A Flood Mitigation Plan for the Non-Tidal N.J. Section of the Delaware River Basin

Delaware River Basin Commission
DELAWARE · NEW JERSEY
PENNSYLVANIA · NEW YORK
UNITED STATES OF AMERICA

Hunterdon County Kick-off Meeting

December 4, 2006

The Delaware River….

crosses many boundaries

- Four states: DE, PA, NJ, NY
- 25 congressional districts
- 2 FEMA Regions
- 2 EPA Regions
- 5 USGS offices
- 4 NRCS state offices
- 42 counties
- 838 municipalities

…. coordination is critical for effective flood loss reduction

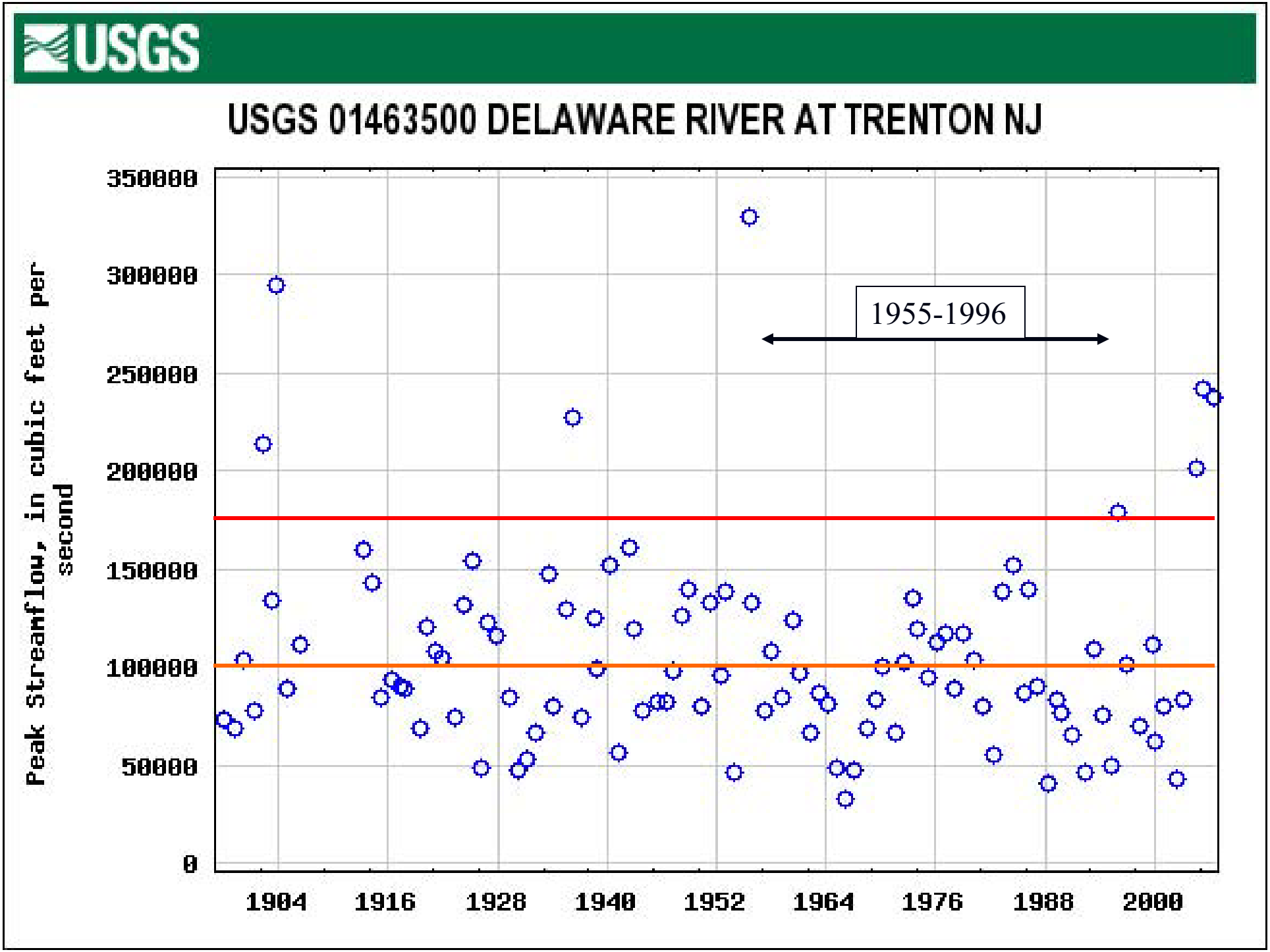
September 2004

April 2005

June 2006

Stockton, NJ - April 2005

Three Major Floods along the Main Stem Delaware River in less than Two Years


USGS
USGS 01463500 DELAWARE RIVER AT TRENTON NJ
Peak Streamflow, in cubic feet per second
350000
300000
250000
200000
150000
100000
50000
0
1904
1916
1928
1940
1952
1964
1976
1988
2000
1955-1996

- We need to plan based on the range of conditions, not averages.
- Floods will occur. We can not stop the flood waters, but we can reduce the losses and damages from flooding. A floodplain is a natural extension of a river. It should be expected to flood.
- No one set of mitigation measures will stop flooding along the Delaware. It is only through a combination of ***regional and local*** measures that the impacts of flooding will be reduced.

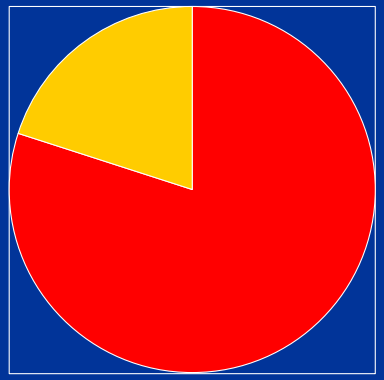
Current Ongoing Initiatives

- Delaware River Basin Interstate Flood Mitigation Task Force (DRBC)
- Flood Analysis Model (DRBC)
- Interim Spill Mitigation Program (DRBC)
- Multi-Jurisdictional Use and Management of Water Resources for the Delaware River Basin, NY, PA, NJ & DE (US Army Corps of Engineers, DRBC)
- Delaware River Flood Risk Verification Study (FEMA Region III)

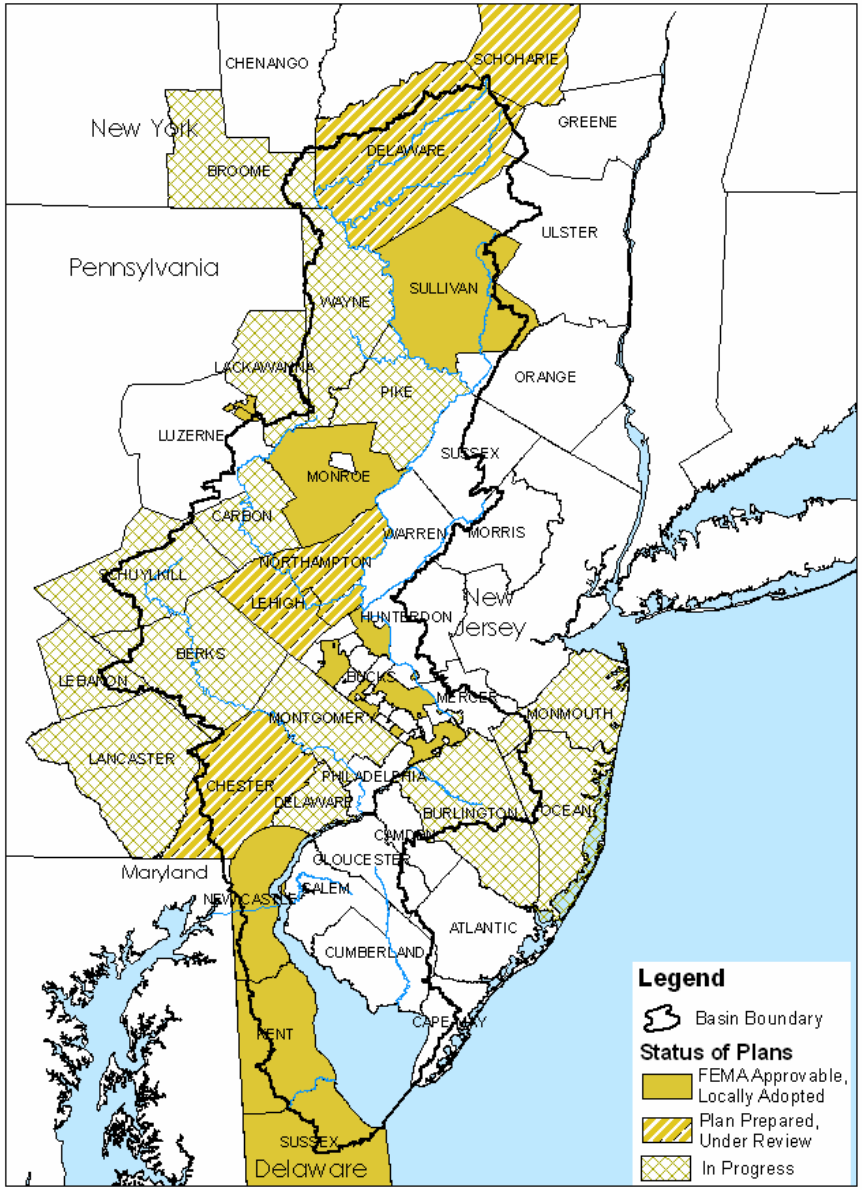
Current Ongoing Initiatives -Continued-

- Interim Feasibility Study for New Jersey (NJDEP, US Army Corps of Engineers)
- Updated Floodplain Mapping (NJDEP)
- Updated Flood Hazard Area Control Act Rules (NJDEP)
- Multi-Jurisdictional Flood Mitigation Plan (DRBC, NJDEP, NJOEM)

Flooding is NJ's #1 Natural Hazard.



Status of All Hazards Mitigation Plans in the Delaware River Basin



Source: Federal Emergency Management Agency (FEMA) and County Planning Departments, 09/20/06.

Proposed Study Area:

Municipalities located in the non-tidal, NJ section of the Delaware River Basin.

Hunterdon:
16 Municipalities

Mercer:
9 Municipalities

Sussex:
17 Municipalities

Warren:
22 Municipalities

Total:
64 municipalities

Comprehensive Flood Mitigation

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The Benefits and Importance of a Flood Mitigation Plan:

- It will identify areas vulnerable to flooding,
- It will identify actions that can be taken to reduce damages to life and property; such as buying or elevating buildings subject to repeat flooding;
- It will contain a prioritized list of local mitigation sources to influence funding sources.
- It will enable your municipality to become eligible for federal funds aimed at flood mitigation

Answers to a Few Important Questions

1. What will the final plan look like?

2. What is the proposed planning process and anticipated timeline?

3. What help will be provided?

4. What is required of our municipality to participate?

A Multi-Jurisdictional Flood Mitigation Plan for the Non-Tidal N.J. Section of the Delaware River Basin

-Table of Contents-

Executive Summary

Section 1: Introduction *(DRBC will draft)*

Purpose and Scope of Plan .....
About the Delaware River Basin .....
Profile of the Study Area .....
Organization of the Plan .....

Section 2: Planning Process *(DRBC will draft, local data included)*

Preparation of the Plan.....
The Regional Planning Team .....
Meetings and Workshops .....
Municipal Participation .....
Involving the Public.....
Involving Stakeholders .....
Review and Incorporation of Existing Information.....

Section 3: Hazard Identification and Analysis *(DRBC will draft, local data included)*

Description of Existing Hazard .....
History of Past Events .....
Location of Hazardous Areas .....
Probability of Future Occurrence .....

Section 4: Vulnerability Assessment *(DRBC will complete based on local survey data)*

Overview.....
Identifying People and Property at Risk.....
Estimating Potential Damages and Losses .....
Analyzing Land Use and Development Trends.....

DRAFT

/3 At 1.1" Ln 1 Col 1 REC TRK EXT OVR
Sweeper | Delaware River Basi... | Sussex County Kick... | Sussex County Kick-... | Flood TOC - Microso... | Document1 - Micros...

Section 5: Capability Assessment ***(DRBC/NJDEP will compile based on local survey)***
Local Capabilities .....
County Capabilities .....
Delaware River Basin Commission Capabilities .....
State and Federal Capabilities .....
Conclusion .....

Section 6: Mitigation Strategy ***(DRBC/NJDEP will draft based on County/Municipal input)***
Mitigation Vision, Goals and Objectives .....
Identification and Analysis of Mitigation Measures .....
Prioritization Process .....

Section 7: Basinwide Mitigation Actions ***(DRBC will draft based on County/Regional input)***
Collective Mitigation Actions .....
DRBC Mitigation Actions .....

Section 8: Mitigation Actions of each Jurisdiction ***(County/Municipal responsibility)***
Hunterdon County .....
Alexandria Township .....
Bethlehem Township .....

Bloomsbury Borough .....
Delaware Township .....

Alpha Borough.....
Belvidere Township .....
Blairstown Township.....
Franklin Township.....
Frelinghuysen Township .....
Greenwich Township.....
Town of Hackettstown .....
Hardwick Township.....
Harmony Township .....
Hope Township.....
Independence Township.....
Knowlton Township .....
Liberty Township.....
Lopatcong Township .....
Mansfield Township .....
Oxford Township.....
Town of Phillipsburg .....
Pohatcong Township .....
Washington Borough.....
Washington Township .....
White Township.....

Section 9: Plan Maintenance Procedures ***(DRBC will draft based on County input)***

Monitoring, Evaluating and Updating the Plan – Annual Cycle.....
Monitoring, Evaluating and Updating the Plan – Five Year Cycle.....
Incorporation into Existing Planning Mechanisms.....
Continued Public Involvement .....

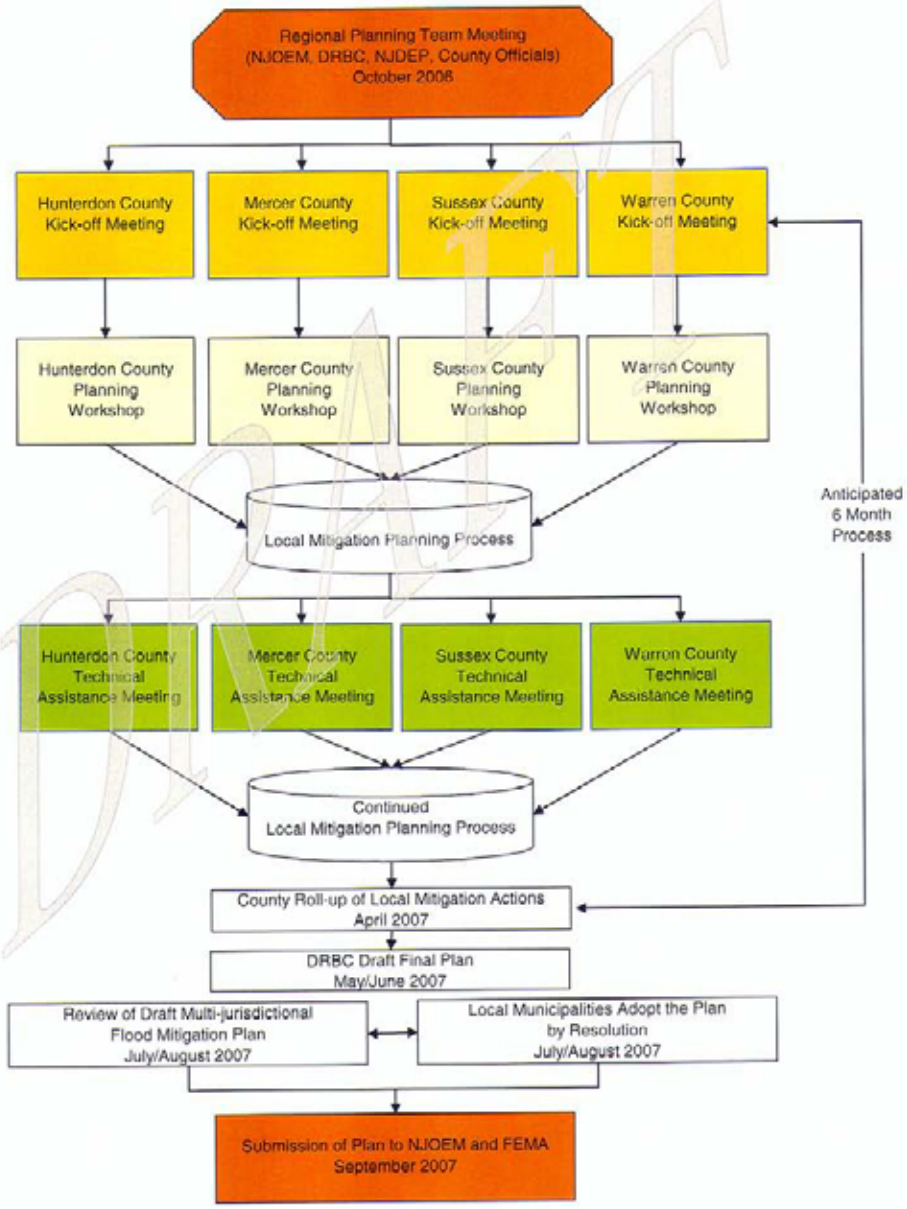
Section 10: Adoption Resolutions ***(Provided to DRBC by local municipalities)***

Mitigation Actions can Include:

- Stormwater improvements
- Acquisition and elevation programs
- Structural projects
- Flood Preparedness/warning
- Strengthening of local floodplain or other regulations
- Training
- Public information/community outreach
- Dam inundation mapping

A Multi-Jurisdictional Flood Mitigation Plan for the Non-Tidal N.J. Section of the Delaware River Basin

-Planning Process-



aware River Basin Commission's Home Page - Microsoft Internet Explorer

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http://www.drbc.net

drbc Go Bookmarks 7 blocked Check Look for Map AutoFill Send to Settings Norton Internet Security

Delaware River Basin Commission

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Welcome to the Delaware River Basin Commission's Web Site

"A river is more than an amenity, it is a treasure."
(U.S. Supreme Court Justice Oliver Wendell Holmes, 1931 Delaware River Diversion Case)

What We Do

Who We Are

Where We Are

Delaware Estuary Program

Basin Location Map

Search this Site

HIGHLIGHTS

Reservoir Storage Graph

Flow & Storage Data

Toxics and PCB Information

Water Resources Plan (Basin Plan)

"Ed. Web" Education Web Page

WHAT'S NEW?

Interstate Flood Mitigation Task Force

Multi-Jurisdictional Flood Mitigation Plan for the Non-Tidal N.J. Section o the Delaware River Basin

Resolutions to Address Flooding Adopted at the September 27 DRBC Meeting *Including* Explanation of Temporary Spill Mitigation Program

Next DRBC Meeting - Tuesday, December 12, 2006

Inter

art Spy Sweeper Delaware River Basin ... Microsoft PowerPoint ...

A Multi-Jurisdictional Flood Mitigation Plan for the Non-Tidal N.J. Section of the DRB - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites

Address http://www.state.nj.us/drbc/Flood_Website/NJmitigation/index.htm

Google drbc Go Bookmarks 7 blocked Check AutoLink AutoFill Send to drbc Settings Norton Internet Security

A Multi-Jurisdictional *Flood* Mitigation Plan for the Non-Tidal N.J. Section of Delaware River Basin

Background Information

- Why Should Your Municipality Get Involved?
- Plan Area
- Roles and Responsibilities Overview *(Adobe Reader required to view)*
- County and Regional Meetings Information
- Recent Flooding History

Mitigation Planning Tools

- Flood Insurance Claims in the Delaware River Basin
- Flood Insurance Claims in the Plan Area *-- coming soon*
- Summary of FEMA Flood Insurance Studies in the Plan Area *(Adobe Reader required to view)*
- Planning Tools and Other Resources

(Above: Frenchtown, N.J. during the June 2006 Flood. Photo taken by Robert Limbeck, DRBC staff)

Goal:

To make the Delaware River Basin more disaster resistant by reducing the long-term risks to loss of life and property from flooding.

Objective:

To form a multi-agency (N.J. Office of Emergency Management/Delaware River Basin Commission/N.J. Department of Environmental Protection) and local planning effort that results in the development and local adoption of a multi-jurisdictional Flood Mitigation Plan for a portion of the Delaware River Basin.

Internet

start Spy Sweeper A Multi-Jurisdictional ...

Three Planning Levels to this Initiative

Lambertville, NJ - April 2005

- Local Municipalities
- Regional Planning Team
- Project Management Team

Regional Planning Team

- County Emergency Management and Planning Officials
- Delaware River Basin Commission
- New Jersey Department of Environmental Protection
- New Jersey Office of Emergency Management

Products/Services to be Provided by Project Management Team

- Flood hazard identification and vulnerability assessment (HAZUS)
- GIS Analysis of flood insurance claims and repetitive loss properties
- Historic flood damage costs by county and municipal damage areas
- Basin-scale mitigation strategies and priorities
- Compendium of local mitigation strategies

Products/Services to be Provided (cont.)

- DRBC Flood Mitigation Website to disseminate products and planning tools
- Facilitation of two meetings per county with municipalities
- Planning Workshops
- Draft/Compile Final Plan

Repetitive Loss Properties

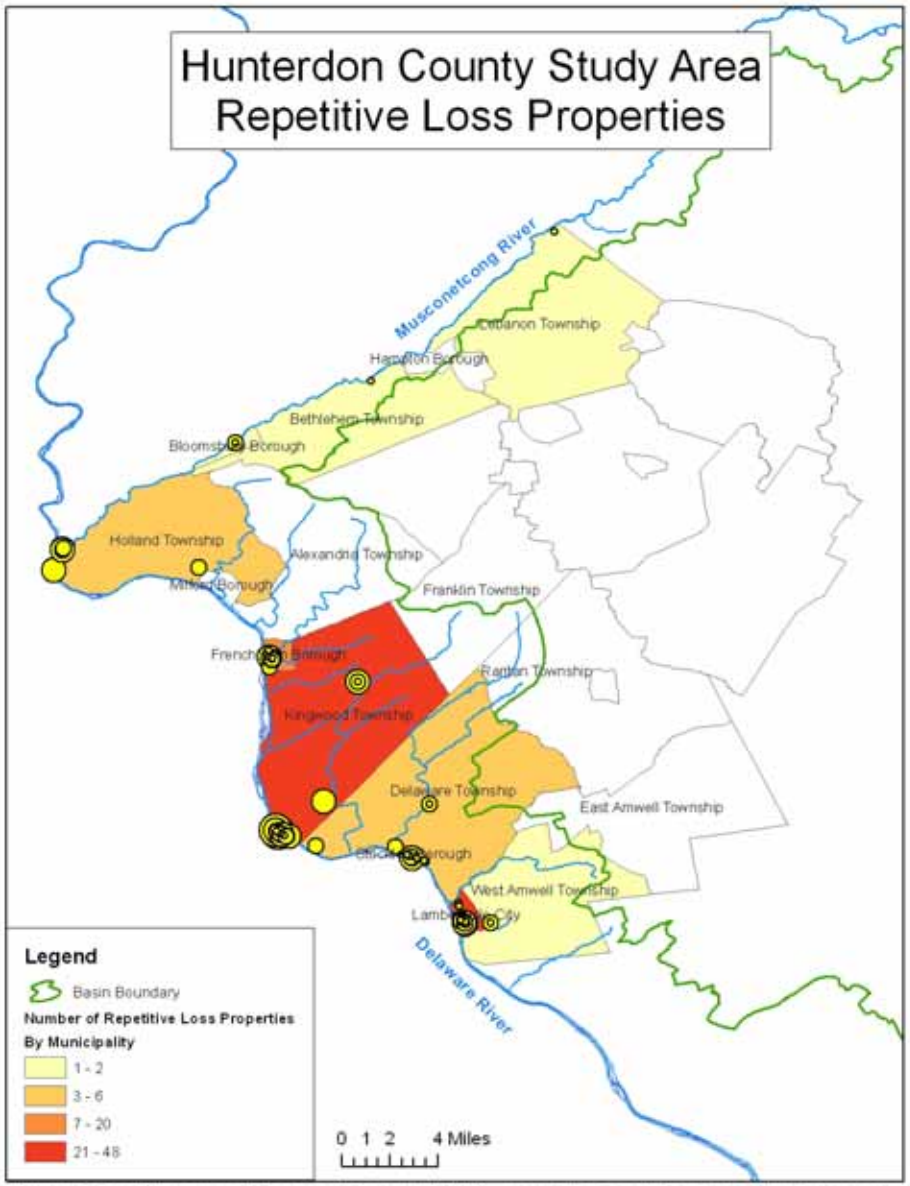
Hunterdon County:

125 Repetitive Loss Properties

$9 Million in Total Payouts

Municipalities with the most Loss Properties:

	Properties	Cost
Lambertville	48	$2.1M
Kingwood	28	$3.5M
Frenchtown	19	$1.2M
Stockton	12	$0.8M
Holland	6	$0.7M
Delaware	6	$0.4M



Source: Federal Emergency Management Agency (FEMA). A property is considered a repetitive loss property when there are 2 or more losses reported which were paid more than $1,000 for each loss. The 2 losses must be within 10 years of each other and be as least 10 days apart. Losses from 01/01/1978 - 08/31/06 that are closed are considered.

Prepared by Delaware River Basin Commission Staff, October 2006.

Severe Repetitive Loss Properties

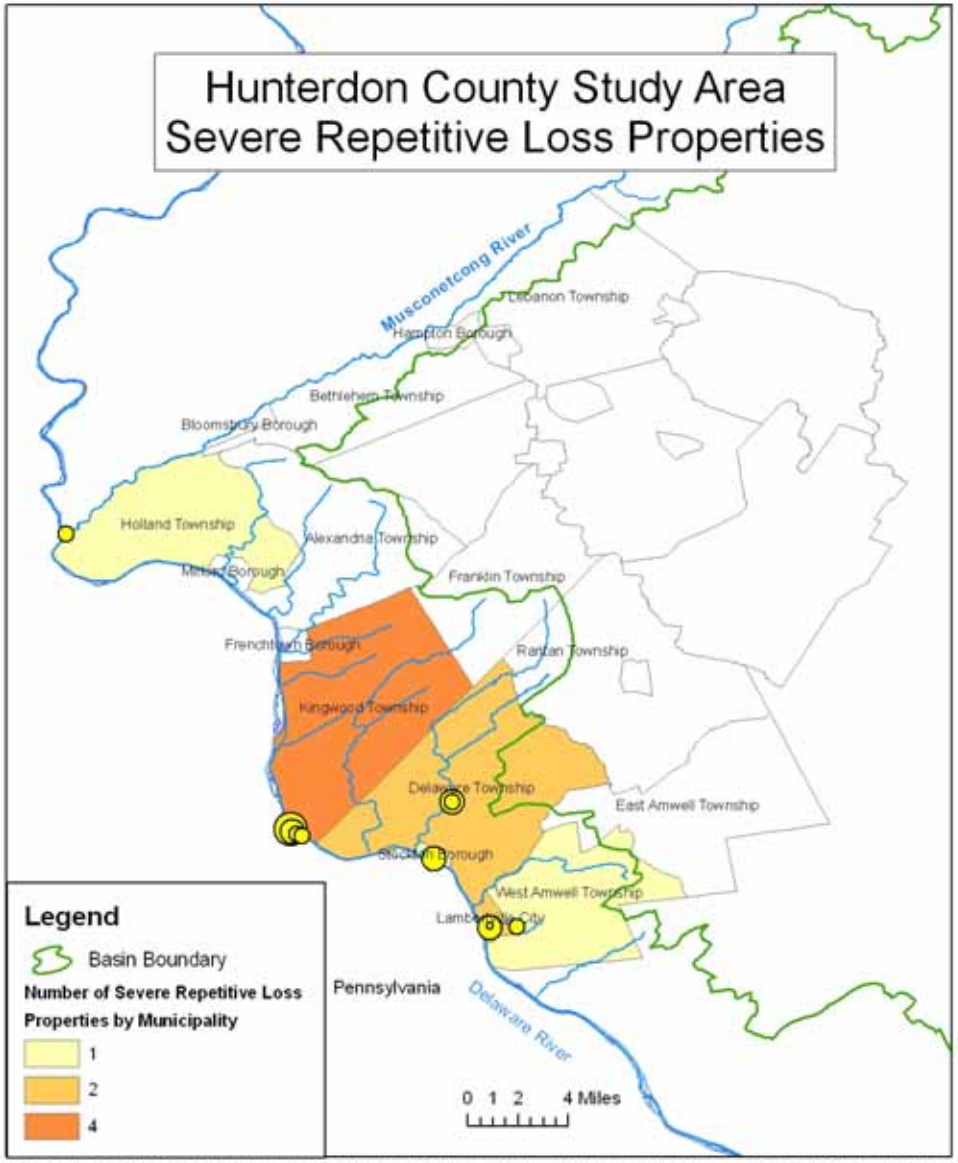
Hunterdon County:

11 Severe Rep Loss Properties

$1.7 Million in Total Payouts

Municipalities with the most Severe Repetitive Loss Properties:

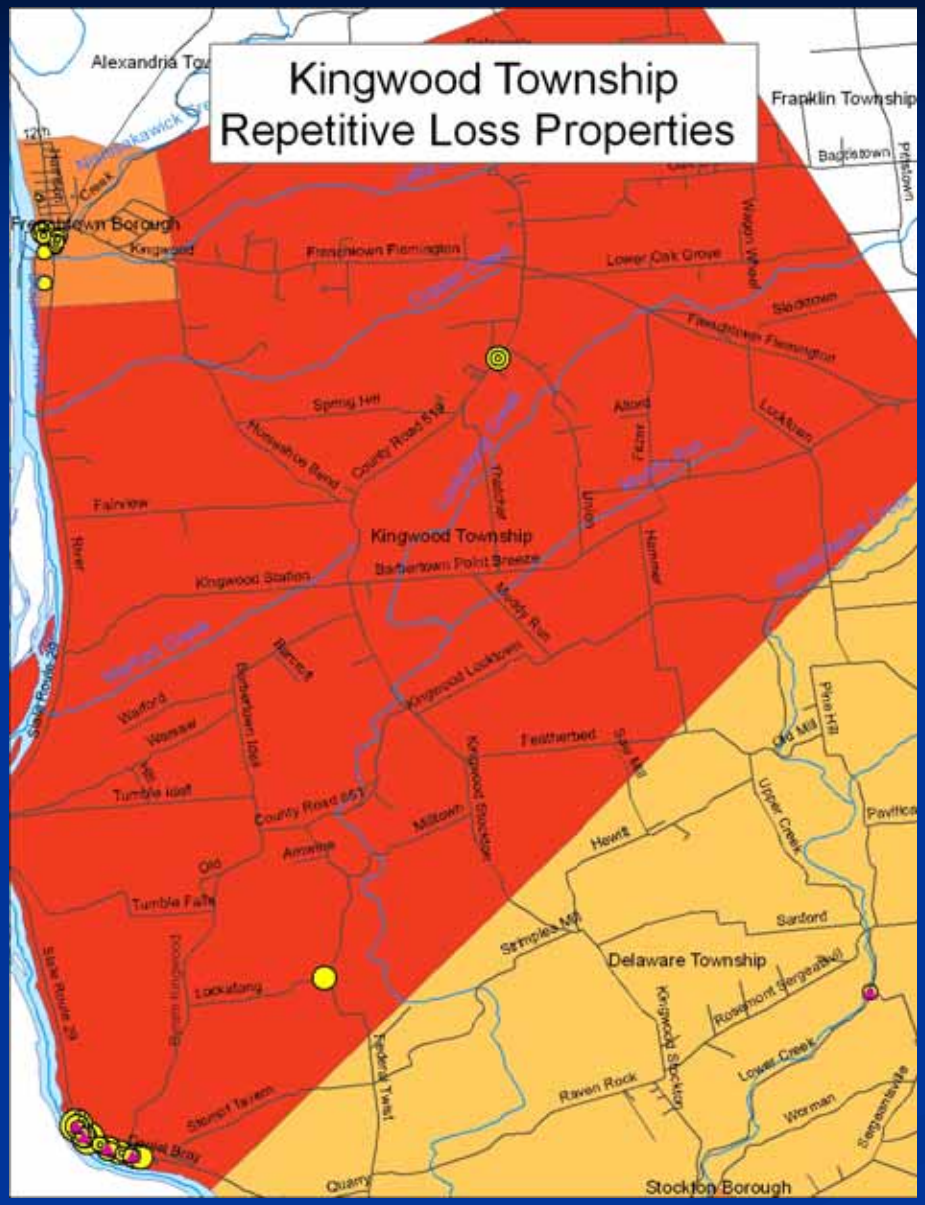
	Properties
Kingwood	4
Delaware	2
Lambertville	2

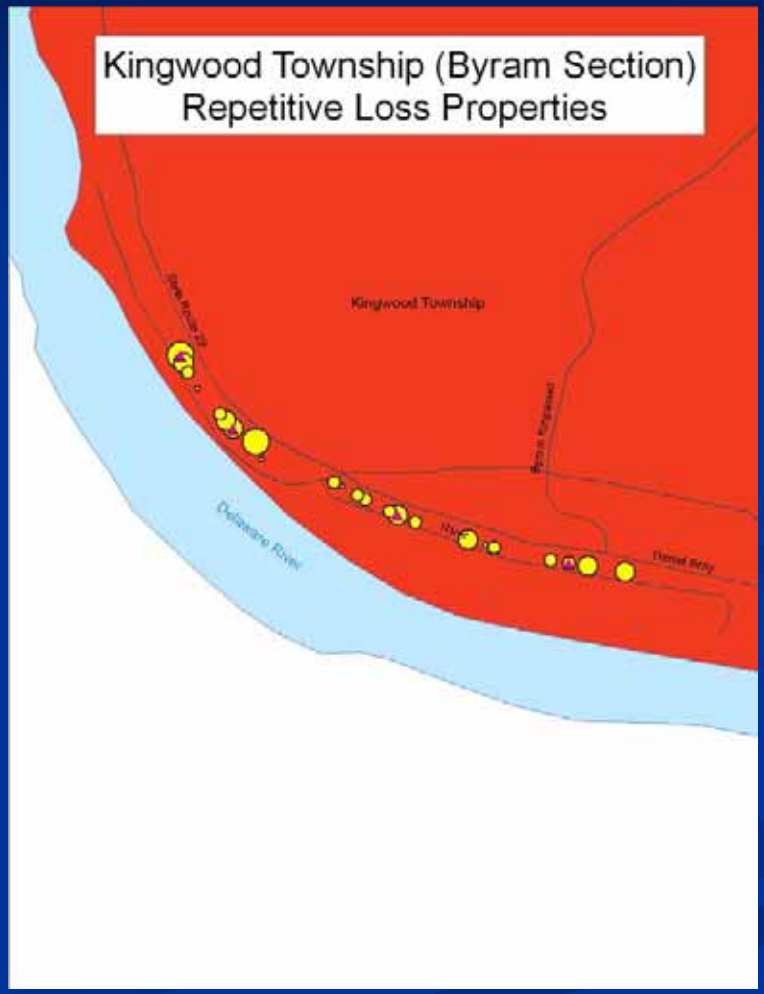


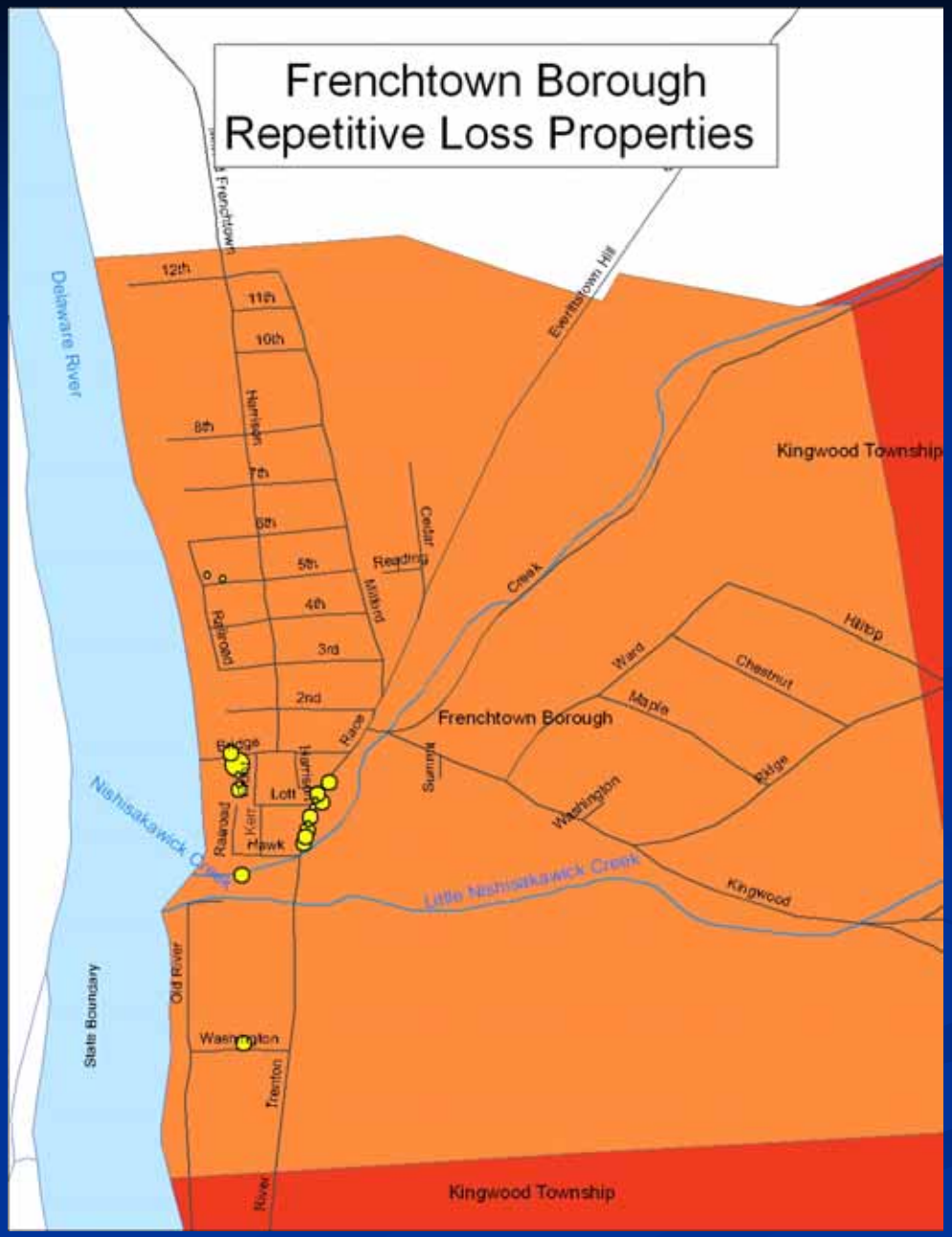
Source: Federal Emergency Management Agency (FEMA). A property is considered a severe repetitive loss property either when there are at least 4 losses each exceeding $5000 or when there are 2 or more losses where the building payments exceed the property value. Losses from 01/01/1978 - 08/31/06 that are closed are considered.

Prepared by Delaware River Basin Commission Staff, November 2006.

City of Lambertville
Repetitive Loss Properties
Delaware Township
West Amwell Township
Lambertville City
Delaware River
Alexauken Creek
Route 179
Route 165
Rock Creek Woods
Washington
Swan
Lincoln
Douglas
Highland
Woodcrest
Crafton
Cherry
Amelt
Phillips Barber
Alexander
Petry
Delaware
Jean
Jefferson
Old York
Jackson
Hancock
Kearney
Skillman
Belvidere
Coryell
Grant
York
Main
Buttonwood
Clinton
Union
Delavan
Grants
Church
Canal
Bridge
Lily
Wilson
Feeger
Franklin
Oversick
Coon
Chimney Hill
Woodward
Seabrook
Main
River
Blair Tract
United


Kingwood Township
Repetitive Loss Properties
Alexandria Tow
Franklin Township
Frenchtown Borough
Kingwood
Frenchtown Flemington
Lower Oak Grove
Sladdtown
Spring Hill
Horseshoe Bend
County Road 519
Altord
Lockatown
Fairview
Kingwood Township
Barbertown Point Breeze
Kingwood Station
Kingwood Lockatown
Warford
Warsaw
Tumble Idaf
County Road 651
Millstown
Featherbed
Old Mill
Pine Hill
Upper Creek
Hewitt
Sanford
Delaware Township
Lockatong
Stimples Mill
Raven Rock
Lower Creek
Worman
Stockton Borough
Quarry
Stompf Tavern
Federal Twist
Kingwood Stockton
Rosemont Sergeantsvill
Pavifica


Kingwood Township (Byram Section)
Repetitive Loss Properties
Kingwood Township
Delaware River
Daniel Bray


Frenchtown Borough
Repetitive Loss Properties
Delaware River
Nishisakawick Creek
Little Nishisakawick Creek
Kingwood Township
Kingwood Township
Frenchtown Borough
State Boundary
Everittstown Hill
Frenchtown
12th
11th
10th
8th
7th
6th
5th
4th
3rd
2nd
Harrison
Railroad
Reading
Cedar
Milford
Creek
Race
Bridge
Lott
Kerr
Hawk
Summit
Ward
Maple
Chestnut
Hilltop
Washington
Ridge
Kingwood
Old River
Washington
Trenton
River

Importance of Local Participation:

Lambertville, NJ - April 2005

- Crucial for the successful development of a Flood Mitigation Plan that contains mitigation actions able to be implemented in the future.
- Participation by the counties and municipalities is also required by FEMA in order for them to be eligible to adopt the Plan.

Local Municipalities

- Submit a Statement of Intent for your municipality
- Designate a local liaison for your municipality
- Attend county meetings and planning workshops
- Form a local flood mitigation planning committee
- Document your local planning process
- Complete the municipal questionnaire
- Publish notice of the municipality's intent to prepare a Flood Mitigation Plan to encourage public participation
- Distribute a prepared questionnaire to residents known to be in the flood prone areas

Local Municipalities (cont.)

- Allow time for comment at two public meetings; once during the drafting stage and another prior to adopting the plan.
- Collect resident questionnaires and summarize public comments
- Create a list of flood mitigation goals for your community
- Compose a list of community goals and desired local mitigation actions
- Adopt the final plan locally by resolution

Next Steps:

- Identify your local liaison and submit your community's Statement of Intent.
- Start to form your community's local flood mitigation planning committee.
- Begin to fill out the Municipal Questionnaire – They are due by January 26, 2007.
- Planning Workshops will be held late January/early February.