

# SOUTH JERSEY LEVEE INVENTORY

Sponsored by the Delaware Estuary Levee Organization (DELO)  
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# WHAT IS DELO?

- The Delaware Estuary Levee Organization (DELO) is an organization made up of representatives of meadow bank companies, twenty-five municipalities, three soil conservation districts, and four counties including planning boards, emergency management, public works, and mosquito commissions.
- DELO is sponsored by the South Jersey Resource Conservation and Development (RC&D) Council, a Non-Profit.



# WHY *DELO*?

Hurricane  
Katrina

New Orleans  
August 29, 2005

# Why DELO?

- Long term history of levees in South Jersey
- Changes in the levee-protected land uses from agriculture to residential, industrial and other uses
- Difficulty in finding necessary funding for maintenance of levees by counties, municipalities and others
- “Orphaned” structures may be putting lives and property at risk

# What we've done?

- DELO was formed in November 2005 as a response to the Katrina disaster.
- DELO met as a group six times in the following year concluding:
  - We don't know how many levees we have, their condition, their risk.
  - Many levees that protect lives and property are "orphaned".
  - A levee inventory was identified as needed

# INITIATIVE

DELO's priority objective is to complete a levee inventory in the following counties:

- Cape May
- Cumberland
- Gloucester
- Salem



# Levee Inventory Purpose

- To Identify and characterize the location, extent and condition of existing levees/dikes in South Jersey
- To determine the amount, type and extent of vulnerability of people and property protected by these levees including agricultural acreages and businesses.

# Cooperating Agencies

- USDA Natural Resources Conservation Service



- New Jersey Department of Environmental Protection



- U.S. Army Corps of Engineers



# COORDINATION

- NJDEP, USACE and NRCS will be partners with DELO on this initiative
- NJDEP Bureau of Dam Safety and Flood Control will provide funding for the Levee Inventory to NRCS through the USACE Delaware River Comprehensive, New Jersey Interim Feasibility Study

# COORDINATION

- NRCS will be coordinating with USACE
  - USACE known to be working on National Levee Database (NLD)
  - Intent to avoid duplication of effort
  - Requested info on data fields in NLD
  
- NRCS will be coordinating the Levee Inventory with a NJOEM/FEMA-funded Multi-Jurisdictional Hazard Planning initiative here

# Steering Committee

➤ Made up of representatives of:

DELO

DRBC

NJDEP

USACE

USDA NRCS

# Steering Committee Role

- To meet on an as-needed basis for inputs to project and reviews of various drafts of output products.

# Levee Inventory Process

- Identify Existing Levees through contacting and meeting with:

County Engineers

County Planners

County Mosquito Commissions

Soil Conservation Districts

County Agricultural Agents

Local municipal contacts

Others

- Levee owner identification/contact/obtain permission to access levee

# Levee Inventory Process

- Methods to be used for elevations and location determinations will include:
  - Light Intensity Distance and Ranging (LIDR)
  - Global Positioning System (GPS)
  - Traditional on-site leveling

# Levee Inventory Work Products

- Identified conditions (per Corps of Engineers Standards) including:
  - Levee Characteristics/Condition
  - Unwanted Vegetation Growth
  - Sod Cover
  - Encroachment
  - Closure Structures
  - Slope Stability
  - Erosion/Bank Caving
  - Settlement
  - Depressions/Rutting
  - Cracking
  - Animal Control
  - Culverts/Discharge Pipes
  - Riprap revetments and bank protection

# Levee Inventory Work Products (Continued)

- Photos of Levee and Its Condition
- Historic Flood of Record
- \*Area Protected (acres/square miles)
- \*Acres of agricultural land protected
- \*Number of homes/businesses/structures protected
- \*Population of Area Protected
- \*Roads, railroads and utilities protected (feet)
- FIRM shows levee as providing flood protection
- Certification Status (FEMA CFR 44 Section 65-10)
- Photos
- GIS/GPS/Other Data Base
- Summary Report

# Outcome of Inventory

Heavily dependent on:

- Local people providing information on levee location and ownership
- Property owners giving permission for accessing their levees
- Weather conditions to do the in-the-field inventory

# Levee Inventory Timeframe

- Levee owner identification and permission with assistance from County, Municipal and others in Winter 2008-2009
- Digitize levee location and extent using LIDR information Summer 2009
- Physical inventory of levee for condition analysis Spring-Fall 2009
- Project to be completed in Spring 2010

# Questions?

