quality issues
- Recommended areas for improvements
Objective of the Project

Study to identify system improvements to address flooding and water quality issues.
Project Schedule

- Phase I (current phase) to be completed by June 2007
- First Public Meeting – held on November 15, 2007
- Second Public Meeting – May 2, 2007
Project Status

- Completed data collection and evaluation
- Completed stormwater system inventory and mapping
- Identified problem areas with your participation
- Reviewed floodplain boundaries using 1-foot topographic contour data
- Evaluated conceptual system improvements to alleviate flooding and improve public safety
Overview of Drainage System

- 23 miles of swales and channels within Astor
- 15 miles within County’s maintenance jurisdiction
Overview of Drainage System (cont.)

- 983 Culverts in Astor
- 707 culverts within County’s maintenance jurisdiction
Overview of Drainage System (cont.)

Roads within County’s maintenance jurisdiction
Overview of Drainage System (cont.)
A large part of Astor lies within the natural floodplain of the St. Johns River.
Causes of Flooding

Inventoried and categorized known problems identified by public at first meeting
Causes of Flooding (cont.)

- Low-lying areas in flood zone
- Localized Problems
  - Downstream culverts and channels not functioning well or undersized
  - Inadequate or lack of drainage system
- Lack of maintenance
Causes of Flooding (cont.)

- Damaged Infrastructure
  - Soil subsidence
  - Blockage at inlet or outlet
  - Erosion at inlet due to unprotected entrance
- Poor design and construction
- Inadequate maintenance
Alternatives to Alleviate Flooding

- Improve, provide drainage system
  - Clean, repair, reconstruct or upsize culverts
  - Clean, repair or widen channels and swales
- Construct storage facilities
- Routine maintenance of culverts and channels
- Erosion control
  - Protect pipe inlets and outlets using wingwall, headwall or riprap, realigning culverts and/or energy dissipation
  - Bank stabilization
Solutions to Flooding (cont.)

- Public Safety Concerns
  - For low lying areas subject to impacts from the St. Johns River
  - Develop and implement a flood early warning system
Water Quality Improvement Options

- Source control
- Detention
- End-of-pipe treatment: conventional baffle boxes and vortex type units
- Constructing, improving and/or repairing swales
Prioritization of Stormwater Management Needs

- Assigned a score to each street segment for following categories:
  - Public Safety (30%)
  - Flood Severity (25%)
  - Swale Condition (15%)
  - Location within Floodplain (15%)
  - Structural Maintenance (15%)
Public Participation Program

- Public Meetings & Public Information Brochure
- Project Website
- Lake County Board of County Commissioner (BOCC) Meetings

http://www.co.lake.fl.us/departments/public_works/engineering/astor_flood_study/
Your Feedback is Most Important!

- Please sign in on the sign-in sheet
- Please fill out comment forms provided
- Please be as specific as possible (i.e., nature of the problem location)
- Representatives from the County and CDM are available to answer your questions
- More information is provided at the workshop stations
Workshop Stations

- Station 1 - Existing system information
- Station 2 - Problem Areas/Causes of Flooding (localized flooding vs. floodplain flooding/low areas)
- Station 3 - Structural Improvements (activities that can be undertaken to help alleviate flooding for localized problems)
- Station 4 - Flood Early Warning System
County Contact Information

Lake County Public Works
437 Ardice Avenue
Eustis, FL 32726
(352) 483-9000

MHamilton@co.lake.fl.us