

APPENDIX H –

MEETING AGENDAS AND PRESENTATIONS

This Appendix contains copies of the agendas, attendance records, and presentations for key meetings, specifically:

July 12, 2010	Planning Process Kickoff Meeting of the CPG
October 4, 2010	Risk Assessment Progress Meeting of the CPG
November 1, 2010	Risk Assessment Question and Answer Session of the CPG
November 30, 2010	Mitigation Strategy Working Session of the CPG
November 30, 2010	Stakeholders Information Session
January 26, 2011	CPG Meeting to Discuss the Draft Plan <i>**Note – this meeting was not yet held as of document preparation; information will be inserted into the Final Plan.</i>

And also:

Date TBD, 2011	Meeting to Present the Draft Plan to Public and County Legislators <i>**Note – this meeting was not yet held as of document preparation; information will be inserted into the Final Plan. The County wishes to present to legislators after APA designation</i>
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Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project

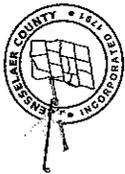
Kickoff Meeting – July 12, 2010

Session Two: 6-8pm

Agenda

- Call to Order í í í í í í í í í í í í í í í í ...*Kelly Paslow, Director, RCBPS*
- Welcome and Opening Remarks í í í í í í í í í *Kelly Paslow, Director, RCBPS*
- Overview of the Project í í í í í*Anna Foley, Project Manager, URS*
Richard Franks, Deputy Project Manager, URS
 - Intent of the Project
 - Why Prepare a Hazard Mitigation Plan?
 - What is a Multi-Jurisdictional Plan?
 - Why Participate in a Multi-Jurisdictional Plan Development Process?
 - Organizational Structure of the Planning Group
 - Overview of the Plan Development Process
 - The Role of Participating Jurisdictions, Contractors, the Public & Other Stakeholders
 - Participation Criteria
 - Key Deliverables
 - Data Collection//Supporting Documents
 - Project Timeline
 - Next Steps
 - Questions & Answers
- Closing Remarks í í í í í í í í í í í í í í í . *Kelly Paslow, Director - RCBPS*
- Adjourn

*Please remember to
SIGN IN
if you haven't already done so.
Thank you.*



Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project
 Project Kickoff Meeting - Monday, July 12, 2010
 Rensselaer County Government Center, 1600 Seventh Avenue, Troy, NY 12180 - Conference Room A

Last Name	First Name	Representing	Email Address	Phone
Kesbrandt	Herbert	Town of Grafton		279-1787
Winn	JAMES	Town of Berlin		658-2162
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Ch Weber	Janet	Village of Valley Falls	JWEBER131@AOL.COM	753-6230
Weidlich	Jolene	Rensselaer Co	jweidlich@renesco.com	270-2690
St Wagner	Ivan	BPS Fire Food	IWA@ERRCF@AOL.COM	657-8893
W Underheide	Linda	Rens Co Planners	Lvonderheide@renesco.com	270-2924
MCC 205	Fred	Town of Nassau	nassauhshway@fairpoint.net	766-9417
Carlson	Jean	T/Schaghticoke	Supwisac@townofschaghticoke.org	518-753-6915 x104
Selma	Jim	WFSFG	JJSelma@WFSFG.com	518-664-9634 x35
Rounds	Burt	Sand Lake	Super@Sand-lake.ny.us	518-674-2026 Fx 72
Goebel	Jenathan	Nassau BPS Rensselaer	jenathan@renesco.com	518-266-2678



Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project
 Project Kickoff Meeting - Monday, July 12, 2010
 Rensselaer County Government Center, 1600 Seventh Avenue, Troy, NY 12180 - Conference Room A

(Session One - 2pm) PG. 2 of 2

Last Name	First Name	Representing	Email Address	Phone
Applow	Kelly	RENSCO BPS	Applow@renSCO.com	518-266-7676
Shiland	William	Town of Hoosick	bshiland1@yahoo.com	518-796-7106
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Eisenbender	Eric	Rens. Co. BPS	EFE@tr13@adl.com	518-265-7980
Fishkin	John	SEMO	John.Fishkin@semo.state.ny.us	518-292-2457
Ostehout	William	Berlin	BFDchief@berlin.com	518-658-2924
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Goyer	Sam	Grate		518-812-3220
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AnnaFoley	Anna	URS Corp.	anna_foley@urscorp.com	973-785-0700x339
Franks	Richard	URS Corp.	richard-franks@urscorp.com	973-785-0700x449
Rosa	David	URS Corp.	david-rosa@urscorp.com	973-785-0700 x312



Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project
 Project Kickoff Meeting - Monday, July 12, 2010
 Rensselaer County Government Center, 1600 Seventh Avenue, Troy, NY 12180 - Conference Room A

(Session Two - 6pm)

Last Name	First Name	Representing	Email Address	Phone
Kaslow	Kelly	Ran Co BPS	KKASLOW@RENSCO.COM	518-266-7676
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Rice	Scott	Village of Schoharie	Scott.Rice.43@gmail.com	518-753-9518
NATER	DAVE	VILLAGE OF SCHOHARIE	ARNATER@NYSO.NY.GOV	518-753-7646
Goebel	Jonathan	Ran County BPS	jgoebel@renco.com	518-266-7678
Foley	Anna	URS Corp.	anna_foley@urscorp.com	973-785-0700 x339
FRANKS	Richard	URS Corp.	richard_franks@urscorp.com	" " x449
ROSA	David	URS Corp.	david_rosa@urscorp.com	" " x312

Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project

*Kickoff Meeting
July 12, 2010*

Session One: 2pm
Session Two: 6pm

Rensselaer County Government Center
Conference Room A
1600 Seventh Avenue, Troy



Today's Agenda:

- Project Overview
- Intent of the Project
- Organizational Structure of the Planning Group
- Overview of the Plan Development Process
- Roles and Responsibilities
- Participation Criteria
- Key Deliverables
- Data Collection / Supporting Documents
- Project Timeline
- Next Steps
- Questions and Answers

The Consultant

URS

Anna Foley, Project Manager
973-785-0700 ext. 339
anna_foley@urscorp.com

Richard Franks, Deputy Project Manager
973-785-0700 ext. 449
richard_franks@urscorp.com

**Our Commitment:
A FEMA-Approved Plan**

URS Wayne Office Hazard Mitigation Plans

- 8 NY State Plans and 4 NJ Plans
- Five FEMA-approved plans (191 jurisdictions, 2004 to present)
- Six plans ongoing or under state/federal review covering additional 130 jurisdictions (not including Rensselaer County)



Mitigation and Mitigation Planning

- **Hazard Mitigation** is any sustained action taken to reduce or eliminate long-term risk to life and property from a hazard event.
- **Hazard Mitigation Planning** is a *process* for State, local, and Indian Tribal governments to identify policies, activities, and tools to implement mitigation actions.
- Consultants walk you through the process needed to meet FEMA requirements and author the plan.

Intent of the Project:
Why Prepare a Hazard Mitigation Plan?

- Study natural hazards,
- Evaluate hazard effects, and
- Identify **hazard mitigation** measures that will reduce risks.

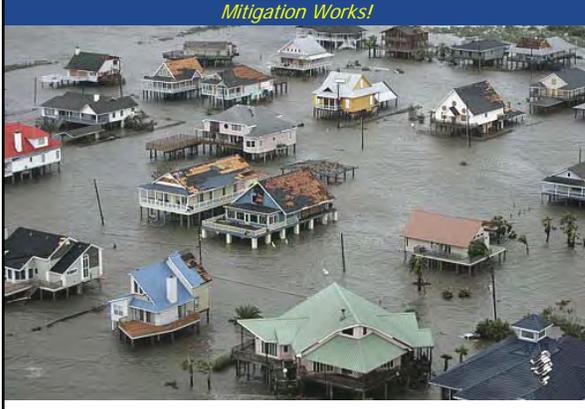




Mitigation Measures – Some Examples




- Elevating a house to reduce flood damages
- Installing hurricane clips to roofs to reduce wind damage
- Retrofit structures with fire-resistant materials (e.g. roofing)
- Modifying building codes to incorporate hazard-resistant design



Mitigation Works!

Elevated homes in Sweet Lake, LA (near Lake Charles) after Hurricane Rita (09/24/05).



Intent of the Project: *Why Prepare a Hazard Mitigation Plan?*



- Mitigation planning leads to judicious selection of risk reduction actions and established funding priorities.



- Implementation of mitigation actions is intended to reduce the costs of a future disaster.



Intent of the Project: *Why Prepare a Hazard Mitigation Plan?*



- Costs of a disaster can often exceed available State and Federal aid.



- Damages can be prevented by taking the time to:
 - ◆ learn about hazards and anticipate where and how they occur; and
 - ◆ allocate resources accordingly.



Intent of the Project: *Why Prepare a Hazard Mitigation Plan?*



- Disaster Mitigation Act of 2000 requires it!
- Plan preparation is funded by a FEMA grant
- No out-of-pocket cost to local municipalities
- Once the plan is approved by FEMA, participating jurisdictions will be eligible to apply for hazard mitigation project grants.



Key Point:

- Focus on natural hazards for the purposes of this planning effort.

Intent of the Project: What is a Multi-Jurisdictional Plan?

- Communities joining together to participate in a single local mitigation plan development process.

<ul style="list-style-type: none"> Common: <ul style="list-style-type: none"> Planning Process Hazards Goals Plan Maintenance Procedures 	<ul style="list-style-type: none"> Unique: <ul style="list-style-type: none"> Risks Mitigation Actions Participation Plan Adoption
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Intent of the Project: What is a Multi-Jurisdictional Plan?

- Each jurisdiction will identify its own set of mitigation actions for the plan
- No competition between municipalities

Unique:

- Risks
- Mitigation Actions
- Participation
- Plan Adoption

Intent of the Project: What is a Multi-Jurisdictional Plan?

- Basic processes for single jurisdiction and multi-jurisdictional plans are identical.
- Difference lies in degree of complexity.

Intent of the Project: Why Participate in a Multi-Jurisdictional Plan Development Process?

- The burden on each municipality is minimal, but the cost to do a single jurisdiction plan is not.
- There are tremendous economies of scale (resources, staff hours, and \$\$) that are realized by coming together in a joint process.
- By participating in a multi-jurisdictional plan, your municipality will gain **all the benefits** of having a plan with the **minimum level of effort** in plan development.

Organizational Structure of the Planning Group

Jurisdictional Assessment Teams:

- For each participating jurisdiction
- Head member (plus alternate) on Core Planning Group

Key:
 RCEPS: Rensselaer County Bureau of Public Safety
 CPG: Core Planning Group
 JAT: Jurisdictional Assessment Team

Overview of the Plan Development Process: Key Steps

- Researching a full range of natural hazard events to determine which are the most prevalent;
- Identifying the location and extent of hazard areas;
- Identifying assets located within these hazard areas;



Overview of the Plan Development Process: Key Steps

- Characterizing existing and potential future assets at risk;
- Assessing vulnerabilities to the most prevalent hazards; and
- Evaluating and prioritizing goals, objectives, and mitigation actions to reduce or avoid long-term vulnerabilities to the most prevalent hazards.



Key Steps

- **Data Review - Incorporation of existing plans/studies/reports**

A Wish List for Core Planning Group Member completion is included in your handout packet. Please return any information/data/documents to URS by 08/12/10.



Key Steps

- **Identification of Potential Hazards**

- Evaluation of a full range of natural hazards
 - Hazards identified for inclusion & why
 - Hazards not identified & why not

A questionnaire for Core Planning Group Member completion is included in your handout packet. Please return to URS by 08/12/10.



What is the "full range" of hazards that we consider for possible inclusion in the plan?

- Avalanches
- Coastal Erosion
- Wave Action
- Earthquakes
- Expansive Soils
- Floods
- Storm Surge
- Dam Failure
- Ice Jams
- Landslides
- Land Subsidence
- Drought
- Extreme Temps
- Hail
- Hurricanes / Tropical Storms
- Nor'easters
- Tornadoes
- Winter Storms / Ice Storms
- Tsunamis
- Volcanoes
- Wildfires
- Extreme Winds
- Lightning

Key Steps

- **Risk Assessment**

- **Hazard Profiles**
 - Description of hazard
 - Location of hazard area
 - Extent (magnitude or severity)
 - Previous occurrences
 - Probability/likelihood of future occurrences





Key Steps

- Risk Assessment
 - Asset Identification and Characterization
 - Quantifies what is at risk
 - Five key types of assets considered:
 - Improved property
 - Emergency facilities
 - Utilities
 - Historic & cultural resources
 - Population



Key Steps

- Risk Assessment
 - Damage Estimates
 - Estimate potential losses (dollars/ qualitative) to assets located in hazard areas
 - Why? To identify centers where the cost of potential damage is the highest




Key Steps

- Risk Assessment
 - Existing Land Uses and Future Development Trends in Hazard Areas
 - Where is new development planned?
 - How much of this is in hazard areas?
 - Are there codes/regulations in place to provide a certain degree of protection from the most frequent events?



A brief questionnaire will be distributed by RCBPS to Core Planning Group Members for return by 09/13/10.



Key Steps

- Capabilities and Resources
 - Plans, codes, and ordinances currently in place
 - Can contribute to, or be utilized for, hazard mitigation
 - Local Municipalities, County, State, Federal

A brief questionnaire will be distributed by RCBPS to Core Planning Group Members for return by 10/12/10.



Key Steps

- Mitigation Strategy
 - Goals
 - Evaluate full range of actions
 - Select actions
 - Prioritize selected actions
 - Identify responsible party, potential funding source, and time frame



This step will be the subject of a working session where the Core Planning Group members will complete a series of three worksheets. (Targeted for mid-November)



Key Steps

- Plan Maintenance
 - Final Plan is a "living document"
 - DMA 2000 requires updates, 5 year cycle
 - Regular monitoring and review of progress



The Role of Participating Jurisdictions

- Participating Jurisdictions must also...
 - ◆ Select mitigation actions (*worksheet*)
 - ◆ Define implementation strategy (*worksheet*)
 - ◆ Adopt the plan (*by resolution*)
 - ◆ Participate in plan maintenance/updates



The Role of Participating Jurisdictions

- If you do not participate actively in the plan's development (through attendance at meetings and submittal of Core Planning Group Deliverables)

OR

- If you do not identify an implementation strategy including mitigation actions for each identified hazard

THEN

- FEMA will not approve the plan for your municipality.

The Rensselaer County Planning Project

THE
FINAL
COUNTY-
WIDE
PLAN

Recognized by FEMA:

- County
- Jurisdictions meeting ALL of the participation criteria

NOT Recognized by FEMA:

- Any jurisdictions that don't meet ALL of the participation criteria

The Role of the Public and Other Stakeholders

- Who Are Other Stakeholders?
 - ◆ Neighborhood groups
 - ◆ Non-profit organizations (i.e. scout troops, Red Cross, Salvation Army)
 - ◆ Housing organizations
 - ◆ Environmental groups
 - ◆ Historic preservation groups
 - ◆ Parent-teacher organizations
 - ◆ Church organizations
 - ◆ Parks organizations
 - ◆ State, federal, and local government offices
 - ◆ Neighboring communities/counties
 - ◆ Business and development organizations
 - ◆ Academic institutions
 - ◆ Utility providers
 - ◆ Hospitals
 - ◆ Tribal groups
 - ◆ Transportation entities
 - ◆ Regional planning organizations
 - ◆ Emergency service providers
 - ◆ Jurisdiction web site managers / IT staff
 - ◆ Any local office and/or group with a public outreach focus

The Role of the Public and Other Stakeholders

- Role of the Public and Other Stakeholders:
 - ◆ Advisory role
 - ◆ Provide feedback
 - ◆ Historic hazard effects
 - ◆ Proposed mitigation actions
 - ◆ Etc...
 - ◆ CPG gets the word out to the public and other stakeholders in their area

Key URS Deliverables

- Guidance Memorandums (3 throughout process, one of which is in today's handouts)
- Working Draft Plan Chapters (ongoing)
- Risk Assessment Interim Deliverable (October)
- Draft Plan (to CPG December; to NYSEMO January)

↓

Review: NYSEMO & FEMA

↓

- Final Plan (60 days from coordinated comments on Draft)

 TARGETED IMPROVEMENT SCHEDULE Rensselaer County, New York Multi-Jurisdictional Natural Hazard Mitigation Planning Project			
Task	Deliverable	Days	Targeted Completion Date
1	Project Initiation Meeting - Refinement of Scope Plan (Meeting 1)	7 days from NTF	05/31/12
2	Establish the Planning Committee (Guidance Memo 1 and Sample Letter)	21 days from Task 1	06/21/12
3	Project Kickoff Presentation with the Planning Team (Meeting 2)	21 days from Task 2	07/12/12
4	Outreach Tools (Fact Sheet and Web Site Support)	30 days from Task 1	06/30/12
5	Review of Available Data	60 days from Task 1	08/31/12
6	Hazard Identification (Questionnaire 1)	30 days from Task 1	06/30/12
7	Hazard Profiles	30 days from Task 6	07/30/12
8	Hazard Inventory	30 days from Task 7	08/29/12
9A	Identifying Losses	60 days from Task 8	09/28/12
9B	Identify Losses and Development Trends (Questionnaire 2)	60 days from Task 8	09/28/12
10	Research of Types of Mitigation Alternatives	7 days from Task 9A	10/05/12
11	Risk Assessment Meeting (Meeting 3)	Timing of Discussion of RACIP/IS	10/01
12	Risk Assessment Interim Deliverable	7 days from Task 10	10/12/12
13	Risk Assessment Q&A Session (Meeting 4)	15 days from Task 12	10/27/12
14	Capacity Assessment (Questionnaire #3)	150 days from NTF	10/27/12
15	Mitigation Strategy Working Session (Meeting 5)	15 days from Task 13	11/11/12
16	Plan Maintenance Procedures (Guidance Memo 2)	150 days from NTF	10/27/12
17	Plan Integration Strategy (Guidance Memo 3)	150 days from NTF	10/27/12
18A	Draft of RACIP	37 days from Task 15	12/13/12
18B	Revised Draft for Release to NYSEEMO	30 days from Task 18A	01/17/13
19	Working on the Draft Plan	Timing of Discussion of RACIP/IS	10/01
20	Final Plan	60 days from coordinated comments on Draft	02/01



Questions and Answers





Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project

Progress Meeting – October 4, 2010

Agenda

- Welcome & Opening Remarks í í í í í í í í í í í ..*Kelly Paslow, Director, RCBPS*
- Current Status of Participation í í .í í í í í í í í í *Kelly Paslow, Director, RCBPS*
- Overview of Project Progress í í í í í í*Anna Foley, URS*
 - Importance of Hazard Mitigation Planning
 - Planning Group Participation and Responsibilities
 - Project Timeline and Current Project Status
 - Upcoming **Risk Assessment Interim Deliverable**
 - Capability Assessment
 - Other Steps
 - To-Do Actions for Jurisdictions
 - Questions & Answers
- Assistance with Completion of Forms/Questionnaires/Etc. Requested To-Date í í ...í ...*All*
- Closing Remarks í .í í í í í í í í í í í í í ..í í ..*Kelly Paslow, Director, RCBPS*
- Adjourn





Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project
 Risk Assessment Progress Meeting – October 4, 2010 (2-4 pm)
 Rensselaer County Government Center, 1600 Seventh Avenue, Troy, NY 12180 in Conference Room A

Last Name	First Name	Representing	Email Address	Phone
Crowell	Sarah	City of Rensselaer	Sarah.Crowell@rensselaer.ny.gov	
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HENRIKSON	ROBERT	VILLAGE OF EAST WARREN	RH@COCA.NET, CDM	794-0299
CHURCH	TIM	TOWN OF PETERSBURGH	TIM58891@NETZERO.COM	658-3453
MELAS	PETE	NYSDOT	PMELAS@DOT.STATE.NY.US	286-2300
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Coyne	JAMES	Castaow		514 812 3220
ASHWORTH	JOSEPHINE	TOWN OF NORTH GREENBUSH	Ashworth@townofng.com	283-5313
Kurmer	Auson	Grafton	grafton-supervisor@verizon.net	279-3565
Lacivita	Mark	Renss Co. BPS	mark25a@gmail.com	527-0409
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Foley	Anna	UPS Coop.	anna-foley@urscorp.com	973-785-0700 x339



Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project
 Risk Assessment Progress Meeting - October 4, 2010 (2-4 pm)
 Rensselaer County Government Center, 1600 Seventh Avenue, Troy, NY 12180 in Conference Room A

Last Name	First Name	Representing	Email Address	Phone
TURNER	RAY	SAND LAKE	RCT@NYCAP.PR.COM	674-8185
FISCHER, F.	JAMES	Village of SCHAGHTICOKE	SCHAGH@NYCAP.PR.COM	753 6100
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BRUNNET	Bob	Port Jervis	CRPOST@NYCAP.PR.COM	283-5100
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Plaslow	Kelby	Rensselaer County	KPlaslow@renso.com	206-7676

Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project

*Progress Meeting
October 4, 2010
2-4 pm*

Rensselaer County Government Center
1600 Seventh Avenue, Troy
Conference Room A

Today's Agenda

- Welcome and Opening Remarks.....Kelly Paslow, RCBPS
- Current Status of Participation.....Kelly Paslow, RCBPS
- Overview of Project Progress.....Anna Foley, URS
- Assistance with Completion of Worksheets.....All
- Closing Remarks.....Kelly Paslow, RCBPS
- Adjourn

Participation and its Benefits

Current Status of Participation

Jurisdiction	Returned Statement of Authority to Participate	Kickoff Meeting (09/12/10)	Work 1 set Originally Due 08/13/10 Extended to 09/13/10	Final # of Deliverables Originally Due 08/13/10 Extended to 09/13/10	Land Use and Development Trade Deliverables Due 09/13/10
Rensselaer County	Yes	Yes	Yes	Yes	Yes
Stark, Town of	Yes	Yes	Yes	Yes	Yes
Broome, Town of	Yes	Yes	Yes	Yes	Yes
Castleton-on-Hudson, Village of	Yes	Yes	Yes	Yes	Yes
East Greenbush, Town of	Yes	Yes	Yes	Yes	Yes
East Nassau, Village of	Yes	Yes	Yes	Yes	Yes
Cooper, Town of	Yes	Yes	Yes	Yes	Yes
Horseshoe, Town of	Yes	Yes	Yes	Yes	Yes
Hopock Falls, Village of	Yes	Yes	Yes	Yes	Yes
Malone, Town of	Yes	Yes	Yes	Yes	Yes
Nassau, Village of	Yes	Yes	Yes	Yes	Yes
North Greenbush, Town of	Yes	Yes	Yes	Yes	Yes
Patterson, Town of	Yes	Yes	Yes	Yes	Yes
Watersburgh, Town of	Yes	Yes	Yes	Yes	Yes
Wheatland, Town of	Yes	Yes	Yes	Yes	Yes
Rensselaer, City of	Yes	Yes	Yes	Yes	Yes
Carlisle, Town of	Yes	Yes	Yes	Yes	Yes
Schaghticoke, Town of	Yes	Yes	Yes	Yes	Yes
Schaghticoke, Village of	Yes	Yes	Yes	Yes	Yes
Schroton, Town of	Yes	Yes	Yes	Yes	Yes
Stuyvesant, Town of	Yes	Yes	Yes	Yes	Yes
Troy, City of	Yes	Yes	Yes	Yes	Yes
Valley Falls, Village of	Yes	Yes	Yes	Yes	Yes

**"Nature, as we know her, is no saint."
- Ralph Waldo Emerson**

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Some past events in Rensselaer County...

Building Disaster Resistant Communities

- Natural disasters are a part of our past, and they will inevitably be a part of our future.
- Costs of repair/recovery can be staggering and often have long-term consequences.
- Federal dollars are not always available to aid in the recovery process for *every* occurrence (i.e., June 2009).



Building Disaster Resistant Communities

- Returning a damaged building or piece of infrastructure to the pre-disaster status quo leaves people and property in harms way.
- Natural hazards will always be present, but by planning ahead, mitigation projects can work to reduce their effects.**



Hazard Mitigation:
"Recovery With Foresight"

- Hazard Mitigation:
 - Saves time and money
 - Protects lives and property
 - Helps preserve economic and social fabric of the community

Hazard Mitigation:
"Recovery With Foresight"

- According to a study by the Multihazard Mitigation Council (part of the National Institute of Building Sciences):

Every \$1 paid toward mitigation saves an average of \$4 in future disaster-related costs



Why participate in this plan?

- Bottom Line: Free money**

Once the plan is approved by FEMA, participating jurisdictions will be eligible to apply for hazard mitigation project grants.

Good projects will be "on the shelf" for when funding opportunities open up.



What kinds of projects can be applied for?

Once the plan is approved, jurisdictions that participate fully will be able to apply for projects like these (few examples):

- Acquire/elevate/floodproof/relocate structures
- Road raising/relocation
- Culvert upgrades
- Bridge retrofits
- Utility system protective measures
- Wind retrofits for buildings
- Minor localized flood reduction projects (inc. retention/detention basins)
- Soil stabilization (geotextiles, rip rap, etc.)
- Wildfire mitigation (defensible space, ignition-resistant construction, fuel reduction)

How much of project costs could typically be funded by FEMA grants?

- Programs and Federal Share
 - HMGP 75%
 - PDM 75%
 - FMA 75%
 - RFC 100%
 - SRL 90%

How much of project costs could typically be funded by FEMA grants?

- Programs and Federal Share
 - HMGP 75% } \$0.25
 - PDM 75% } \$0.25
 - FMA 75% } \$0.25
 - RFC 100% } \$0.00
 - SRL 90% } \$0.10
- Bottom Line: Free money**

What will it take to participate?

Participating jurisdictions must:

- Attend 3 more meetings
- Review and comment on three Guidance Memos
- Outreach (to the public and other stakeholders)
- Provide info/data/documents from the Wish List
- Feedback (3 questionnaires)
- Mitigation Action Plan (3 worksheets)
- Review and comment on the RAID and Draft Plan

To Do:

How much time is this going to take?

In many ways, the choice is yours (getting the job simply done, versus doing a really good job).

Remember:

- Participation is by municipality, not by person, so tasks should be divided amongst a small group of people in your municipality

Current Status of Participation

Jurisdiction	Returned Statement of Authority to Participate	Kickoff Meeting (02/12/10)	Wish List Originally Due 08/13/09 Extended to 09/13/09	Hazard ID Questionnaire Originally Due 08/13/09 Extended to 09/13/09	Land Use and Development Trends Questionnaire Due 09/13/09
Harrisonville, County	*	*	*	*	*
Beola, Town of	*	*	*	*	*
Shelburne, Town of	*	*	*	*	*
Leffertsburg, Village of	*	*	*	*	*
East Greenbush, Town of	*	*	*	*	*
East Nassau, Village of	*	*	*	*	*
Lefferts, Town of	*	*	*	*	*
Hopewell, Town of	*	*	*	*	*
Hopewell, Village of	*	*	*	*	*
Nassau, Town of	*	*	*	*	*
Nassau, Village of	*	*	*	*	*
North Greenbush, Town of	*	*	*	*	*
Hatsellburg, Town of	*	*	*	*	*
Walden, Town of	*	*	*	*	*
Harrisonville, Town of	*	*	*	*	*
Harrisonville, City of	*	*	*	*	*
Card Lake, Town of	*	*	*	*	*
Schaghticoke, Town of	*	*	*	*	*
Schaghticoke, Village of	*	*	*	*	*
Schrofford, Town of	*	*	*	*	*
Deerpark, Town of	*	*	*	*	*
City, City of	*	*	*	*	*
City, Village of	*	*	*	*	*

Mitigation Success Story:
Village of Ellicottville (Cattaraugus County)

Population 472; just under 1 square mile

Problem

- ◆ Bridge at confluence of two creeks
- ◆ Abutments restricted flow
 - ◆ Water backed up during even moderate rain/snowmelt
 - ◆ \$125,000 in annual damages
 - ◆ January 1996 Flood (DR-1095) → \$371,000

FEMA Mitigation Grant

- ◆ Bridge replacement (widen abutments), channel reconfiguration
- ◆ Cost \$421,000 (75% FEMA HMGP; 25% County)
- ◆ Completed in 1998
- ◆ **Public investment already recouped**



Mitigation Success Story:
Hamlet of Morrisonville (Clinton County)

Population 1,702; just under 3 square miles

Problem

- ◆ Ice jam flooding along Saranac River
- ◆ Roughly once every 10 years
 - ◆ January 1996 Flood (DR-1095) damages \$667,000
 - ◆ Residents had to be evacuated at night during dangerous ice and high water conditions

FEMA Mitigation Grant

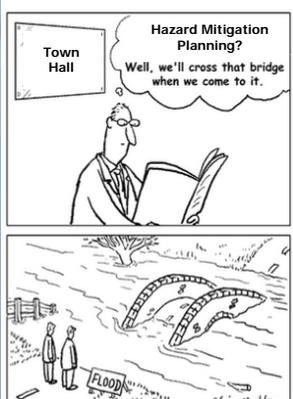
- ◆ Acquisition of 19 residential homes and 3 vacant lots
- ◆ Cost \$1.4M (75% FEMA HMGP; 25% State/County/Private)
- ◆ Most homes vacated by November 1996 when next event occurred
- ◆ Substantial savings realized in less than one year




Town Hall

Hazard Mitigation Planning?

Well, we'll cross that bridge when we come to it.



FLOOD

* Modified cartoon by Chris Madden

Overview of the Plan Development Process: Key Steps

- ◆ Researching a full range of natural hazard events to determine which are the most prevalent;
- ◆ Identifying the location and extent of hazard areas;
- ◆ Identifying assets located within these hazard areas;



Overview of the Plan Development Process: Key Steps

- ◆ Characterizing existing and potential future assets at risk;
- ◆ Assessing vulnerabilities to the most prevalent hazards; and
- ◆ Evaluating and prioritizing goals, objectives, and mitigation actions to reduce or avoid long-term vulnerabilities to the most prevalent hazards.



Project Timeline

- ◆ Kickoff Meeting: July 2010
- ◆ Plan Development: Ongoing
- ◆ Local Feedback: Ongoing
- ◆ Risk Assessment Interim Deliverable: October 2010
- ◆ Risk Assessment Q&A Session: October 2010
- ◆ Mitigation Strategy Working Session: November 2010
- ◆ Draft Plan to CPG: December 2010
- ◆ Draft Plan to NYSEMO: January 2011

Risk Assessment Interim Deliverable (RAID) In Progress

Working chapters of the overall plan:

- Hazard Identification
- Hazard Profiles
- Asset Identification and Characterization
- Vulnerabilities (Annual Damages)
- Land Uses and Development Trends
- Types of Mitigation Actions for Various Hazards



Hazard Identification Chapter of RAID Completed

- Evaluation of a full range of natural hazards (23)
- Hazards selected for further analysis and reasons why (13)
- Hazards not selected and reasons why not (10)



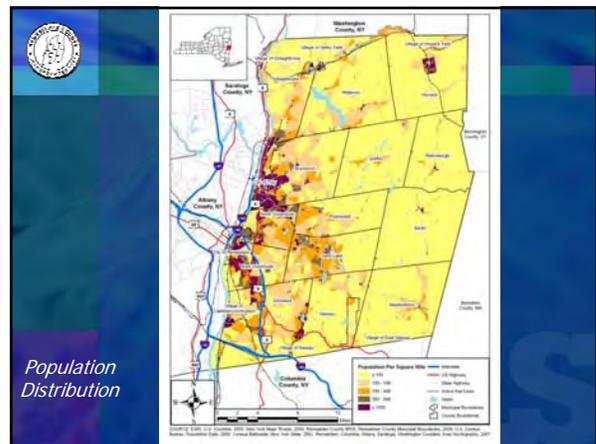
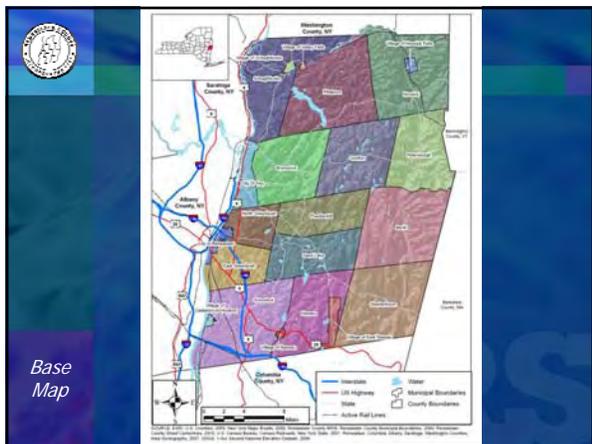
Hazard Identification Chapter of RAID Completed

23 hazards evaluated
13 identified as "significant" for further evaluation

■ Extreme Temperatures	■ Drought
■ Extreme Wind	■ Flood
■ Hurricane and Tropical Storms	■ Ice Jams
■ Lightning	■ Earthquakes
■ Tornadoes	■ Landslides
■ Winter Storms	■ Wildfires
■ Dam Failure	

Hazard Profiles Chapter of RAID Completed

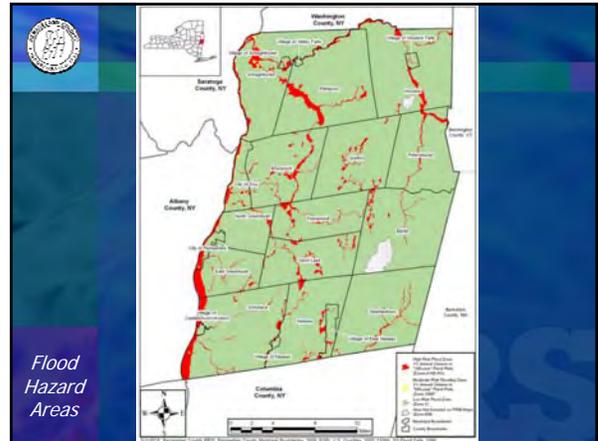
- Description of hazard
- Location of hazard area
- Extent (magnitude or severity)
- Previous occurrences
- Probability/likelihood of future occurrences



Distribution of Profiled Hazards

**Table 3a.1
Summary of Profiled Hazards by Municipality**

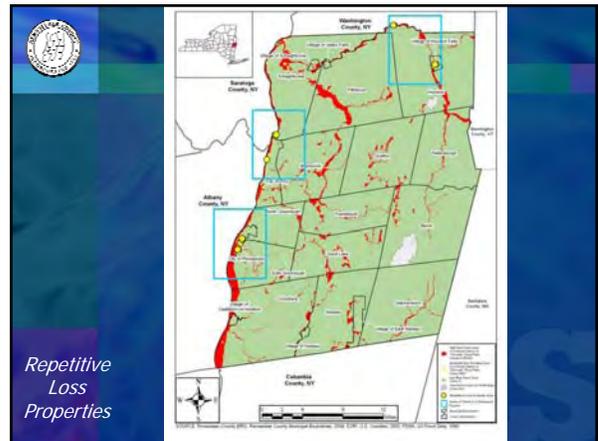
Jurisdiction	Extreme Temperatures	Extreme Wind	Hurricane and Tropical Storm	Tornado	Lightning	Winter Storms	Dam Failure	Drought	Flood	Ice/Jam	Earthquake	Landslide	Wildfire
Rensselaer County of													
Berlin, Town of	■	■	■	■	■	■	■	■	■	■	■	■	■
Bonanza, Town of	■	■	■	■	■	■	■	■	■	■	■	■	■
Castleton-on-Hudson, Village of	■	■	■	■	■	■	■	■	■	■	■	■	■
East Greenbush, Town of	■	■	■	■	■	■	■	■	■	■	■	■	■
East Nassau, Village of	■	■	■	■	■	■	■	■	■	■	■	■	■
Clifton, Town of	■	■	■	■	■	■	■	■	■	■	■	■	■
Honick, Town of	■	■	■	■	■	■	■	■	■	■	■	■	■
Honick Falls, Village of	■	■	■	■	■	■	■	■	■	■	■	■	■
Harris, Town of	■	■	■	■	■	■	■	■	■	■	■	■	■
Nassau, Village of	■	■	■	■	■	■	■	■	■	■	■	■	■
North Greenbush, Town of	■	■	■	■	■	■	■	■	■	■	■	■	■
Paterburgh, Town of	■	■	■	■	■	■	■	■	■	■	■	■	■
Pittsford, Town of	■	■	■	■	■	■	■	■	■	■	■	■	■
Porterburgh, Town of	■	■	■	■	■	■	■	■	■	■	■	■	■
Rineclert, City of	■	■	■	■	■	■	■	■	■	■	■	■	■
Sand Lake, Town of	■	■	■	■	■	■	■	■	■	■	■	■	■
Schaghticoke, Town of	■	■	■	■	■	■	■	■	■	■	■	■	■
Schaghticoke, Village of	■	■	■	■	■	■	■	■	■	■	■	■	■
Schoharie, Town of	■	■	■	■	■	■	■	■	■	■	■	■	■
Shelburne, Town of	■	■	■	■	■	■	■	■	■	■	■	■	■
Troy, City of	■	■	■	■	■	■	■	■	■	■	■	■	■
Valley Falls, Village of	■	■	■	■	■	■	■	■	■	■	■	■	■



Flood Hazard Areas

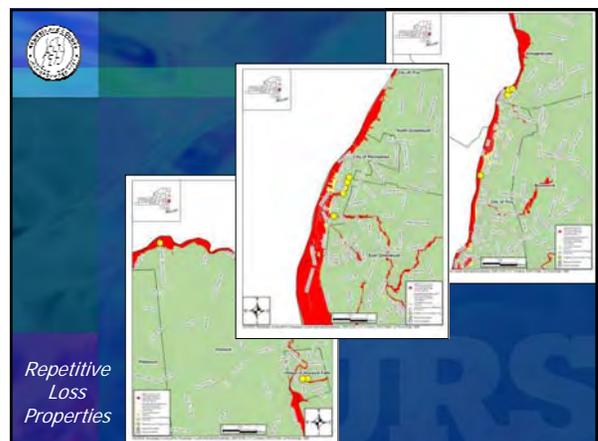
Summary of FEMA QS Flood Data by Municipality: Improved Property in Hazard Areas

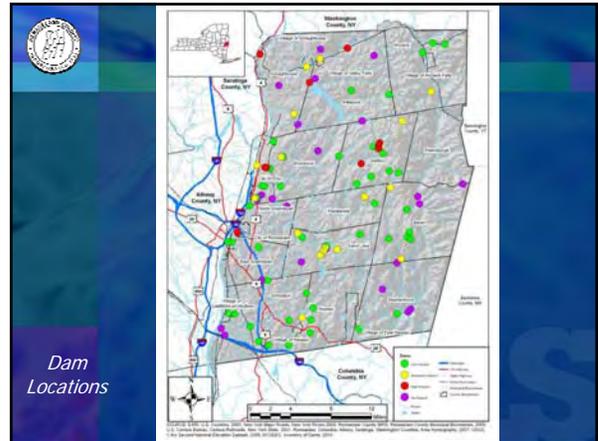
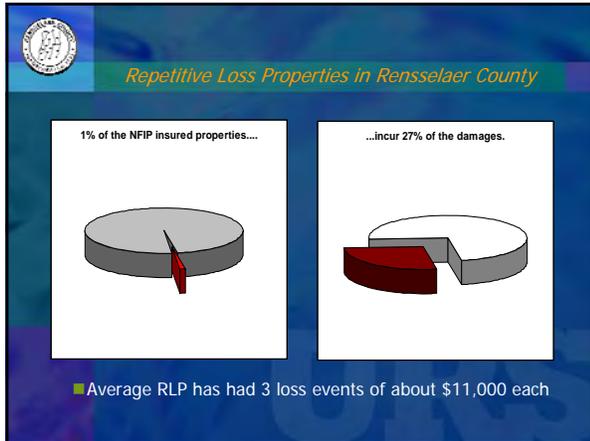
Municipality	Total Improved Property Value	Improved Property in High Flood Risk Area		Improved Property in Moderate Flood Risk Area		Improved Property in Low Flood Risk Area (%)	
		A, AE	X	A, AE	X	A, AE	X
Berlin, Town of	\$161,460,296	\$7,365,983	\$0	\$1,531,640	7%	0%	97%
Bonanza, Town of	\$933,076,230	\$41,246,232	\$666,171	\$803,163,233	4%	0.1%	96%
Castleton-on-Hudson, Village of	\$173,218,901	\$45,107,756	\$2,043,511	\$128,067,992	26%	1%	73%
East Greenbush, Town of	\$1,478,535,900	\$40,485,331	\$661,755	\$1,437,388,812	3%	0.04%	97%
East Nassau, Village of	\$36,635,844	\$3,574,931	\$485,969	\$32,634,942	10%	1%	89%
Clifton, Town of	\$160,142,003	\$4,706,000	\$0	\$155,435,003	3%	0%	97%
Honick, Town of	\$274,325,323	\$6,462,770	\$0	\$269,291,973	2%	0%	97%
Honick Falls, Village of	\$333,334,980	\$16,069,381	\$0	\$319,265,599	5%	0%	95%
Harris, Town of	\$207,287,186	\$6,404,721	\$377,291	\$200,334,164	3%	0.2%	97%
Nassau, Village of	\$103,812,537	\$6,880,664	\$0	\$94,932,368	7%	0%	97%
North Greenbush, Town of	\$1,126,168,100	\$54,139,043	\$31,248,415	\$1,040,780,734	7%	3%	92%
Paterburgh, Town of	\$15,589,579	\$5,292,082	\$0	\$10,422,038	3%	0%	97%
Pittsford, Town of	\$294,607,030	\$9,976,431	\$57,320	\$284,023,647	3%	0.02%	97%
Porterburgh, Town of	\$11,226,879	\$1,129,633	\$1,832,897	\$106,216,417	7%	1%	94%
Rineclert, City of	\$327,481,832	\$122,812,754	\$38,968,236	\$174,635,237	23%	5%	71%
Sand Lake, Town of	\$618,731,180	\$38,307,439	\$2,662,318	\$582,001,109	7%	0.3%	94%
Schaghticoke, Town of	\$393,637,712	\$16,652,644	\$14,796,910	\$361,855,234	4%	4%	92%
Schaghticoke, Village of	\$46,285,242	\$995,359	\$35,092	\$45,289,991	2%	0.1%	98%
Schoharie, Town of	\$146,788,082	\$18,401,492	\$2,352,977	\$126,033,795	2%	0.3%	98%
Shelburne, Town of	\$187,625,080	\$5,411,373	\$444,371	\$180,962,326	3%	0.2%	97%
Troy, City of	\$4,097,481,405	\$323,453,320	\$192,613,242	\$3,531,414,643	8%	3%	87%
Valley Falls, Village of	\$24,033,244	\$143,064	\$7,662	\$24,413,074	2%	0.03%	98%
Rensselaer County Total	\$12,432,182,825	\$752,887,538	\$279,469,802	\$11,366,520,560	6%	2.2%	91%



Repetitive Loss Properties:

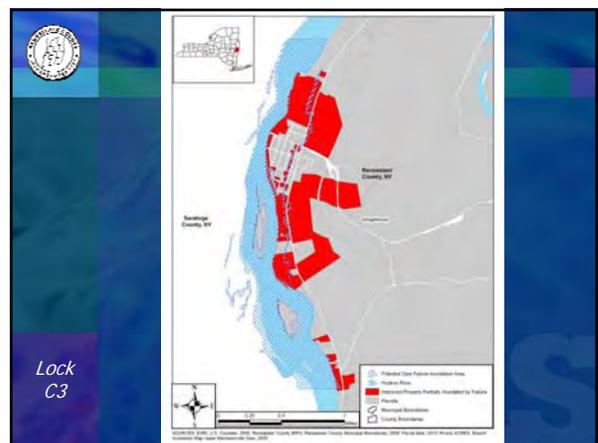
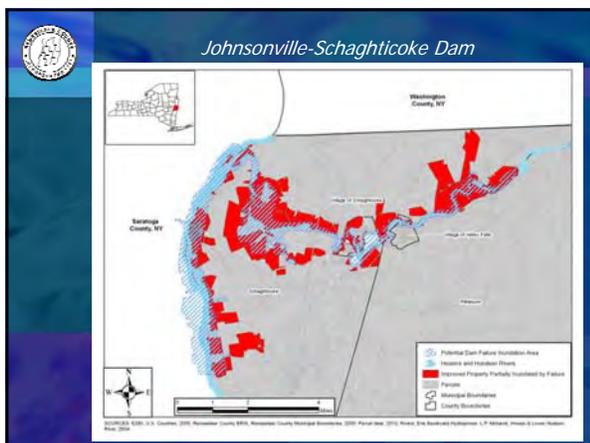
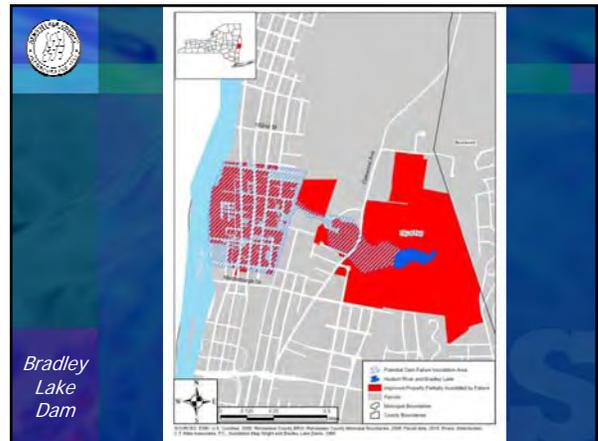
- Two or more losses
- Of at least \$1,000 each
- In any rolling 10-year window since community's entry into NFIP

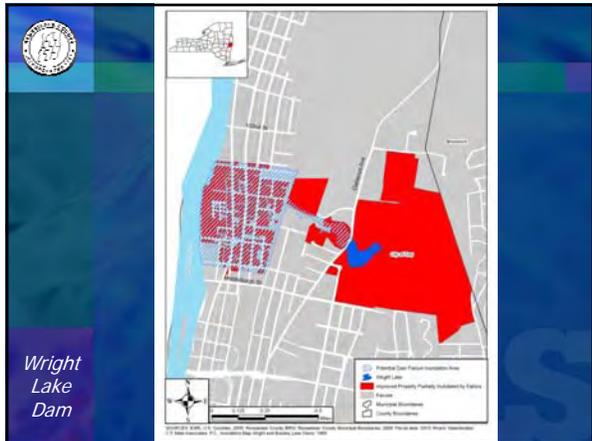
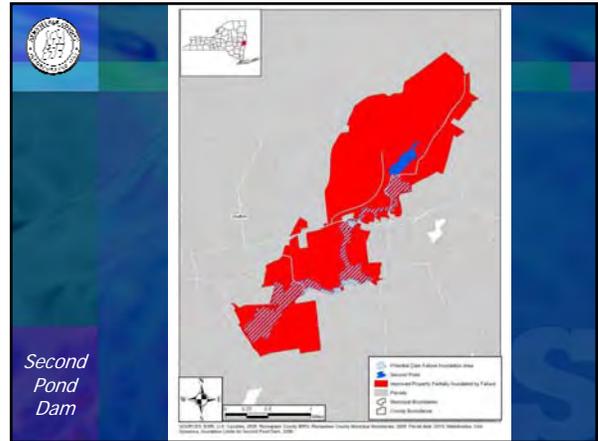
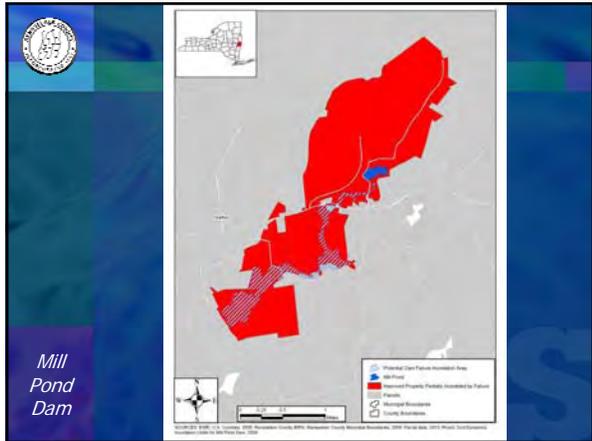
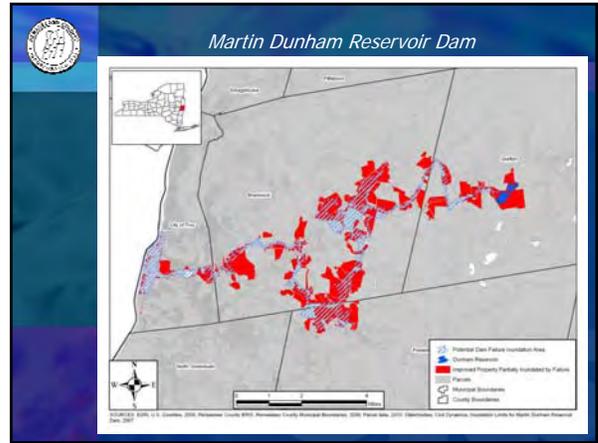
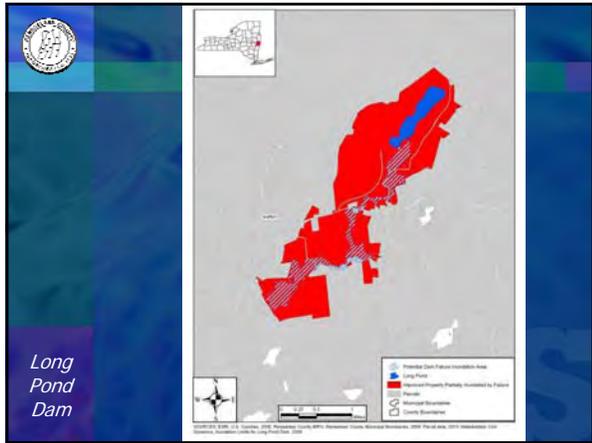





Dam Failure

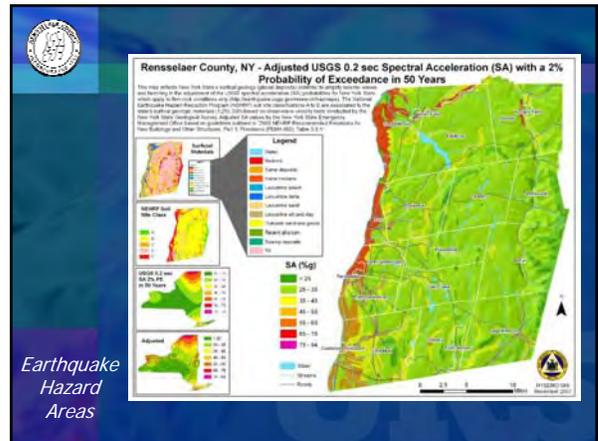
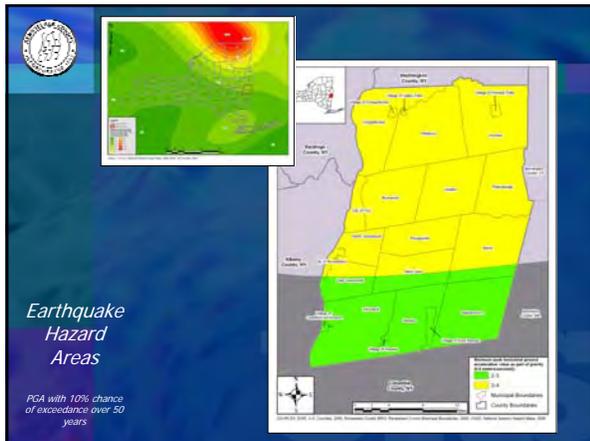
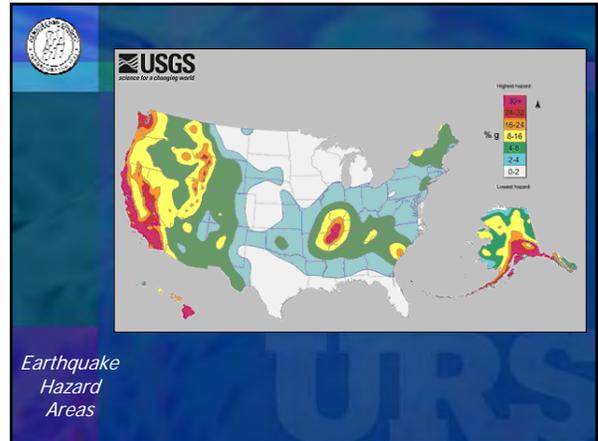
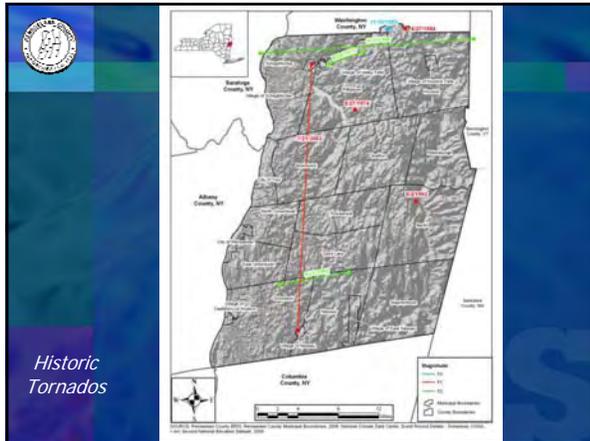
High Hazard Dams (NYSDEC):
A dam failure may result in widespread or serious damage to home(s); damage to main highways, industrial or commercial buildings, railroads, and/or important utilities, including water supply, sewage treatment, fuel, power, cable or telephone infrastructure; or substantial environmental damage; such that the loss of human life or widespread substantial economic loss is likely.





Estimated Potential Exposure of Improved Property to Dam Failure (Source: NISDEC, Rensselaer County GIS)			
Bradley Lake Dam			
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
City of Troy	\$4,577,481,405	\$65,630,484	1.5%
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
City of Troy	\$4,577,481,405	\$65,630,484	1.5%
Martin Dunham Reservoir Dam			
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
Town of Oranthe	\$166,142,003	\$1,481,528	0.9%
Town of Fawcettville	\$115,226,879	\$4,233,684	3.7%
Town of Bantamark	\$933,076,250	\$64,226,781	6.9%
City of Troy	\$4,577,481,405	\$167,927,205	3.7%
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
Town of Oranthe	\$166,142,003	\$167,927,205	10.1%
Mill Pond Dam			
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
Town of Oranthe	\$166,142,003	\$168,811	0.1%
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
Town of Oranthe	\$166,142,003	\$168,811	0.1%
Second Pond Dam			
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
Town of Oranthe	\$166,142,003	\$3,226,164	1.9%
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
Town of Oranthe	\$166,142,003	\$3,226,164	1.9%
Long Pond Dam			
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
Town of Oranthe	\$166,142,003	\$1,317,225	0.8%
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
Town of Oranthe	\$166,142,003	\$1,317,225	0.8%
Schenectady and Schaghticoke Dam			
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
Town of Fawcettville	\$124,057,020	\$1,401,111	1.1%
Town of Schaghticoke	\$193,627,712	\$15,357,582	7.9%
Village of Schaghticoke	\$45,253,342	\$7,226,737	16.0%
Village of Valley Falls	\$14,929,241	\$1,484,663	10.0%
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
Town of Schaghticoke	\$193,627,712	\$17,492,372	9.0%

Note: Exposure has been estimated only for the hydrologic basins affecting Rensselaer County for which adequate inundation mapping was readily available.



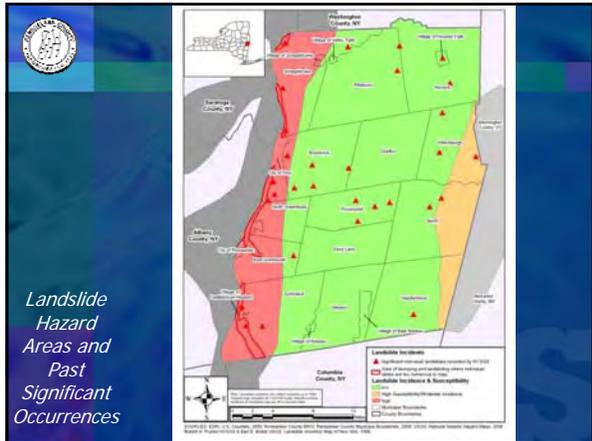
Earthquake Magnitude/Intensity Comparison

PGA	Magnitude	Intensity	Perceived Shaking	Potential Damage
< 0.17	1.0 - 3.0	I	Not Felt	None
0.17 - 1.4	3.0 - 3.9	II - III	Weak	None
1.4 - 9.2	4.0 - 4.9	IV - V	IV. Light V. Moderate	IV. None V. Very Light
9.2 - 34	5.0 - 5.9	VI - VII	VI. Strong VII. Very Strong	VI. Light VII. Moderate
34 - 124	6.0 - 6.9	VIII - IX	VIII. Severe IX. Violent	VIII. Moderate/Heavy IX. Heavy
> 124	7.0 and higher	X and higher	Extreme	Very Heavy

Rensselaer County Earthquake Hazard: Adjusted USGS 0.2 Sec Spectral Acceleration With a 2% Probability of Exceedance over 50 Years - Impaired Property
(Source: NYSDM/NY Geological Survey)

Municipality	Total Impaired Property	SA (High 35-45)		SA (High 45-65)	
		Improved Property	%	Improved Property	%
Berlin, Town of	\$141,460,296	\$24,430,411	17%	\$0	0%
Braunswick, Town of	\$935,076,250	\$310,277,134	33%	\$0	0%
Carlton-on-Hudson, Village of	\$173,219,901	\$1,467,452	0%	\$152,402,287	88%
East Greenbush, Town of	\$1,478,335,900	\$324,995,738	22%	\$287,266,501	19%
East Nassau, Village of	\$56,635,844	\$1,971,697	3%	\$637,927	1%
Orancho, Town of	\$160,142,003	\$8,690	0%	\$0	0%
Hosack, Town of	\$276,325,323	\$65,399,992	24%	\$0	0%
Hosack Falls, Village of	\$335,334,980	\$171,983,884	51%	\$0	0%
Nassau, Town of	\$207,267,186	\$4,390,472	2%	\$4,344,366	2%
Nassau, Village of	\$103,812,517	\$10,248,734	10%	\$0	0%
North Greenbush, Town of	\$1,226,168,100	\$34,275,301	3%	\$22,703,243	2%
Pittsburgh, Town of	\$85,588,579	\$3,620,964	4%	\$0	0%
Pittsford, Town of	\$296,037,030	\$54,211,305	18%	\$0	0%
Fourtowns, Town of	\$21,526,879	\$7,828,547	36%	\$0	0%
Rensselaer, City of	\$529,481,832	\$3,927,501	1%	\$213,481,430	40%
Sand Lake, Town of	\$618,791,110	\$176,714,228	29%	\$0	0%
Schaghticoke, Town of	\$393,627,712	\$51,271,879	13%	\$0	0%
Schaghticoke, Village of	\$46,255,242	\$0	0%	\$0	0%
Schoharie, Town of	\$846,793,002	\$329,735,681	39%	\$117,344,879	14%
Stephentown, Town of	\$187,025,080	\$31,483,850	17%	\$1,972,282	1%
Troy, City of	\$4,097,481,405	\$343,157,688	8%	\$0	0%
Valley Falls, Village of	\$24,953,624	\$0	0%	\$0	0%
Cherry Road	\$12,632,147,615	\$3,565,101,998	28%	\$816,286,292	7%

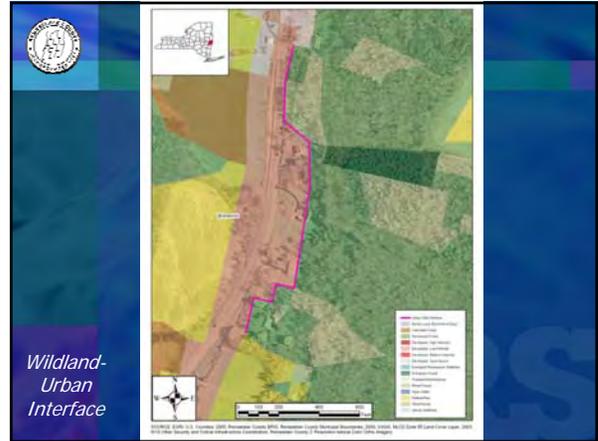
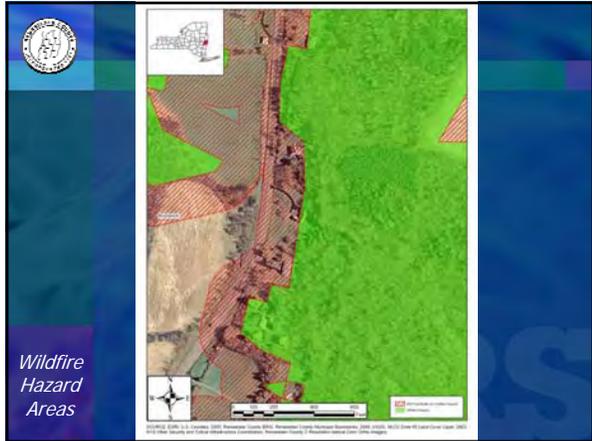
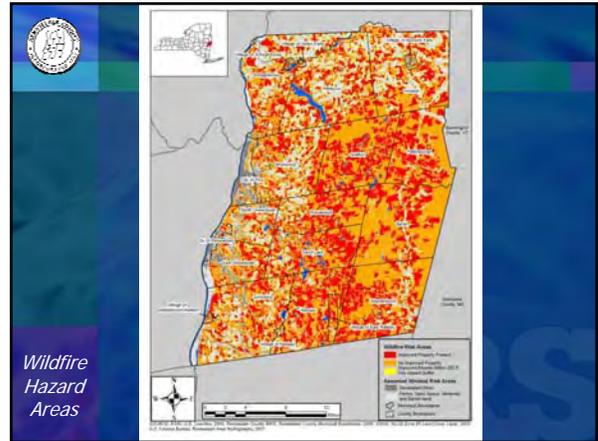
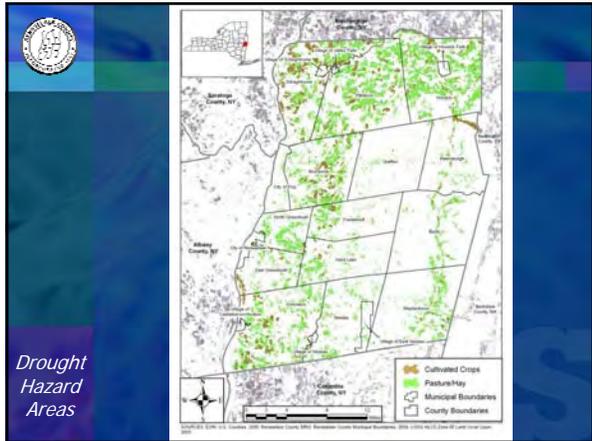
Low risk SA categories (25 - and 25 - 35) omitted for clarity



Landslide Hazard Areas

Landslide Risk by Municipality

Municipality	Total Area (Acres)	Total Improved Value	High Incidence		High Susceptibility/Moderate Incidence	
			Area (Acres)	%	Area (Acres)	%
Berlin, Town of	20,156	\$161,462,296	0	0%	\$0	0%
Blenheim, Town of	29,284	\$93,576,620	2,189	7%	\$222,193,789	24%
Curtin-on-Hudson, Village of	533	\$173,248,901	533	100%	\$173,248,901	100%
East Otsego, Town of	15,713	\$1,478,555,900	12,208	78%	\$1,422,462,069	96%
East Hesse, Village of	3,031	\$36,635,844	0	0%	\$0	0%
Oriskany, Town of	29,706	\$140,142,003	0	0%	\$0	0%
Roscoe, Town of	29,344	\$276,553,323	0	0%	\$0	0%
Hessburgh Falls, Village of	950	\$335,334,980	0	0%	\$0	0%
Hesse, Town of	25,597	\$207,267,186	0	0%	\$0	0%
Hesse, Village of	482	\$103,023,237	0	0%	\$0	0%
North Otsego, Town of	12,183	\$1,136,168,100	6,006	50%	\$767,769,236	68%
Petersburgh, Town of	26,632	\$1,588,579	0	0%	\$0	0%
Pittsford, Town of	40,236	\$296,057,628	0	0%	\$0	0%
Powdermill, Town of	26,732	\$115,226,879	0	0%	\$0	0%
Roseville, City of	2,262	\$327,461,832	2,262	100%	\$327,461,832	100%
Small Lake, Town of	23,088	\$618,731,110	0	0%	\$0	0%
Schlaghts, Town of	33,507	\$393,677,782	23,281	69%	\$303,358,307	77%
Schlaghts, Village of	640	\$48,283,342	474	74%	\$44,403,730	92%
Schroeder, Town of	46,243	\$846,788,002	23,084	50%	\$518,241,575	61%
Stoughton, Town of	27,280	\$137,023,088	0	0%	\$0	0%
Trout, City of	7,036	\$4,097,461,405	6,992	99%	\$4,087,461,400	100%
Vestal, Village of	307	\$24,933,624	0	0%	\$0	0%
County Total	425,915	\$12,472,182,922	75,976	18%	\$8,066,599,592	65%



Wildfire Hazard Areas

Exposure to Wildfire Risk in Kennesaw County

Municipality	Urban-Wildland Interface (Miles)	Wildfire Risk Zones with no Improved Property (Acres)	Wildfire Risk Zones with Improved Property (Acres)	Total Municipal Area (Acres)	Wildfire Risk (%)	Total Value of Improvement in Municipal Area	Improved Property Value Valuable in Wildfire*	Improved Property Value Valuable in Wildfire (%)
Berlin, Town of	6.1	25,119	12,255	38,194	96%	\$141,460,296	\$132,903,665	92%
Bowmansville, Town of	43.8	7,330	13,214	28,284	73%	\$915,076,230	\$551,284,456	59%
Carleton-on-Hudson, Village of	4.6	40	312	537	67%	\$173,203,997	\$179,292,469	100%
East Greenbush, Town of	38.8	4,597	4,544	15,313	69%	\$1,413,333,000	\$637,389,474	47%
East Haverhill, Village of	2.5	1,261	1,563	3,021	69%	\$36,633,844	\$11,450,637	32%
Oradon, Town of	4.2	13,045	13,569	29,396	96%	\$166,142,003	\$155,527,946	97%
Roanoke, Town of	19.1	9,577	18,845	39,364	72%	\$278,323,723	\$199,394,443	70%
Roanoke Falls, Village of	8.4	152	378	650	56%	\$133,334,939	\$127,832,334	93%
Warren, Town of	11.0	5,269	14,611	25,597	60%	\$267,287,196	\$177,774,978	63%
Warren, Village of	3.6	103	819	462	73%	\$151,818,537	\$43,396,915	28%
North Greenbush, Town of	33.1	3,401	4,404	12,193	67%	\$1,126,168,100	\$591,383,797	53%
Peterborough, Town of	6.1	12,533	12,424	26,682	94%	\$65,588,579	\$77,492,364	91%
Pittsford, Town of	24.7	9,310	26,317	46,256	72%	\$296,037,030	\$119,104,155	40%
Pittsford, Town of	26.2	7,698	10,768	29,322	60%	\$13,529,879	\$76,334,815	53%
Rousesville, City of	2.7	368	230	2,392	31%	\$527,481,832	\$137,344,492	26%
Spaulding, Town of	40.3	2,251	11,733	17,018	59%	\$618,731,193	\$151,631,048	24%
Stoughtonville, Town of	37.3	3,440	14,465	32,507	67%	\$193,627,710	\$262,461,393	130%
Stoughtonville, Village of	4.1	110	256	640	37%	\$46,212,342	\$32,146,874	67%
Stoughtonville, Town of	71.0	11,204	17,267	46,243	72%	\$6,766,000	\$613,378,744	77%
Stoughtonville, Town of	10.6	17,248	17,377	37,280	93%	\$137,020,089	\$159,778,710	113%
Trout, City of	14.8	1,648	1,238	7,056	37%	\$4,970,461,403	\$100,990,981	2%
Valley Falls, Village of	1.6	100	98	307	64%	\$24,933,624	\$12,789,845	51%
County Totals	413.8	149,427	194,228	452,915	67%	\$12,437,187,912	\$6,675,489,591	50%

- ### What we need from you:
- Statement of Authority to Participate
 - Wish List Info/Data/Documents
 - Hazard ID Questionnaire
 - Land Uses and Development Trends Questionnaire
 - Capability Assessment Questionnaire
 - Outreach to the Public and Other Stakeholders

Hazard Mitigation: Recovery With Foresight



"The world we have created today as a result of our thinking thus far has problems which cannot be solved by thinking the way we thought when we created them."

Albert Einstein

Questions and Answers



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richard_franks@urscorp.com

Our Commitment:
A FEMA-Approved Plan



**Rensselaer County Multi-Jurisdictional
Hazard Mitigation Planning Project**

Question and Answer Session – November 1, 2010

Agenda

- Welcome & Opening Remarks í í í í í í í í í í í í í í í í *Kelly Paslow, Director, RCBPS*
- Current Status of Participation í í .í í í í í í í í í í í í *Kelly Paslow, Director, RCBPS*
- RAID Q&A í *Anna Foley, URS*
- Mitigation Action Items Tip Sheet.....*Anna Foley, URS*
- To-Do Actions for Jurisdictionsí *Anna Foley, URS*
- Assistance with Completion of Forms/Questionnaires/Etc. Requested To-Dateí í í ...í ...*All*
- Closing Remarksí .í *Kelly Paslow, Director, RCBPS*
- Adjourn





Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project
 Question & Answer Session on the R.A.I.D. - November 1, 2010 (2-4 pm)
 Rensselaer County Government Center, 1600 Seventh Avenue, Troy, NY 12180 in Conference Room A

P.1/2

Last Name	First Name	Representing	Email Address	Phone
Russell	Robert	Town of Pittsford	Pittsford@pittsfordny.com	518-253-4691
Bonestel	Wayne	Rensselaer County	wbonestel@rensco.com	518-283-0973
TELISKA	JOE	"	jteliska@rensco.com	
Gallerie	Scott	Rensselaer County	sgallerie@rensco.com	518-283-1151
Rounds	Burton	Town of Sand Lake		
CARBONI	JOHN	CITY OF TROY	JOHN.CARBONI@TROY.NY.GOV	518 376 3747
Wheland	Chris	City of Troy	Chris.Wheland@troy.ny.gov	518 369-3259
HENRICKSON	ROBERT	VILLAGE OF ENNASSAUR	ROBERT@ENNASSAUR.NY.GOV	784-0289
Kurchner	Alison	Town of Grafton	grafton_supervisor@verizon.net	279-3565
Crowell	Sarah	City of Rensselaer	Sarah.Crowell@rensco.ny.gov	465-1693
Sawille	Richard	Village of Castleton-on-Hudson	brswe2004ras@verizon.net	518-732-2983
Ashworth	Jo	Town of North Greenbush	ashworth@townofng.com	518-283-5313
Forsyth Grabel	Jonathan	Town of Nassau	jgoebel@rensco.com	518-266-7678
Foley	Anna	URS	anna_foley@urscorp.com	518-973-785-0700/229



Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project
 Question & Answer Session on the R.A.I.D. - November 1, 2010 (2-4 pm)
 Rensselaer County Government Center, 1600 Seventh Avenue, Troy, NY 12180 in Conference Room A

P.2/2

Last Name	First Name	Representing	Email Address	Phone
TURNER	RAY	SAND LAKE	RET@NYCAP.ORG	674-2026
FUDA	NADINE	Town of Schoharie	Nadine.fuda@schoharie.org	477-7938
HOLMES	KEVIN	Town of Schoharie	kholmes12@nycap.org	766-4000
VAN DENUSEN	MARGARET	V. of Nassau	NETERK@NYCAP.ORG	766-3044 x2
SEVERANCE	ROBERT	V. OF NASSAU	ROBERT.SEVERANCE@US.ARMY.MIL	813-3337 C
FISCHER	TIM	Village of Saratoga	SENTACH@NYCAP.ORG	753 6100
JABOUR	JOE	Town of Brunswick	Jjabour@townofbrunswick.org	279-3461 x100
LOCIVITA	BOB MARK	Renss Co	MARK25a@GMAIL.COM	527-0409
FRLOW	KELLY	Rensco.	Kfrlow@rensko.com	266-7676
JORDAN	BRIAN	NYSOEM	Bjordan@DHSES.ny.gov	793-6646
VONDERKAM	LINDA	Rensselaer County Planning	Lvonderk@rensko.com	270-2974
CHURCH	TIMOTHY	TOWN OF PETERSBURGH	TIM5881@NETZERO.COM	658-3453
WEBER	JANET	Village of Valley Falls	JWEBER631@AOL.COM	753-6230
HANSEN	VERNA	Town of Pittstown	VSH50@wildblue.net	753-6216

Risk Assessment Interim Deliverable (RAID)

Distributed to CPG via email 10/20/10

- Questions?
- Comments?
- Feedback?



Mitigation Action Items Tip Sheet

(Included in RAID Section 6)



Project Timeline

- Kickoff Meeting: July 2010
- Plan Development: Ongoing
- Local Feedback: Ongoing
- Risk Assessment Interim Deliverable: October 2010
- Risk Assessment Q&A Session: November 2010
- Mitigation Strategy Working Session: TBD (late Nov)
- Draft Plan to CPG: December 2010
- Draft Plan to NYSEMO: January 2011

Past due/ongoing CPG member items:

- Wish List Info/Data/Documents
- Hazard ID Questionnaire
- Land Uses and Development Trends Questionnaire
- Capability Assessment Questionnaire
- Outreach to the Public and Other Stakeholders

Assistance with completion of worksheets?

Upcoming CPG member items:

- Worksheets to be completed by each municipality at the upcoming Mitigation Strategy Working Session (next meeting, late November or early December)
 - Mitigation Options Survey
 - Prioritization Worksheet (STAPLEE)
 - Implementation Strategy Worksheet
 - NFIP Compliance Actions Worksheet

NFIP Compliance Actions Worksheet

(excerpt)



Name of Your Jurisdiction	Adoption Date of your Current Floodplain Management Ordinance	Position Title of Your Jurisdiction's Designated Floodplain Administrator	Number of Municipal Staff with Roles in Enforcement of Floodplain Management Ordinance
Please give a brief description of activities currently undertaken by your municipality to enforce your floodplain management ordinance:			



Local Floodplain Administrators and Floodplain Management Ordinances



- Designating a Local Floodplain Administrator and adopting a Local Floodplain Management Ordinance are REQUIREMENTS for entry into FEMA's National Flood Insurance Program (NFIP).
- FEMA's NFIP Community Status Book lists every municipality in the County as participating in the NFIP.
- At some point in the past, every municipality in the county provided FEMA with their ordinance and the local administrator.



Questions and Answers



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973-785-0700 ext. 339
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Richard Franks, Deputy Project Manager
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richard_franks@urscorp.com

**Our Commitment:
A FEMA-Approved Plan**

End of show



Hazard Identification Chapter of RAID

Completed

- Evaluation of a full range of natural hazards (23)
 - Hazards selected for further analysis and reasons why (13)
 - Hazards not selected and reasons why not (10)




Hazard Identification Chapter of RAID

Completed

23 hazards evaluated
13 identified as "significant" for further evaluation

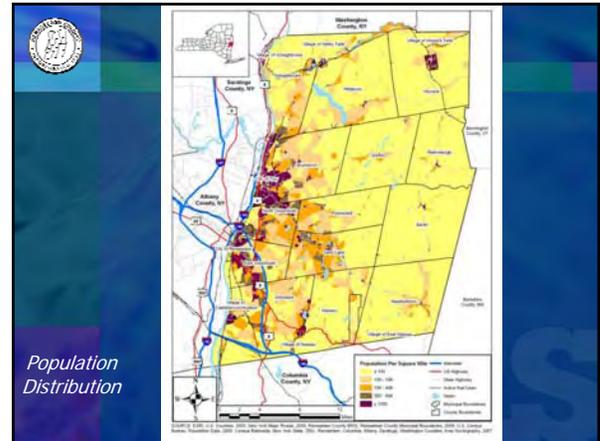
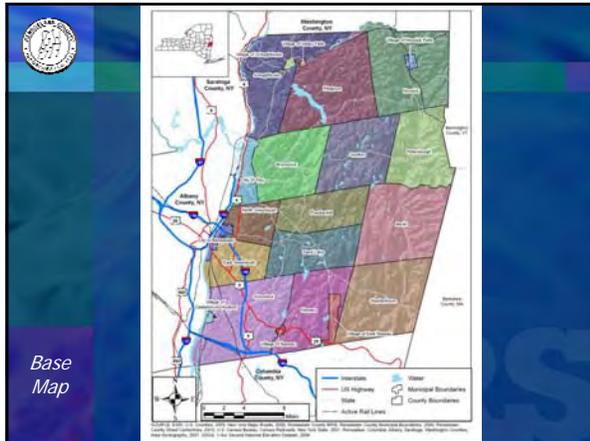
■ Extreme Temperatures	■ Drought
■ Extreme Wind	■ Flood
■ Hurricane and Tropical Storms	■ Ice Jams
■ Lightning	■ Earthquakes
■ Tornadoes	■ Landslides
■ Winter Storms	■ Wildfires
■ Dam Failure	



Hazard Profiles Chapter of RAID

Completed

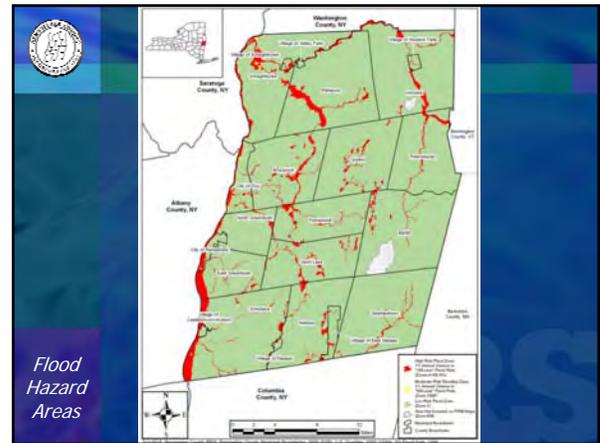
- Description of hazard
- Location of hazard area
- Extent (magnitude or severity)
- Previous occurrences
- Probability/likelihood of future occurrences



Distribution of Profiled Hazards

Table 3a.1
Summary of Profiled Hazards by Municipality

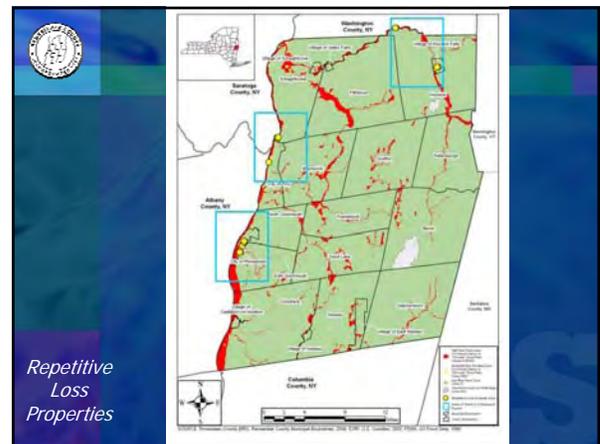
Jurisdiction	Extreme Temperature	Extreme Wind	Hurricane and Tropical Storms	Tornado	Lightning	Winter Storms	Down Fallout	Drought	Flood	Ice/Aval	Earthquake	Landslide	Wildfire
Brookline, Town of													
Brunswick, Town of													
Castleton-on-Hudson, Village of													
East Greenbush, Town of													
East Nassau, Village of													
Orangetown, Town of													
Hudson, Town of													
Horseshoe Falls, Village of													
Nassau, Town of													
Nassau, Village of													
North Greenbush, Town of													
Paterburgh, Town of													
Pittsford, Town of													
Putnam, Town of													
Rensselaer, City of													
Sand Lake, Town of													
Schaghticoke, Town of													
Schaghticoke, Village of													
Schoharie, Town of													
Stephentown, Town of													
Troy, City of													
Valley Falls, Village of													



Flood Hazard Areas

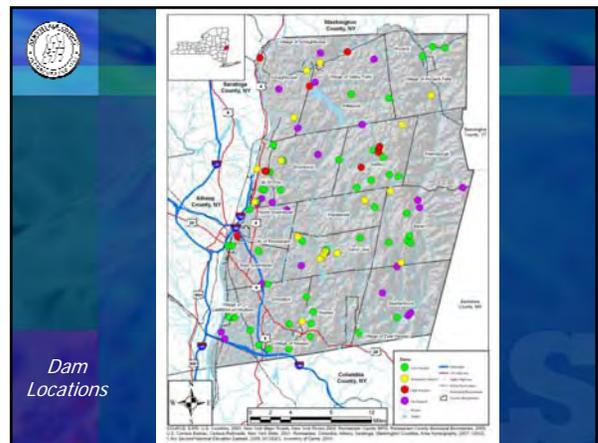
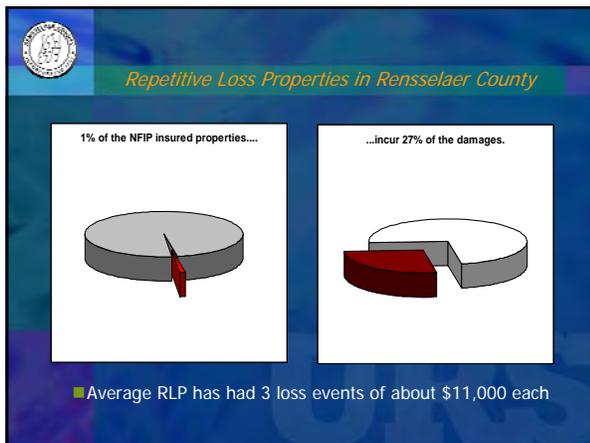
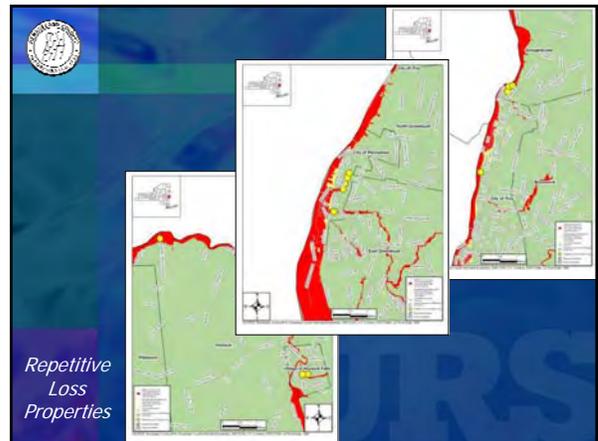
Summary of FEMA Q3 Flood Data by Municipality: Improved Property in Hazard Areas

Municipality	Total Improved Property Value	Improved Property in High Flood Risk Area		Improved Property in Moderate Flood Risk Area		Improved Property in Low Flood Risk Area	
		A, AE	X	A, AE	X	A, AE	X
Brookline, Town of	\$161,400,206	\$7,368,093	\$0	\$153,032,113	\$0	0%	0%
Brunswick, Town of	\$913,076,230	\$41,246,232	\$666,131	\$870,163,831	\$0	4%	0.1%
Castleton-on-Hudson, Village of	\$173,218,001	\$42,107,736	\$2,043,151	\$129,067,192	\$0	24%	1%
East Greenbush, Town of	\$1,478,515,900	\$40,403,331	\$663,755	\$1,437,112,112	\$0	0.04%	0%
East Nassau, Village of	\$36,633,244	\$3,574,931	\$403,969	\$32,654,342	\$0	10%	1%
Orangetown, Town of	\$160,142,003	\$4,706,800	\$0	\$155,435,203	\$0	3%	0%
Hudson, Town of	\$274,323,723	\$6,462,770	\$0	\$267,860,953	\$0	2%	0%
Horseshoe Falls, Village of	\$335,324,903	\$16,069,381	\$0	\$319,255,522	\$0	5%	0%
Nassau, Town of	\$207,267,186	\$6,404,721	\$177,201	\$200,134,141	\$0	3%	0%
Nassau, Village of	\$101,012,237	\$6,880,044	\$0	\$94,132,193	\$0	7%	0%
North Greenbush, Town of	\$1,236,165,100	\$41,138,043	\$31,249,415	\$1,163,777,642	\$0	3%	0%
Paterburgh, Town of	\$83,589,579	\$3,092,023	\$0	\$80,497,556	\$0	4%	0%
Pittsford, Town of	\$294,057,030	\$9,976,431	\$37,128	\$284,020,471	\$0	0.02%	0%
Putnam, Town of	\$31,226,879	\$1,127,037	\$1,032,087	\$30,103,792	\$0	4%	0%
Rensselaer, City of	\$27,481,832	\$123,012,754	\$28,949,326	\$37,435,537	\$0	23%	2%
Sand Lake, Town of	\$618,731,130	\$33,047,439	\$2,842,158	\$582,881,109	\$0	0.5%	0%
Schaghticoke, Town of	\$393,427,712	\$16,512,444	\$14,796,010	\$361,635,234	\$0	4%	0%
Schaghticoke, Village of	\$48,285,342	\$995,192	\$25,092	\$47,289,901	\$0	0.1%	0%
Schoharie, Town of	\$146,788,002	\$18,401,402	\$2,232,877	\$128,383,725	\$0	12%	0%
Stephentown, Town of	\$187,025,080	\$5,411,173	\$444,371	\$181,613,909	\$0	3%	0%
Troy, City of	\$4,097,481,403	\$23,453,130	\$192,613,262	\$3,804,868,141	\$0	0.6%	0%
Valley Falls, Village of	\$24,933,624	\$143,966	\$7,662	\$24,829,656	\$0	0.03%	0%
Washington County Total	\$12,432,182,802	\$785,872,538	\$7,794,892	\$11,646,310,560	\$0	6%	0.2%



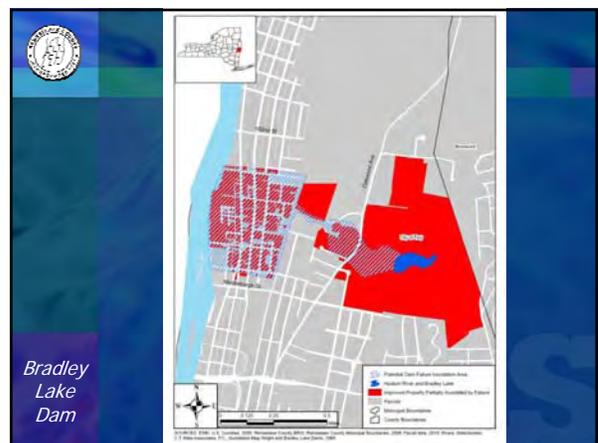
Repetitive Loss Properties:

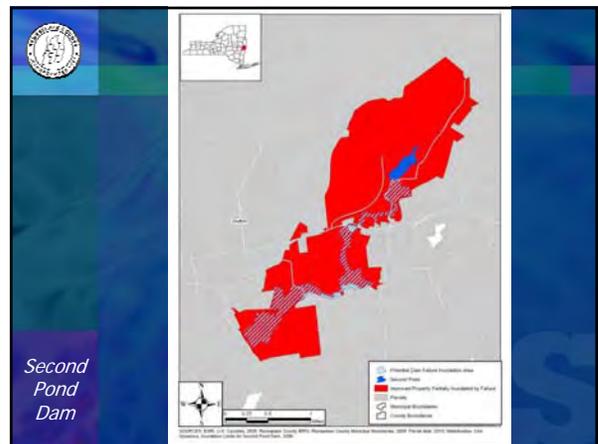
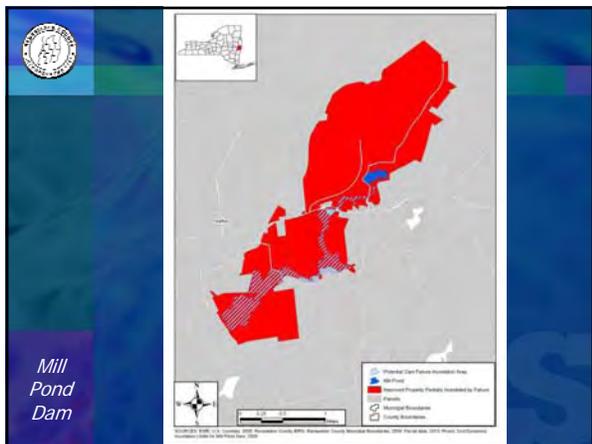
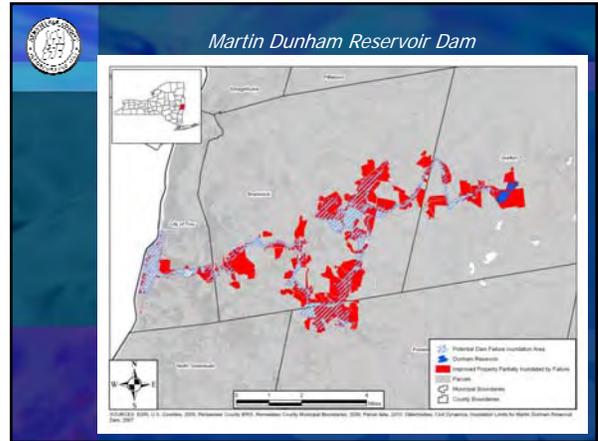
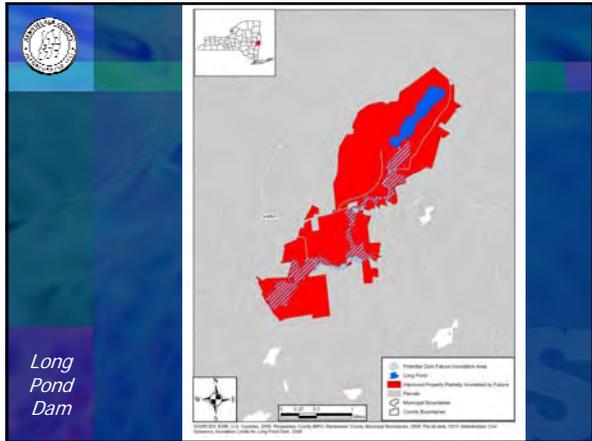
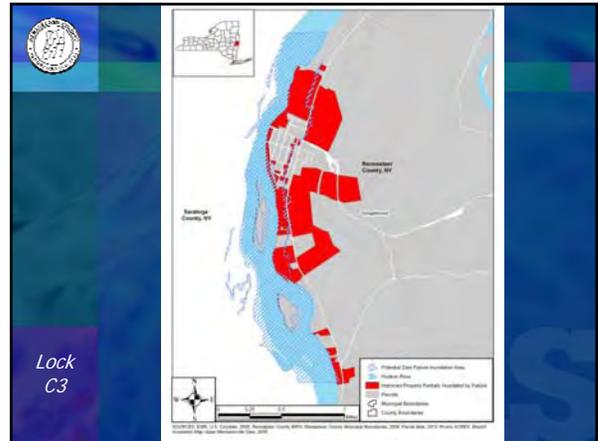
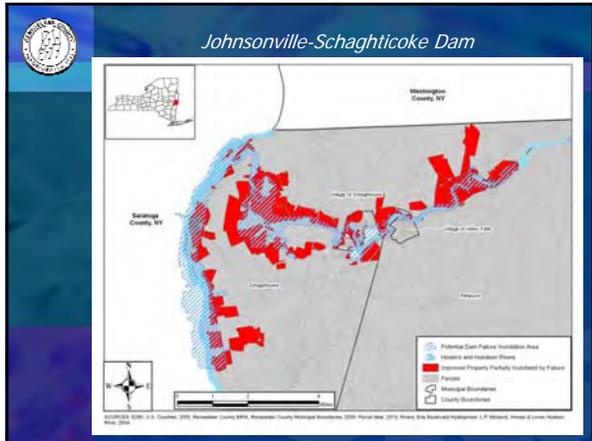
- Two or more losses
- Of at least \$1,000 each
- In any rolling 10-year window since community's entry into NFIP

Dam Failure

High Hazard Dams (NYSDEC):
 A dam failure may result in widespread or serious damage to home(s); damage to main highways, industrial or commercial buildings, railroads, and/or important utilities, including water supply, sewage treatment, fuel, power, cable or telephone infrastructure; or substantial environmental damage; such that the loss of human life or widespread substantial economic loss is likely.





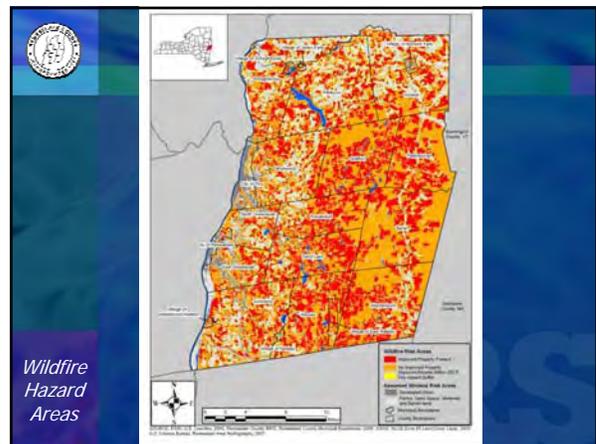
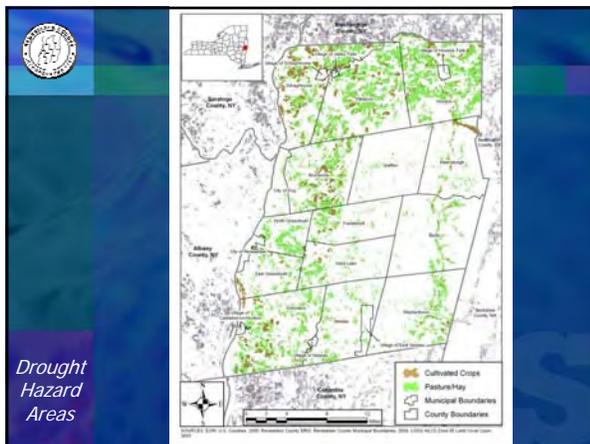
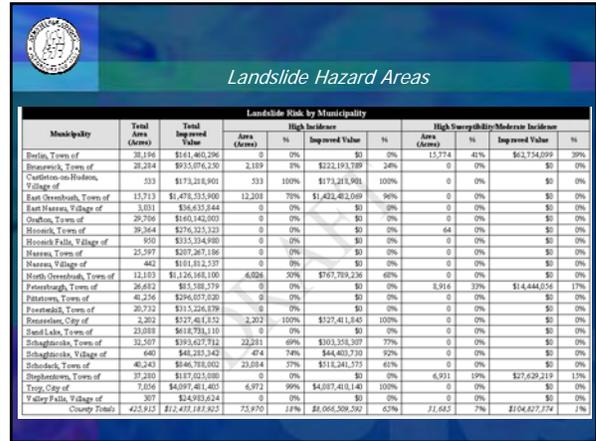
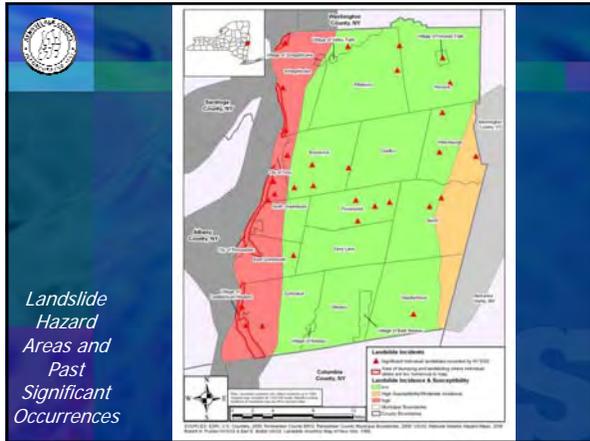
Earthquake Magnitude/Intensity Comparison

PGA	Magnitude	Intensity	Perceived Shaking	Potential Damage
< 0.17	1.0 - 3.0	I	Not Felt	None
0.17 - 1.4	3.0 - 3.9	II - III	Weak	None
1.4 - 9.2	4.0 - 4.9	IV - V	IV. Light V. Moderate	IV. None V. Very Light
9.2 - 34	5.0 - 5.9	VI - VII	VI. Strong VII. Very Strong	VI. Light VII. Moderate
34 - 124	6.0 - 6.9	VIII - IX	VIII. Severe IX. Violent	VIII. Moderate/Heavy IX. Heavy
> 124	7.0 and higher	X and higher	Extreme	Very Heavy

**Remondino County Earthquake Hazard: Adjusted USCS 0.2 Sec Spectral Acceleration
With a 2% Probability of Exceedance over 50 Years - Improved Property**
(Source: NCEM/USGS Geological Survey)

Municipality	Total Improved Property	SA (Mag) 04-6		SA (Mag) 05-65		SA (Mag) 65-75	
		Improved Property	%	Improved Property	%	Improved Property	%
Berlin, Town of	\$161,460,296	\$24,433,411	15%	\$0	0%	\$0	0%
Bronswick, Town of	\$935,076,250	\$310,277,134	33%	\$0	0%	\$6,682,659	1%
Carleton-on-Hudson, Village of	\$173,218,901	\$1,467,452	0%	\$152,402,337	88%	\$0	0%
East Osearush, Town of	\$1,478,315,000	\$324,392,729	22%	\$217,266,321	15%	\$751,035	0%
East Haveras, Village of	\$36,635,844	\$13,971,607	38%	\$637,027	2%	\$0	0%
Oranby, Town of	\$160,142,003	\$24,860	0%	\$0	0%	\$0	0%
Hoonick, Town of	\$276,323,323	\$66,199,092	24%	\$0	0%	\$1,289,715	0%
Hoonick Falls, Village of	\$335,304,900	\$171,903,884	51%	\$0	0%	\$11,457,740	3%
Haveras, Town of	\$207,267,186	\$44,590,472	21%	\$4,344,366	2%	\$0	0%
Masses, Village of	\$101,812,337	\$10,248,394	10%	\$0	0%	\$0	0%
North Osearush, Town of	\$1,126,168,100	\$334,273,303	31%	\$22,703,248	2%	\$184,728,119	16%
Petersburgh, Town of	\$83,588,579	\$7,620,964	9%	\$0	0%	\$0	0%
Pittsboro, Town of	\$296,037,020	\$24,111,305	8%	\$0	0%	\$1,281,919	1%
Pointebluff, Town of	\$31,526,679	\$7,838,547	25%	\$0	0%	\$0	0%
Remondino, City of	\$529,413,352	\$3,923,201	1%	\$213,614,202	40%	\$304,975,930	58%
Sand Lake, Town of	\$618,791,110	\$176,714,228	29%	\$0	0%	\$0	0%
Schaghticoke, Town of	\$393,627,712	\$21,271,879	5%	\$0	0%	\$75,935,781	19%
Schaghticoke, Village of	\$48,255,342	\$0	0%	\$0	0%	\$16,735,649	35%
Schoharie, Town of	\$646,788,002	\$329,793,681	51%	\$117,344,979	18%	\$0	0%
Stephentown, Town of	\$187,025,080	\$31,483,850	17%	\$17,672,782	10%	\$0	0%
Troy, City of	\$4,097,481,405	\$343,157,600	8%	\$0	0%	\$3,179,815,227	78%
Valley Falls, Village of	\$24,933,634	\$0	0%	\$0	0%	\$4,207	0%
County Totals	\$12,432,181,925	\$3,565,101,899	29%	\$816,286,292	7%	\$3,689,432,187	21%

Low risk SA categories (C25 and 25 - 35) omitted for clarity





**Rensselaer County Multi-Jurisdictional
Hazard Mitigation Planning Project**

***Mitigation Strategy Working Session –
November 30, 2010 (1-4 pm)***

Agenda

- Welcome & Opening Remarks í í í í í í í í í ...*Kelly Paslow, Director, RCBPS*
- Reminders í ..*Anna Foley, URS*
- Any Public Comments?.....*All*
- **Mitigation Strategy Working Session***Anna Foley, URS*
 - ✚ *Mitigation Options Survey*
 - ✚ *Evaluation and Prioritization of Mitigation Actions*
 - ✚ *Developing Project Implementation Strategies*
 - ✚ *Actions for Continued Compliance with the NFIP*
- Next Steps í í í í í í í í ..í í í í í í í .í í í í*Anna Foley, URS*
- Questions & Answers í í í í í í .í í íí í í í í í í í í í ..*All*
- Adjourn í í í .í í í í í í í í í í *Kelly Paslow, Director, RCBPS*





Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project
 Mitigation Strategy Working Session - November 30, 2010 (1-4 pm)
 Rensselaer County Government Center, 1600 Seventh Avenue, Troy, NY 12180 in Conference Room A

1 of 2

Last Name	First Name	Representing	Email Address	Phone
VanDuse	Margaret	Village of Nassau	NCLERK@NYCAP, RR.COM	766-3044 XZ
FISHER	TIM	Village of Schoharie	SCHAEV@NYCAP.PP.COM	518 753 6100
Russell	Bob	Town of Pittsford	Pittsford Garage & Acl.com	518 252 4222
Hansen	VERNA	Town of Pittsford	WH50@wildblue.net	753-6214
McCagg	Fred	Town of Nassau	Nassauhighway@fairpoint.net	766-9417
Rounds	Barton	Town of Sand Lake	Super@SandLake.us	674-2026 Ext 12
vonderheide	Linda	Rensselaer/Manlius	Lvonderheide@renseco.com	518 270 2921
Nadine Fuda		T/O Schoharie	Nadine.Fuda@Schoharie.org	477-7938
Holmes	KEN	T/O Schoharie	Kholmes12@nycap.ny.com	766-4000
SEVERANCE	BOB	VILLAGE OF NASSAU	ROBERT.SEVERANCE@USARMY.MIL	766-3044 X2
Weber	Janet	Village of Valley Falls	JWEBER6131@ADL.COM	753-6131
Gallen	Scott	Renss Co Highway	sgallen@renseco.com	428-6632
TELISKA	JOE	RENS. Co. HIGHWAY	jteliska@renseco.com	
CROWELL	SARAH	CITY OF RENSSELAER	SARAH.CROWELL@RENSSELAER.NY.GOV	518-465-1893



Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project
 Mitigation Strategy Working Session - November 30, 2010 (1-4 pm)
 Rensselaer County Government Center, 1600 Seventh Avenue, Troy, NY 12180 in Conference Room A

2 of 2

Last Name	First Name	Representing	Email Address	Phone
Turner	RAY	SAND LAKE	rcr@nycap.ca.com	674-8185
Jordan	Bruce	NYSOEM	BJordan@dhses.ny.gov	793-6686
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Gooden	Allyce	Town of Stephentown		733-5999
Behunath	Jo	Town of N.B.	behunath@townofny.com	283-5313
Mark Prens	Mark	" "	Prens@Nycap.RR.com	283 3921
HENRIKSON	Robert	VILL OF E. NASSAU	RHE@COCAURET.COM	760 5814
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Groebel	Jonathan	Rensselaer County	jgroebel@renesco.com	266-7678
Pastor	Kathy	Ren Co BPS	KPastor@renesco.com	266-7676
KIRCHNER	ALLISON	GRAFTON		

Anna

URS

Foley



Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project

Mitigation Strategy Working Session

November 30, 2010

1-4 pm

Rensselaer County Government Center
1600 Seventh Avenue, Troy
Conference Room A




Today's Agenda

- Welcome and Opening Remarks
- Reminders
- Any public comments?
- Mitigation Strategy Working Session
 - ◆ Completion of worksheets to evaluate and prioritize actions and develop implementation strategies
- Next Steps
- Questions and Answers



Reminders

- Please remember to sign in
- Outreach Logs were due to URS on November 18th – please record all activities intended to alert and engage the public. Return by December 3rd.




Reminders

- Previous questionnaires will still be accepted (LUDT, CA, Hazard ID) through December 3rd
- Today's worksheets will be accepted through December 15th



Comments so far from the Public and/or Other Stakeholders??

- Please tell us what and from whom.
- We will incorporate into appropriate section of the plan.
- Please get back to us no later than December 3rd.



Mitigation Strategy Working Session

- The Worksheets:
 1. Mitigation Options Survey
 2. Evaluation and Prioritization of Actions
 3. Documenting an Implementation Strategy
 4. NFIP Compliance Actions Worksheet



Worksheet Completion

- Mitigation strategy 'Tip Sheet' was distributed at the last meeting, and via an RCBPS email of November 16th.
- Today's worksheets were initially distributed via an RCBPS email of November 16th.
- RAID (distributed via an RCBPS email of October 20th) includes initial actions list, tip sheet, other reference material for selection of mitigation actions.
- Return today's worksheets no later than December 15th



Worksheet Completion

IMPORTANT NOTE:

If you do not complete and return the worksheets on time, FEMA will not see your municipality as having sufficiently participated and the plan will not be approved for your jurisdiction



Worksheet Completion

FEMA Requirements – apply to the County and EACH municipality on an individual basis:

- Identify and analyze a comprehensive range of projects for each hazard
- Select projects that address reducing the effects of hazards on both new and existing buildings and infrastructure – for each identified hazard
- Identify, evaluate and prioritize actions related to continued compliance with the NFIP



Worksheet Completion

FEMA Requirements (cont'd):

- Document the process and criteria used for prioritizing the projects
- Identify how each project will be implemented and administered, who will be responsible, resources for completion, targeted time frame?



Worksheet Completion

FEMA Requirements (cont'd):

- For each project, the estimated cost and documentation of cost-benefit review
- Identifiable action items for each participating jurisdiction



1. Mitigation Options Survey

- Ranking 6 categories of actions to reflect each municipality's overall local preferences
 - Preventive Measures
 - Asset Protection
 - Emergency Services
 - Structural Projects
 - Natural Resources Protection
 - Public Information

Rembrandt County Multi-Jurisdictional Hazard Mitigation Planning Project Affirmation/Options Survey

Municipality: _____
 Year: _____

Please rank the following general descriptions of mitigation measures in the order that you estimate them to be most preferred by the residents of your municipality, with 1 = most preferred, through 5 = least preferred. This information will be used to help fund a prioritized portion of when local performance may need to be used for planning with the state-wide hazard action plan of local jurisdictions.

Preventive measures, such as:
 Regulation
 Building codes
 Zoning

Acquisition measures, such as:
 Purchase of structures
 Purchase of land
 Purchase of easements

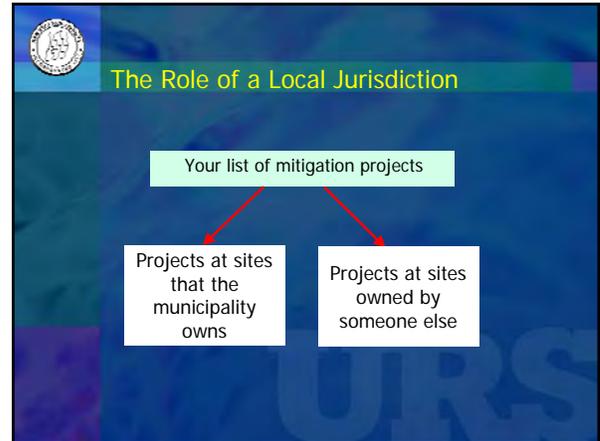
Emergency warning measures, such as:
 Evacuation routes
 Emergency warning systems
 Hazard warning systems
 Emergency response

Structural projects, such as:
 Floodwalls
 Coastal armorment
 Dams
 Dikes

Nonstructural measures, such as:
 The state and local government policies
 Wetland and other natural resources

Public information activities, such as:
 Education
 Public awareness
 Local media

* Emergency Warning System: Flood warning systems provide more than one emergency warning system that an owner can use to receive a warning of an emergency and to evacuate the area. However, the state will continue to be responsible for providing the state-wide hazard action plan of local jurisdictions and will not use mitigation measures for FEMA's warning system.



Rembrandt County Multi-Jurisdictional Hazard Mitigation Planning Project

WHAT IS THE ROLE OF A LOCAL JURISDICTION IN MITIGATION???

In developing your list of mitigation projects, you may think of some projects that will be undertaken at sites or facilities owned by your municipality. For example, maybe you would like to upgrade a commercial drainage system, install a flood-resistant roadway, or relocate the local police station out of the floodplain. But what happens if you see a need for a mitigation project at a site or facility for which your municipality has no authority? For example, what if a County road runs through your municipality, and you think a certain portion of the road should be raised to prevent the road from being overtopped during a flood event? What if there is a nursing home in your community's floodplain, and you think there would be a great benefit to building a floodwall around the facility? Or how about residential structures that you think should be elevated? Here are some points which we hope will clarify the role of a local jurisdiction under these two circumstances.

If your municipality DOES NOT own the structure in need of mitigation...	If your municipality DOES own the structure in need of mitigation...
1. Meet with the facility owner to advise them of the problem.	1. Identify feasible alternatives to mitigate the problem (this may require a consultation with the state and specific construction details of the facility).
2. Request the facility owner to identify feasible alternatives to mitigate the problem that may require a consultation with the state and specific construction details of the facility.	2. Fund the most cost-effective mitigation alternative (either through local spending, grants, or if needed through funding sources at the state or federal levels, such as FEMA's Pre-Disaster Mitigation Program (PDM), Hazard Mitigation Grant Program (HMGP), or Flood Mitigation Assistance Program (FMAA)).
3. If requested by the facility owner, apply to the owner's local flood hazard mitigation project funding for the most cost-effective mitigation alternative (either through local spending, grants, or if needed through funding sources at the state or federal levels, such as FEMA's Pre-Disaster Mitigation Program (PDM), Hazard Mitigation Grant Program (HMGP), or Flood Mitigation Assistance Program (FMAA)).	3. Maintain the project when funding is secured.

The Role of a Local Jurisdiction

- If municipality has ownership, then your action is to undertake the project.
- If the owner is anyone else, then your action can be to: advise the owner of the problem, work with them to identify a solution, and submit a grant application on their behalf to obtain funding to complete the project.

The Role of a Local Jurisdiction – An Example

- The Project:** Acquire 5 homes that repeatedly flood
- Your municipality's "action" is NOT to acquire the houses (unless your local budget has a lot of available funds).
- Your municipality's "action" is to meet with the homeowner to advise them of the risks they face and the benefits of acquisition, and apply to FEMA on their behalf for mitigation project grant funding.

2. Evaluation and Prioritization of Actions

- FEMA's "S T A P L E E"
- Qualitative and subjective level of analysis of overall benefits and costs in lieu of formal benefit-cost analysis
- Acceptable for the planning phase – more formal analysis only required later when making actual grant applications

Local Floodplain Administrators and Floodplain Management Ordinances

- Designating a Local Floodplain Administrator and adopting a Local Floodplain Management Ordinance are REQUIREMENTS for entry into FEMA's National Flood Insurance Program (NFIP).
- FEMA's NFIP Community Status Book lists every municipality in the County as participating in the NFIP.
- At some point in the past, every municipality in the county provided FEMA with their ordinance and the local administrator.

Renovated County Multi-Jurisdictional Hazard Mitigation Planning Project
NFIP COMPLIANCE ACTIONS WORKSHEET

(Name of Jurisdiction): _____

Part 1:

Please fill in the following table. (Note: All municipalities in Renovation County participating in the NFIP, NFIP participating townships DO have a floodplain management ordinance AND a Floodplain Administrator on the books.)

Name of Your Jurisdiction	Adoption Date of your Current Floodplain Management Ordinance	Position Title of Your Jurisdiction's Designated Floodplain Administrator	Number of Municipal Staff with Roles in Enforcement of Floodplain Management Ordinance
Please give a brief description of activities currently undertaken by your municipality to enforce your floodplain management ordinance:			

Part 2:

- If your current floodplain management ordinance was adopted before 1996 and has not been subsequently revised, then fill in Row 1 on Pages 2 and 3. (Please leave Row 1 blank if your ordinance is current as of 1996 or later.)
- If your jurisdiction currently does not have a specific person filling the position title of Floodplain Administrator, or if the person filling this position is unaware of their responsibilities, then fill in Row 1 on Pages 2 and 3. (Otherwise please leave Row 1 blank.)
- If you consider the present level of staffing sufficient to adequately enforce your floodplain management ordinance, then fill in Row 3 on Pages 2 and 3. (Please leave Row 2 blank if you feel current staffing level is adequate.)
- Please fill in Row 4 on Pages 2 and 3 to evaluate how you plan to update your floodplain management ordinance to be consistent with revised Flood Insurance Rate Maps that may at some point become available in the State for Renovation County. (Note that FEMA has not included Renovation County as part of its Map Modernization study. Thus, no new mapping is anticipated in the near future. However, everyone should still fill in Row 4.)
- If floodplain management staff members in your municipality are not Certified Floodplain Managers (CFM), then please fill in Row 5 on Pages 2 and 3. (Please leave Row 2 blank if your floodplain managers are already CFM.)
- If your municipality is not already a participant in FEMA's Community Rating System (CRS), please fill in Row 6 on Pages 2 and 3. (No jurisdiction in Renovation County currently participates in the CRS; everyone should fill in Row 6.)
- If you consider there to be additional activities that could be undertaken to enforce your municipality's floodplain management ordinance beyond what your municipality is already doing, please list these activities in the blank Rows 7 and 8 on Pages 2 and 3. (Otherwise, you can leave Row 7 and 8 blank.) * Feel free to attach additional pages if you need more space.

Renovated County Multi-Jurisdictional Hazard Mitigation Planning Project
NFIP COMPLIANCE ACTIONS WORKSHEET

(Name of Jurisdiction): _____

PRIORITIZATION

NFIP Compliance Action	*** cost (unfavorable)					** neutral or not applicable			*** benefit (favorable)			High, medium, or low		Priority
	S	T	A	P	L	E	E	Can be implemented easily	Requires multiple agencies	Can be implemented quickly	Overall Benefit	Overall Costs		
1. Update/review floodplain management ordinance to comply with latest FEMA regulations														
2. Designate/review a specific person to be your municipality's Floodplain Administrator														
3. Add/review sufficient members of staff to adequately enforce NFIP regulations/floodplain management ordinance														
4. Update/review floodplain management ordinance to be consistent with potential future new FEMA														
5. Request staff involved in floodplain management and ordinance enforcement to become Certified Floodplain Managers (CFM)														
6. Join the Community Rating System (CRS)														

Renovated County Multi-Jurisdictional Hazard Mitigation Planning Project
NFIP COMPLIANCE ACTIONS WORKSHEET

(Name of Jurisdiction): _____

IMPLEMENTATION STRATEGY

Priority	NFIP Compliance Action	Applies to Community Structures Existing Now, Being Rebuilt, or New	Primary Department Responsible	Existing Local Planning Mechanisms through which the action will be implemented	Target Date	Cost Estimate	Funding Source
	1. Update/review floodplain management ordinance to comply with latest FEMA regulations						
	2. Designate/review a specific person to be your municipality's Floodplain Administrator						
	3. Add/review sufficient members of staff to adequately enforce NFIP regulations/floodplain management ordinance						
	4. Update/review floodplain management ordinance to be consistent with potential future new FEMA						
	5. Request staff involved in floodplain management and ordinance enforcement to become Certified Floodplain Managers (CFM)						
	6. Join the Community Rating System (CRS)						

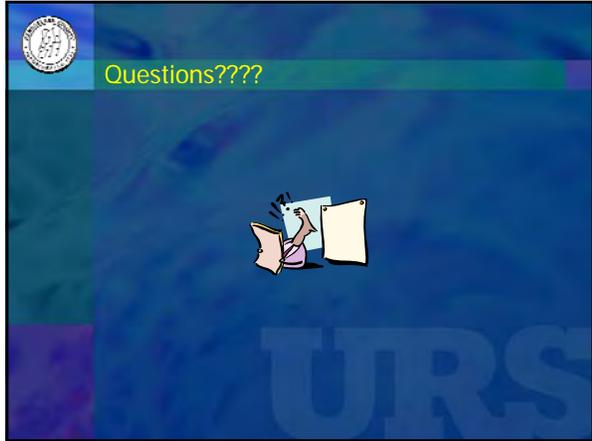
To submit your worksheets:

Anna Foley
URS
201 Willowbrook Boulevard, 3rd Floor
Wayne, New Jersey 07470-7005
Phone: 973-785-0700 ext. 339
Fax: 973-812-0985
Email: anna_foley@urcorp.com

Please don't hesitate to call with questions!!

Next Steps

- Submit comments on the RAID and any past-due deliverables no later than Friday, December 3rd.
- If you are not turning in your forms today, please do so no later than Wednesday, December 15th.
- January – Draft Plan to NYSOEM → FEMA





Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project

*Stakeholders Informational Session –
November 30, 2010 (6-8 pm)*

Agenda

- Welcome & Opening Remarks í í í í í í í í í ...*Kelly Paslow, Director, RCBPS*
- Project Overview í í í .í í í í í í í ...í í í í í*Anna Foley, URS*
 - ✚ *Mitigation and Mitigation Planning*
 - ✚ *Purpose and Need for the Plan*
 - ✚ *Key Stakeholders and How They Fit In to the Process*
 - ✚ *Summary of the Project To Date*
- Discussion and Feedback from Stakeholdersí .í í í í*Anna Foley, URS*
- Closing Remarks.í í í í í í í í í í *Kelly Paslow, Director, RCBPS*
- Adjourn





Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project
Stakeholders Informational Session – November 30, 2010 (6-8 pm)
Rensselaer County Government Center, 1600 Seventh Avenue, Troy, NY 12180 in Conference Room A

1061

Last Name	First Name	Representing	Email Address	Phone
Seward	Karen	HVCC	k.seward@hvcc.edu	629-7427
SANDFORD	Tom	RENS CO SOIL & WATER	TOM.SANFORD@NY.NACONET.NET	271-1740
HAWLEY	DAVID	Cornell Cooperative Extension of Rensselaer	dhh10@cornell.edu	272-4210
SILVA	RYAN	Rensselaer County Chamber Commerce	rsilva@renscochamber.com	274-7020
KING	JOANNA	CAPITAL DIST. REG. PLNG. COMM.	JOANNA@CDRPC.ORG	432-0850
COWAN	STEPHEN	HVCC	S.COWAN@HVCC.EDU	629.7356
Laslov	Kelly	Rm Co APs	KLaslov@Rensco.com	866-7676
Bachman	Timothy	Red Cross	BACHMAN@REDCROSSNY.ORG	577-9101
HANSON	CHARLE	QUESTAR III BOCES	CHANSEN@QUESTAR.ORG	479.6974
Goebel	Jonathan	Rensselaer County	jgoebel@rensco.com	266-7678
Foley	ANNA	URS	ANNA	

Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project

Stakeholders Informational Session
November 30, 2010
 6-8 pm

Rensselaer County Government Center
 1600 Seventh Avenue, Troy
 Conference Room A

Tonight's Agenda

- Welcome and Opening Remarks.....Kelly Paslow, RCBPS
- Project Overview.....Anna Foley, URS
 - ◆ Mitigation and Mitigation Planning
 - ◆ Purpose and Need for the Plan
 - ◆ Key Stakeholders & How They Fit In To The Process
 - ◆ Summary of the Project To Date
- Discussion and Feedback from Stakeholders.....All
- Closing Remarks.....Kelly Paslow, RCBPS
- Adjourn

"Nature, as we know her, is no saint."
 - Ralph Waldo Emerson

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Project Overview:
Mitigation and Mitigation Planning

- Natural hazards are a part of our past, and they will inevitably be a part of our future.
- But- they don't need to become disasters!
- **By planning ahead, mitigation projects can work to reduce or eliminate their consequences during future occurrences.**

Project Overview:
Mitigation and Mitigation Planning

- **Hazard Mitigation** is any sustained action taken to reduce or eliminate long-term risk to life and property from a hazard event.
- "Recovery with foresight"

Project Overview:
Mitigation and Mitigation Planning

"Mitigation is about lowering the risk and reducing the effects of disasters, and this ambitious venture has the potential to reap great rewards. To successfully mitigate against disaster will require the combined talents and concerted efforts of all levels of governments, academia, professional and voluntary organizations, the corporate sector, and all Americans."

- Former President William J. Clinton

Project Overview:
Mitigation and Mitigation Planning

- Hazard Mitigation Planning is a collaborative *process* undertaken to break the damage cycle by:
 - Studying natural hazards,
 - Evaluating hazard effects, and
 - Using this information to identify hazard mitigation measures that will reduce risks.

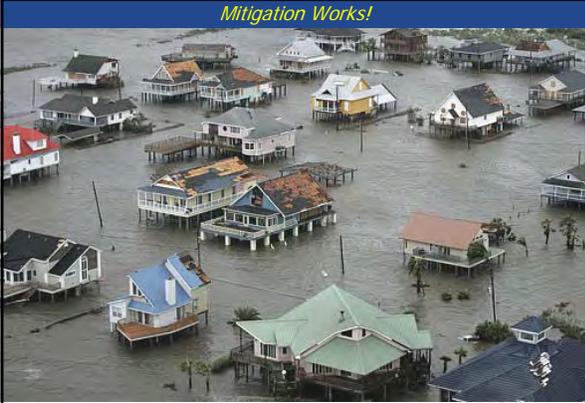


Project Overview:
Mitigation and Mitigation Planning



- Elevating a house to reduce flood damages
- Installing hurricane clips to roofs to reduce wind damage
- Retrofit structures with fire-resistant materials
- Modifying building codes to incorporate hazard-resistant design

Mitigation Works!



Elevated homes in Sweet Lake, LA (near Lake Charles) after Hurricane Rita (09/24/05).

Project Overview:
Mitigation and Mitigation Planning

- According to a study by the Multihazard Mitigation Council (part of the National Institute of Building Sciences):

Every \$1 paid toward mitigation saves an average of \$4 in future disaster-related costs



Project Overview:
Purpose and Need for the Plan



- Disaster Mitigation Act of 2000 requires it as a condition for eligibility to apply for certain types of federal hazard mitigation project funding.

Project Overview:
Purpose and Need for the Plan

- The final plan will serve as a portal to Federal grant monies for hazard mitigation projects that will reduce the effects of future natural hazards.
- Winning grant applications allow local officials to supplement precious local tax dollars with federal funding to achieve local hazard mitigation objectives at the least cost to the community.
- Implementing the projects will reduce the repair costs associated with future hazard occurrences.



Project Overview: Purpose and Need for the Plan

Once the plan is approved, jurisdictions that participate fully will be able to apply for projects like these (few examples):

- Acquire/elevate/floodproof/relocate structures
- Road raising/relocation
- Culvert upgrades
- Bridge retrofits
- Utility system protective measures
- Wind retrofits for buildings
- Minor localized flood reduction projects (inc. retention/ detention basins)
- Soil stabilization (geotextiles, rip rap, etc.)
- Wildfire mitigation (defensible space, ignition-resistant construction, fuel reduction)

How much of project costs could typically be funded by FEMA grants?

- Programs and Federal Share
 - HMGP 75%
 - PDM 75%
 - FMA 75%
 - RFC 100%
 - SRL 90%

How much of project costs could typically be funded by FEMA grants?

- Programs and Federal Share

HMGP	75%	\$0.25
PDM	75%	\$0.25
FMA	75%	\$0.25
RFC	100%	\$0.00
SRL	90%	\$0.10
- Bottom Line: Free money**

Hazard Mitigation Planning?

Town Hall: Well, we'll cross that bridge when we come to it.

* Modified cartoon by Chris Madden

Project Overview: Key Stakeholders & How They Fit Into the Process

County
Municipalities
General Public
Other Stakeholders
Consultant

Project Overview: Key Stakeholders & How They Fit Into the Process

Who Are Other Stakeholders?

- Neighborhood groups
- Non-profit organizations (i.e. scout troops, Red Cross, Salvation Army)
- Housing organizations
- Environmental groups
- Historic preservation groups
- Parent-teacher organizations
- Church organizations
- Parks organizations
- State, federal, and local government offices
- Neighboring communities/counties
- Business and development organizations
- Academic institutions
- Utility providers
- Hospitals
- Tribal groups
- Transportation entities
- Regional planning organizations
- Emergency service providers
- Jurisdiction web site managers / IT staff
- Any local office and/or group with a public outreach focus

Project Overview:
Key Stakeholders & How They Fit Into the Process



■ “An effective and open public involvement process ensures that all citizens understand risks and vulnerability so that they will work with the jurisdiction and support policies, actions, and tools that over the long-term will lead to a reduction in future losses.”



Project Overview:
Key Stakeholders & How They Fit Into the Process



- “...In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process **shall** include:
- (1) an opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
- (2) An opportunity for ...[other stakeholders]...to be involved in the planning process;.....”



Project Overview:
Key Stakeholders & How They Fit Into the Process

Your involvement in this planning process is welcomed and encouraged.

Point of Contact for the Project
 Kelly Paslow, Director, RCBPS
 kpaslow@rensko.com
 518-266-7678

[Comments](#) [Feedback](#) [Contributions](#)

Project Overview:
Summary of the Project To-Date

Key Steps:

- Researching a full range of natural hazard events to determine which are the most prevalent;
- Identifying the location and extent of hazard areas;
- Identifying assets located within these hazard areas;



Project Overview:
Summary of the Project To-Date

Key Steps: (continued)

- Characterizing existing and potential future assets at risk;
- Assessing vulnerabilities to the most prevalent hazards; and
- Evaluating and prioritizing goals, objectives, and mitigation actions to reduce or avoid long-term vulnerabilities to the most prevalent hazards.

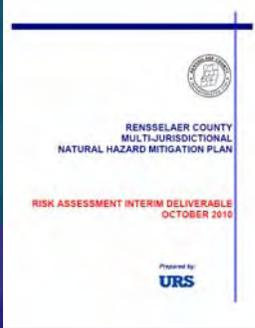


Project Overview:
Summary of the Project To-Date

Project Timeline

- Kickoff Meeting: July 2010
- Plan Development: Ongoing
- Local Feedback: Ongoing
- Risk Assessment Interim Deliverable: October 2010
- Risk Assessment Q&A Session: October 2010
- Mitigation Strategy Working Session: November 2010
- Draft Plan to CPG: December 2010
- Draft Plan to NYSEMO: January 2011

Project Overview:
Summary of the Project To-Date



- R.A.I.D. - Distributed to CPG 10/20/10
- Contains working draft sections of the plan
 - Hazard Identification
 - Hazard Profiles
 - Identification and Characterization of Assets
 - Damage Estimates
 - Mitigation Goals
 - Range of Alternative Mitigation Actions to Consider
 - Plan Maintenance
 - For More Information

Project Overview:
Summary of the Project To-Date

- Evaluation of a full range of natural hazards (23)
- Hazards selected for further analysis and reasons why (13)
- Hazards not selected and reasons why not (10)



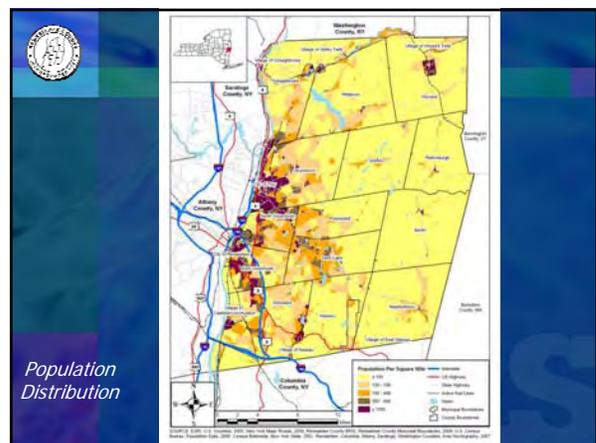
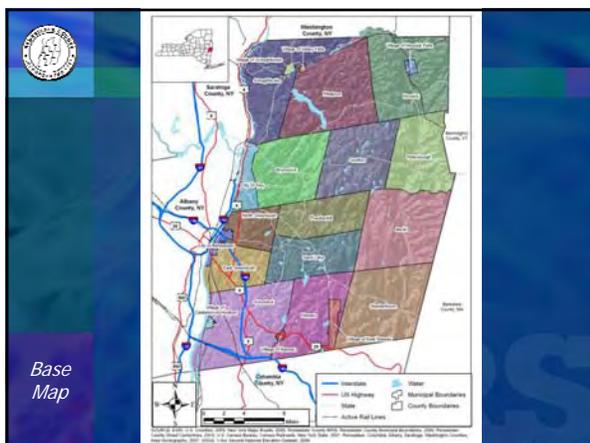
Project Overview:
Summary of the Project To-Date

23 hazards evaluated
13 identified as "significant" for further evaluation

- Extreme Temperatures
- Extreme Wind
- Hurricane and Tropical Storms
- Lightning
- Tornadoes
- Winter Storms
- Dam Failure
- Drought
- Flood
- Ice Jams
- Earthquakes
- Landslides
- Wildfires

Project Overview:
Summary of the Project To-Date

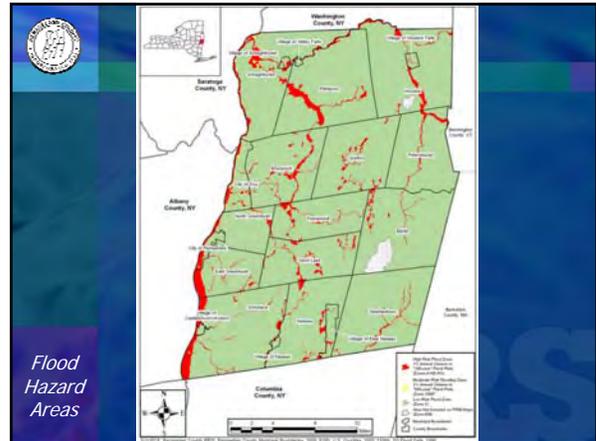
- Description of hazard
- Location of hazard area
- Extent (magnitude or severity)
- Previous occurrences
- Probability/likelihood of future occurrences



Distribution of Profiled Hazards

**Table 3a.1
Summary of Profiled Hazards by Municipality**

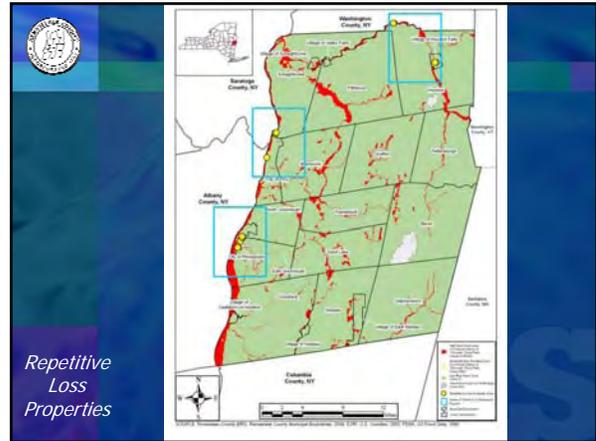
Jurisdiction	Extreme Temperatures	Extreme Wind	Blizzards and Tropical Storms	Tornadoes	Lightning	Winter Storms	Dam Failure	Drought	Flood	Ice-Jam	Earthquake	Landslide	Wildfire
Rensselaer County of													
Berlin, Town of													
Henrieville, Town of													
Castleton-on-Hudson, Village of													
East Greenbush, Town of													
East Nassau, Village of													
Clifton, Town of													
Honick, Town of													
Honick Falls, Village of													
Nassau, Town of													
Nassau, Village of													
North Greenbush, Town of													
Paterberg, Town of													
Pittsford, Town of													
Forestville, Town of													
Rineclaire, City of													
Sand Lake, Town of													
Schaghticoke, Town of													
Schaghticoke, Village of													
Schoharie, Town of													
Schoharie, Village of													
Shelburne, Town of													
Troy, City of													
Valley Falls, Village of													



Flood Hazard Areas

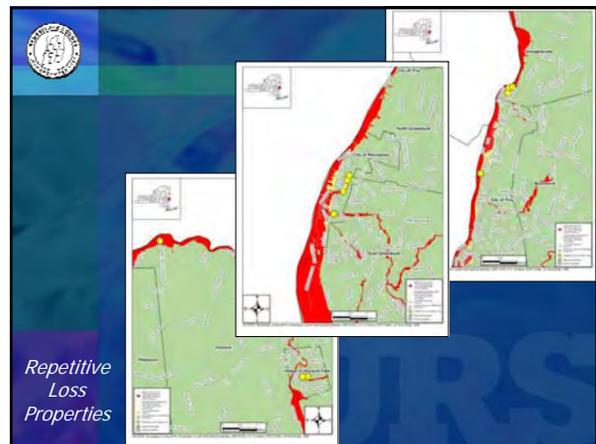
Summary of FEMA QS Flood Data by Municipality: Improved Property in Hazard Areas

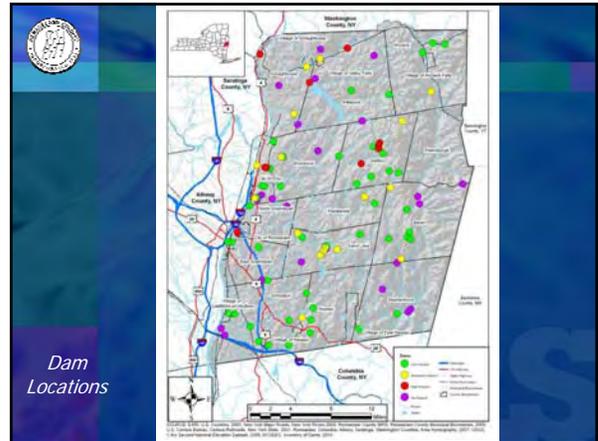
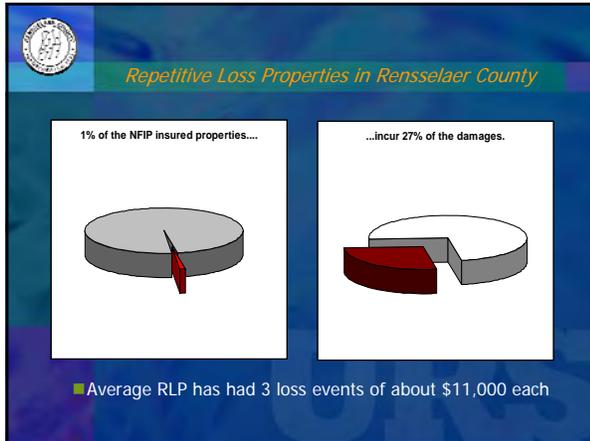
Municipality	Total Improved Property Value	Improved Property in High Flood Risk Area		Improved Property in Moderate Flood Risk Area		Improved Property in Low Flood Risk Area (%)	
		A, AE	X	A, AE	X	A, AE	X
Berlin, Town of	\$161,460,296	\$7,365,993	\$0	\$1,531,640	7%	0%	97%
Henrieville, Town of	\$933,076,230	\$41,246,232	\$666,171	\$803,163,031	4%	0.1%	96%
Castleton-on-Hudson, Village of	\$173,218,901	\$45,107,756	\$2,043,011	\$128,067,992	24%	1%	75%
East Greenbush, Town of	\$1,478,535,900	\$40,485,331	\$661,755	\$1,437,388,812	3%	0.04%	97%
East Nassau, Village of	\$36,635,844	\$3,574,931	\$485,969	\$32,634,942	10%	1%	89%
Clifton, Town of	\$169,142,003	\$4,706,000	\$0	\$155,435,003	3%	0%	97%
Honick, Town of	\$274,325,323	\$6,462,770	\$0	\$269,291,973	2%	0%	97%
Honick Falls, Village of	\$333,334,980	\$16,069,381	\$0	\$319,365,599	5%	0%	95%
Nassau, Town of	\$207,287,186	\$6,404,721	\$337,291	\$200,334,161	3%	0.7%	97%
Nassau, Village of	\$103,812,537	\$6,880,664	\$0	\$94,932,368	7%	0%	97%
North Greenbush, Town of	\$1,126,168,100	\$54,139,043	\$31,248,415	\$1,040,740,734	5%	3%	92%
Paterberg, Town of	\$15,589,579	\$5,292,082	\$0	\$10,422,036	3%	0%	97%
Pittsford, Town of	\$294,607,030	\$9,976,431	\$57,320	\$284,023,647	3%	0.02%	97%
Forestville, Town of	\$11,226,879	\$1,129,633	\$1,832,897	\$106,216,417	7%	1%	94%
Rineclaire, City of	\$327,481,832	\$122,812,734	\$38,968,236	\$174,635,237	23%	5%	71%
Sand Lake, Town of	\$618,731,180	\$38,307,439	\$2,862,318	\$580,001,109	7%	0.3%	94%
Schaghticoke, Town of	\$393,637,712	\$16,652,644	\$14,796,910	\$361,855,234	4%	4%	92%
Schaghticoke, Village of	\$46,285,242	\$995,359	\$35,092	\$47,249,991	2%	0.1%	98%
Schoharie, Town of	\$146,788,092	\$15,401,492	\$2,352,977	\$128,033,795	2%	0.3%	98%
Schoharie, Village of	\$187,625,080	\$5,411,373	\$444,371	\$180,962,326	3%	0.2%	97%
Troy, City of	\$4,097,481,405	\$223,453,320	\$192,613,242	\$3,381,414,642	6%	5%	87%
Valley Falls, Village of	\$24,033,244	\$143,064	\$7,662	\$24,413,074	2%	0.03%	98%
Rensselaer County Total	\$12,492,182,825	\$752,887,538	\$279,469,802	\$11,186,520,560	4%	2.2%	91%



Repetitive Loss Properties:

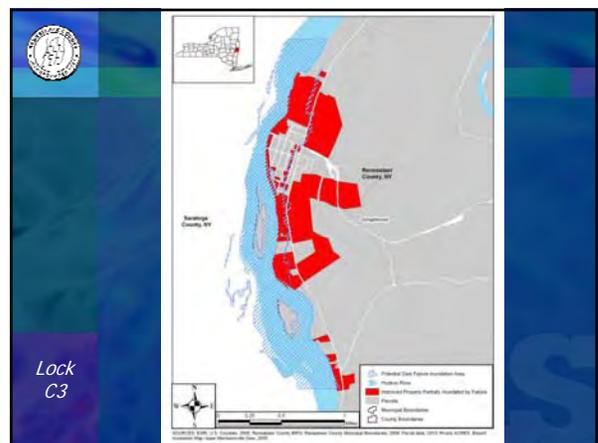
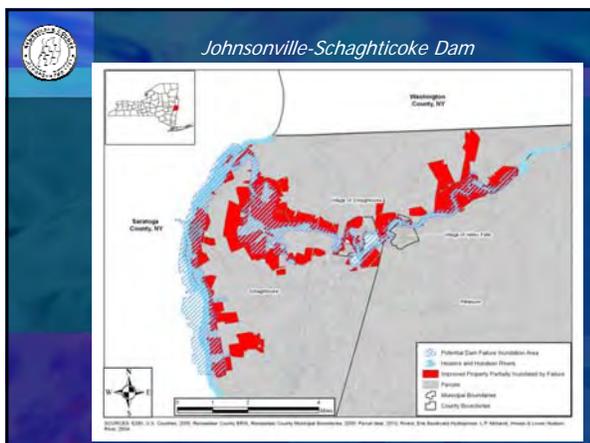
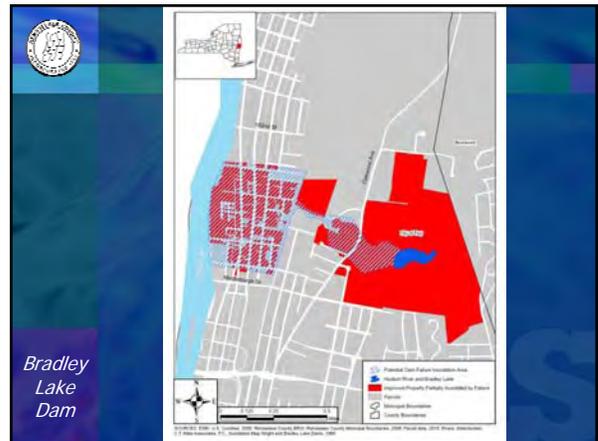
- Two or more losses
- Of at least \$1,000 each
- In any rolling 10-year window since community's entry into NFIP

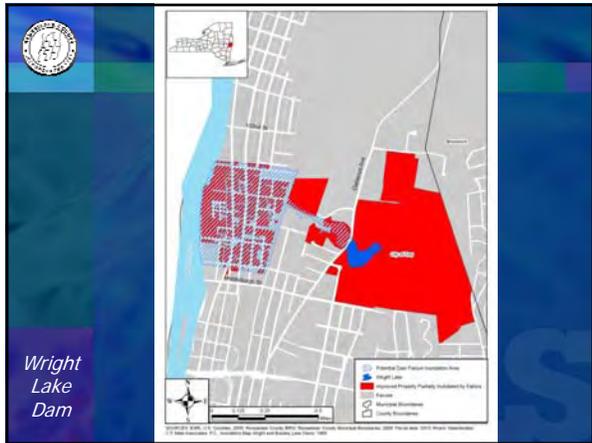
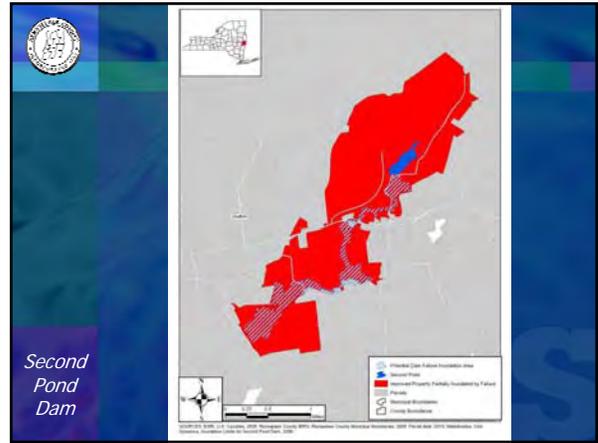
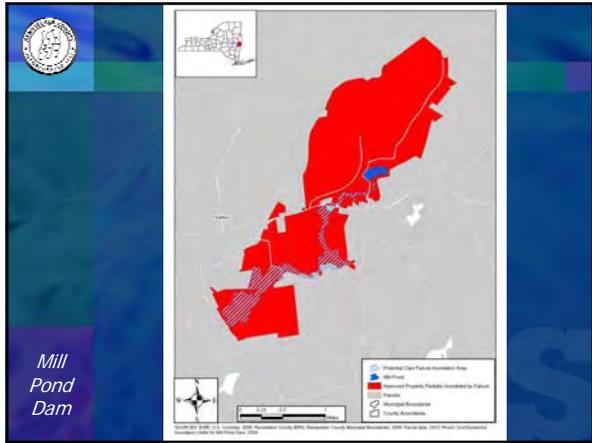
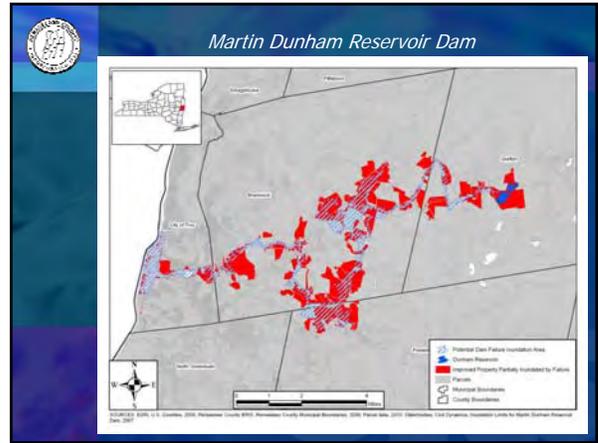
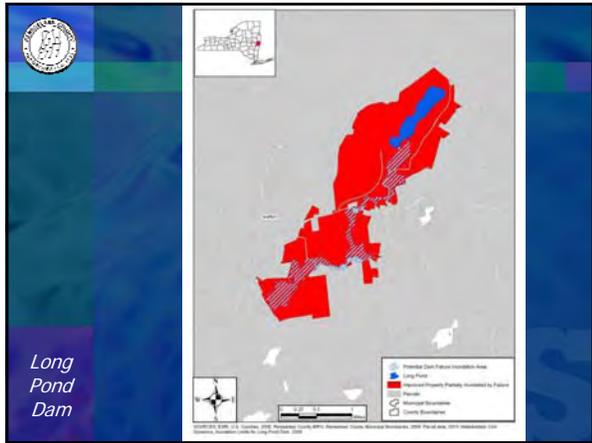




Dam Failure

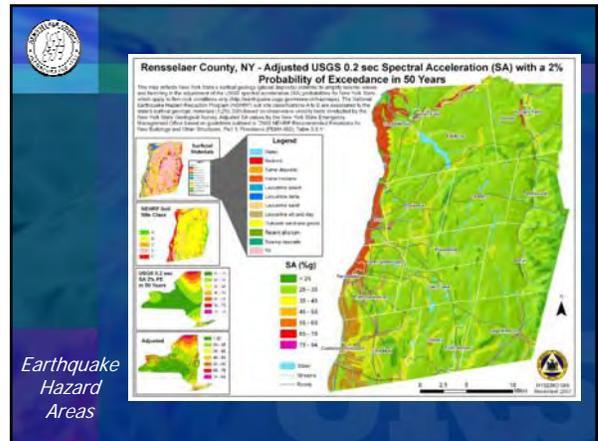
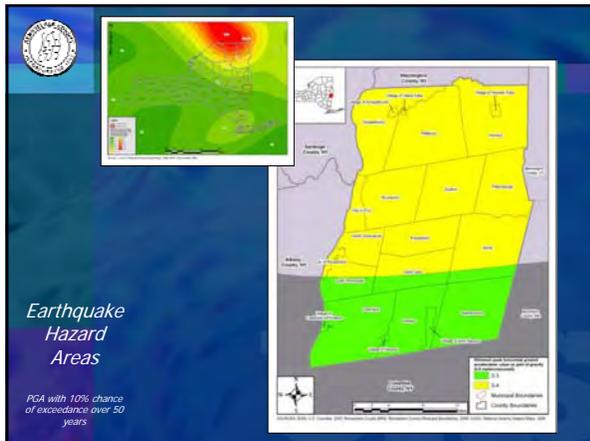
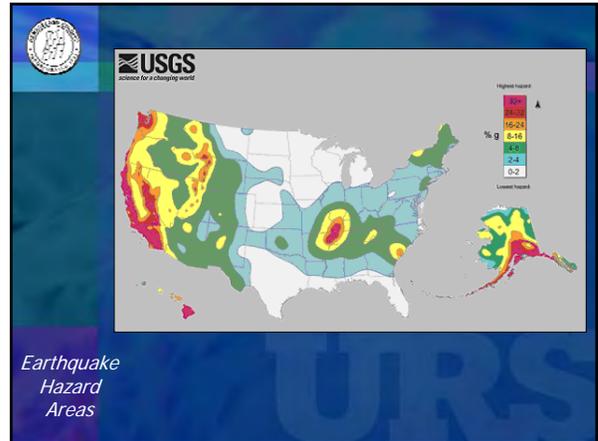
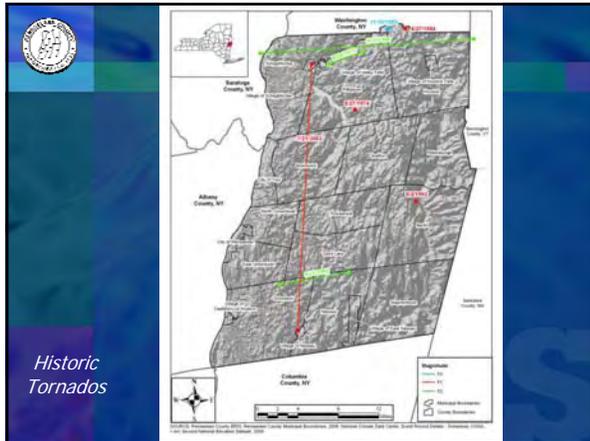
*High Hazard Dams (NYSDEC):
A dam failure may result in widespread or serious damage to home(s); damage to main highways, industrial or commercial buildings, railroads, and/or important utilities, including water supply, sewage treatment, fuel, power, cable or telephone infrastructure; or substantial environmental damage; such that the loss of human life or widespread substantial economic loss is likely.*





Estimated Potential Exposure of Improved Property to Dam Failure (Source: NISDEC, Rensselaer County GIS)			
Bradley Lake Dam			
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
City of Troy	\$4,577,481,405	\$65,630,484	1.5%
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
City of Troy	\$4,577,481,405	\$65,630,484	1.4%
Martin Dunham Reservoir Dam			
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
Town of Oranthen	\$166,142,003	\$1,481,528	0.9%
Town of Fawcettville	\$115,226,879	\$4,233,684	3.7%
Town of Bantamark	\$933,076,250	\$64,226,731	6.9%
City of Troy	\$4,577,481,405	\$167,727,205	3.7%
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
Town of Oranthen	\$166,142,003	\$168,811	0.1%
Second Pond Dam			
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
Town of Oranthen	\$166,142,003	\$3,226,164	1.9%
Long Pond Dam			
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
Town of Oranthen	\$166,142,003	\$1,317,225	0.8%
Schoharie and Schaghticoke Dam			
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
Town of Fawcettville	\$124,057,020	\$1,401,111	1.1%
Town of Schaghticoke	\$193,627,712	\$15,357,582	7.9%
Village of Schaghticoke	\$45,253,342	\$7,226,737	16.0%
Village of Valley Falls	\$14,929,241	\$1,484,663	10.0%
Municipality	Total Municipal Improved Value	Exposed Improved Value	Exposed Value as % of Municipal Total
Town of Schaghticoke	\$193,627,712	\$7,492,302	3.9%

Note: Exposure has been estimated only for the hydrologic basins affecting Rensselaer County for which adequate stationing mapping was readily available.



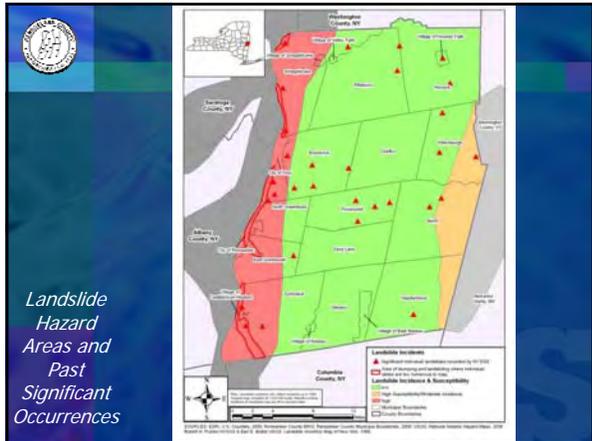
Earthquake Magnitude/Intensity Comparison

PGA	Magnitude	Intensity	Perceived Shaking	Potential Damage
< 0.17	1.0 - 3.0	I	Not Felt	None
0.17 - 1.4	3.0 - 3.9	II - III	Weak	None
1.4 - 9.2	4.0 - 4.9	IV - V	IV. Light V. Moderate	IV. None V. Very Light
9.2 - 34	5.0 - 5.9	VI - VII	VI. Strong VII. Very Strong	VI. Light VII. Moderate
34 - 124	6.0 - 6.9	VIII - IX	VIII. Severe IX. Violent	VIII. Moderate/Heavy IX. Heavy
> 124	7.0 and higher	X and higher	Extreme	Very Heavy

Rensselaer County Earthquake Hazard: Adjusted USGS 0.2 Sec Spectral Acceleration With a 2% Probability of Exceedance over 50 Years - Impaired Property
(Source: NYSDMNYG Geological Survey)

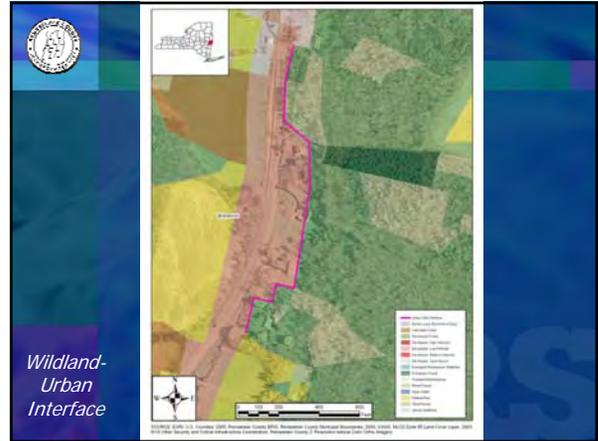
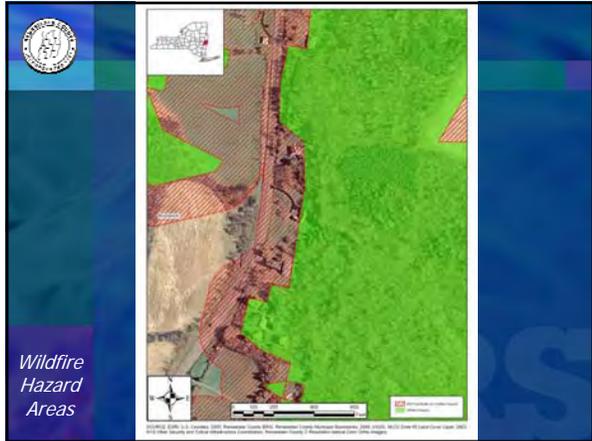
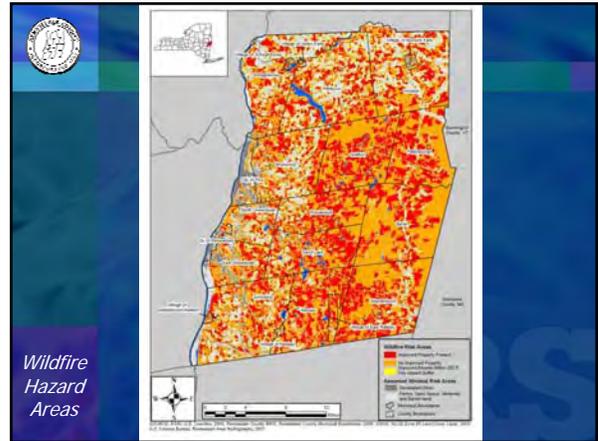
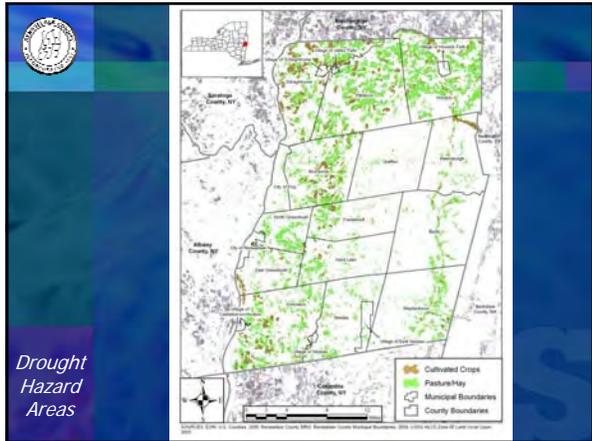
Municipality	Total Impaired Property	SA (High 38-40)		SA (High 45-48)		SA (High 48-55)	
		Improved Property	%	Improved Property	%	Improved Property	%
Berlin, Town of	\$141,460,296	\$24,420,411	17%	\$0	0%	\$0	0%
Braunswick, Town of	\$935,076,250	\$310,277,134	33%	\$0	0%	\$6,692,959	1%
Carlton-on-Hudson, Village of	\$173,219,901	\$1,467,452	0%	\$152,402,287	88%	\$0	0%
East Greenbush, Town of	\$1,478,335,900	\$324,995,738	22%	\$287,266,501	19%	\$751,335	0%
East Nassau, Village of	\$56,635,844	\$18,971,697	33%	\$637,927	1%	\$0	0%
Oranthe, Town of	\$160,142,003	\$84,660	0%	\$0	0%	\$0	0%
Hosack, Town of	\$276,325,323	\$66,399,092	24%	\$0	0%	\$1,289,215	0%
Hosack Falls, Village of	\$335,334,980	\$171,983,884	51%	\$0	0%	\$11,437,740	3%
Nassau, Town of	\$207,267,186	\$44,390,472	21%	\$4,344,366	2%	\$0	0%
Nassau, Village of	\$103,812,517	\$10,248,734	10%	\$0	0%	\$0	0%
North Greenbush, Town of	\$1,226,168,100	\$34,275,301	3%	\$22,703,243	2%	\$184,928,819	16%
Pittsburgh, Town of	\$85,588,579	\$3,620,964	4%	\$0	0%	\$0	0%
Pittsford, Town of	\$296,037,030	\$54,211,305	18%	\$0	0%	\$3,128,919	1%
Fourtowns, Town of	\$21,526,879	\$7,828,547	36%	\$0	0%	\$0	0%
Rensselaer, City of	\$529,481,832	\$3,927,501	1%	\$213,481,420	40%	\$304,975,930	58%
Sand Lake, Town of	\$618,791,110	\$176,714,228	29%	\$0	0%	\$0	0%
Schaghticoke, Town of	\$393,627,712	\$51,271,879	13%	\$0	0%	\$75,855,781	19%
Schaghticoke, Village of	\$46,255,242	\$0	0%	\$0	0%	\$18,735,849	40%
Schoharie, Town of	\$846,793,002	\$329,735,681	39%	\$117,344,879	14%	\$0	0%
Stephentown, Town of	\$187,025,080	\$31,483,850	17%	\$1,972,282	1%	\$0	0%
Troy, City of	\$4,097,481,405	\$343,157,608	8%	\$0	0%	\$3,179,819,227	78%
Valley Falls, Village of	\$24,953,624	\$0	0%	\$0	0%	\$4,207	0%
Cherry Road	\$12,632,147,615	\$3,505,101,998	28%	\$816,286,292	7%	\$2,683,430,287	21%

Low risk SA categories (25 - and 25 - 35) omitted for clarity



Landslide Hazard Areas

Municipality	Total Area (Acres)	Total Improved Value	High Incidence		High Susceptibility/Moderate Incidence	
			Area (Acres)	%	Area (Acres)	%
Delin, Town of	20,156	\$161,462,296	0	0%	\$0	0%
Downsville, Town of	29,284	\$933,076,232	2,189	7%	\$222,193,789	24%
Carleton-on-Hudson, Village of	533	\$173,248,901	533	100%	\$173,248,901	100%
East Onondaga, Town of	15,713	\$1,478,555,900	12,208	78%	\$1,422,462,069	96%
East Haven, Village of	3,031	\$36,635,844	0	0%	\$0	0%
Oriskany, Town of	29,706	\$140,142,003	0	0%	\$0	0%
Hessick, Town of	29,344	\$276,553,323	0	0%	\$0	0%
Hessick Falls, Village of	950	\$335,334,980	0	0%	\$0	0%
Hessick, Town of	25,597	\$207,267,186	0	0%	\$0	0%
Hessick, Village of	482	\$103,023,237	0	0%	\$0	0%
North Onondaga, Town of	12,183	\$1,136,168,100	6,806	56%	\$767,769,236	68%
Petersburgh, Town of	26,632	\$1,588,579	0	0%	\$0	0%
Pittsford, Town of	40,236	\$296,607,628	0	0%	\$0	0%
Powdermill, Town of	26,732	\$115,226,879	0	0%	\$0	0%
Rosebush, City of	2,262	\$327,461,832	2,262	100%	\$327,461,832	100%
Small Lake, Town of	23,088	\$618,731,110	0	0%	\$0	0%
Schlaghts, Town of	33,507	\$393,677,782	23,281	69%	\$303,358,307	77%
Schlaghts, Village of	640	\$48,283,342	474	74%	\$44,403,730	92%
Schroeder, Town of	46,243	\$846,718,002	23,084	50%	\$518,241,575	61%
Stoughton, Town of	27,280	\$137,023,088	0	0%	\$0	0%
Tracy, City of	7,036	\$4,097,461,405	6,992	99%	\$4,087,461,400	100%
Valley Falls, Village of	307	\$24,933,624	0	0%	\$0	0%
County Totals	425,915	\$12,472,182,922	75,976	18%	\$8,066,599,592	65%

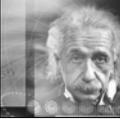


Wildfire Hazard Areas

Exposure to Wildfire Risk in Kenosha County

Municipality	Urban-Wildland Interface (Miles)	Wildfire Risk Zones with no Improved Property (Acres)	Wildfire Risk Zones with Improved Property (Acres)	Total Municipal Area (Acres)	Wildfire Risk Zones (%)	Total Value of Improvement in Municipal Area	Improved Property Value Valuable in Wildfire*	Improved Property Value Valuable in Wildfire (%)
Berlin, Town of	6.1	25,119	12,255	38,194	96%	\$141,460,296	\$132,903,665	92%
Bromwich, Town of	43.8	7,330	13,814	28,284	73%	\$93,076,230	\$51,284,656	55%
Carlisle-on-Mission, Village of	4.6	40	312	537	67%	\$173,218,991	\$179,922,469	103%
East Greenbush, Town of	38.8	4,587	4,144	15,313	69%	\$1,413,333,000	\$837,389,874	59%
East Haven, Village of	2.5	1,261	1,563	3,024	67%	\$36,633,844	\$11,430,637	31%
Orford, Town of	4.2	13,041	13,569	29,396	96%	\$166,142,003	\$155,527,946	93%
Roanoke, Town of	19.1	9,577	18,145	39,364	72%	\$276,323,723	\$199,394,443	72%
Roanoke Falls, Village of	8.4	132	378	650	58%	\$133,334,930	\$127,832,334	96%
Warren, Town of	11.0	5,269	14,611	25,597	69%	\$267,287,196	\$177,774,978	66%
Warren, Village of	3.6	103	819	462	73%	\$131,818,537	\$44,336,915	34%
North Greenbush, Town of	33.1	3,401	4,404	12,103	62%	\$1,126,168,100	\$591,383,797	52%
Peterborough, Town of	6.1	12,533	12,424	26,682	94%	\$65,588,579	\$77,492,364	119%
Petersburg, Town of	24.7	9,310	26,317	46,256	72%	\$296,027,020	\$119,104,135	40%
Port Jervis, Town of	26.2	7,081	10,708	29,312	69%	\$13,228,579	\$76,334,815	58%
Rosenau, City of	2.7	368	220	2,202	11%	\$37,481,832	\$37,344,492	100%
Small Lake, Town of	48.3	2,261	11,733	17,028	39%	\$618,731,183	\$313,631,640	51%
Stoughtonville, Town of	37.3	3,440	14,465	32,507	67%	\$193,627,710	\$262,461,393	135%
Stoughtonville, Village of	4.1	110	256	640	37%	\$48,212,342	\$32,146,874	67%
Stoughton, Town of	71.0	11,204	17,207	46,243	72%	\$266,768,000	\$613,378,744	229%
Stoughton, Village of	18.6	13,248	17,377	37,280	93%	\$137,023,080	\$159,778,710	116%
Troy, City of	14.8	1,648	1,238	7,056	37%	\$4,977,481,400	\$100,960,961	2%
Valley Falls, Village of	1.6	100	98	307	68%	\$24,933,624	\$12,789,845	51%
County Totals	413.8	149,427	194,128	453,815	64%	\$12,437,187,812	\$6,675,489,591	53%

Hazard Mitigation: Recovery With Foresight



► "The world we have created today as a result of our thinking thus far has problems which cannot be solved by thinking the way we thought when we created them."

Albert Einstein

Questions and Answers



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Richard Franks, Deputy Project Manager
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richard_franks@urscorp.com

**Our Commitment:
A FEMA-Approved Plan**



**Rensselaer County Multi-Jurisdictional
Hazard Mitigation Planning Project**

***Meeting to Present the Draft Plan –
January 26, 2011 (2 pm)***

Agenda

- Welcome & Opening Remarks.....*Kelly Paslow, Director, RCBPS*
- The Draft Plan.....*Anna Foley, URS*
- Comments/Feedback on the Document.....*Core Planning Group Members*
- What happens next?.....*Anna Foley, URS*
- Questions & Answers.....*All*
- Adjourn..... *Kelly Paslow, Director, RCBPS*





Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project
 Mitigation Strategy Working Session - January 26, 2011 (2 pm)
 Rensselaer County Government Center, 1600 Seventh Avenue, Troy, NY 12180 in Conference Room A

P. 1/2

Last Name	First Name	Representing	Email Address	Phone
Jordan	Bruce	nysoer	B.Jordan@DHSIS.ny.gov	793-6646
Ashworth	Josephine	W. Greenbush	ashworth@tomofny.com	283-5313
Premo	Mark	Mr. Greenbush	Premo@NCRP.RR.COM	283 3921
TELSERA	Joe	RENSSELAER CO. HIGHWAY	jtelsera@renesco.com	283-0973
Coedermite	Alden	Town of Stephentown		733-5994
vanderHardy	Linda	Rensselaer Co Planning	Lvonderwide@renesco.com	270-2921
Rownds	Durton	Town of Sand Lake	Super@Sand-Lake.us	674-2026 Ext. 12
MELAS	PETE	NYS DEPT. OF TRANSP.	AMELAS@DOT.STATE.NY.US	286-2301
Carlson	Jean	Town of Schaghticoke	sygnisr@townofschaghticoke.org	518-753-6915 x104
Gallerie	Scott	Renss Co Highway	Sgallerie@renesco.com	518 283-0973
McCoy	Fred	Town of Nasset	Nassauhighway@fairpoint.net	518 766-9417
Pastow	Kelly	Rensselaer County BPS	Kpastow@renesco.com	518-266-7676
Cowell	Saran	City of Rensselaer	Saran.c.cowell@renesco.ny.gov	518 465-1693
Goebel	Jonathan	Rensselaer County BPS	jgoebel@renesco.com	518-266-7678



Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project
 Mitigation Strategy Working Session - January 26, 2011(2 pm)
 Rensselaer County Government Center, 1600 Seventh Avenue, Troy, NY 12180 in Conference Room A

Last Name	First Name	Representing	Email Address	Phone
Hansen	VERNA	Town of P. Hstown	WHS@wldblue.net	518-753-6216
FISCHER	JAMES	Village of Schoharie	SENAGA@MYOR.PP.COM	518 753 6100
SCHMIGER	Louis	Town of Hoosick	LSCHMIGER@COASRUNNER.COM	518 528 4219
MOSTA	Matt	East Greenbush	MMOSTA@EASTGREENBUSH.ORG	518 694 4011
VANWORMER	DAVID	EAST GREENBUSH	DVANWORMER@EASTGREENBUSH.ORG	518 477-7296
CHERUBINE	JOSEPH	" "	Jcherubine@Eastgreenbush.org	477-6225
Moore	JAMES	East Greenbush	Jmoore@eastgreenbush.org	694-411
CHURCH	TIM	TOWN OF PETERSBURG	TIM58891@NETZERO.COM	658-3463
Weber	Janet	Village of Valley Falls	JWEBER131@ADF.COM	518 753-6230
Fuda	Nadine	Town of Schoharie	Nadine.fuda@schoharie.org	(518) 477-7938
Holmes	KEN	Town of Schoharie	Kholmes12@nycap.nyc.gov	766-4000
Saville	Richard	Village of Castleton-on-Hudson	brswc2004ras@verizon.net	732-2983
SEVERANCE	ROBERT	VILLAGE OF NASSAU	ROBERT.SEVERANCE@US.ARMY.MIL	766-3044
Kurchner	Arlison	Town of Grafton	grafton-supervisor@verizon.net	279.3565

Foley Anna WES
 anna_foley@wscorp.com 913-785-0700 x339

Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project

Meeting to Present the Draft Plan

January 26, 2011

2 pm

Rensselaer County Government Center
1600 Seventh Avenue, Troy
Conference Room A

Today's Agenda

- Welcome and Opening Remarks
- The Draft Plan
- Comments/Feedback on the Document
- What happens next?
- Questions and Answers

The Draft Plan

RENSSELAER COUNTY, NEW YORK
MULTI-JURISDICTIONAL
NATURAL HAZARD MITIGATION PLAN

DRAFT
JANUARY 2011
FOR JURISDICTIONAL REVIEW
PURPOSES ONLY

Prepared by:
URS

The Draft Plan

- Distributed via secure file transfer site 1/24
- CDs are being distributed today
 - One for each municipality

The Draft Plan

- This Draft :
 - Is being reviewed by you
 - Will soon be released to the public and other stakeholders
 - Will enter its formal State/Federal review cycle tomorrow

RAID vs. Working Draft vs. Draft

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    graph LR
      RAID((RAID  
Oct. 2010)) --> WD((Working Draft  
Dec. 2010))
      WD --> Draft((Draft  
Jan. 2011))
  
```

- RAID = Certain main text sections, no appendices
- Working Draft = All main text sections (with placeholders), no appendices
- Draft = All main text sections and appendices

Working Draft vs. Draft

- Appendix A – Improved Property in Hazard Areas
- Appendix B – Critical Facilities in Hazard Areas
- Appendix C – Historic and Cultural Resources in Hazard Areas
- Appendix D – Prioritization Worksheets
- Appendix E – Implementation Strategy Worksheets
- Appendix F – NFIP Compliance Actions Worksheets
- Appendix G – CPG Members
- Appendix H – Meeting Agendas, PowerPoints, SignIn Sheets
- Appendix I – Press (news articles + web)
- Appendix J – Additional flood exposure info for FEMA

Participating Jurisdictions

- All municipalities noted as having participated
- Some outstanding municipal worksheets regarding action items – plan notes “forthcoming”
 - East Greenbush
 - Hoosick
 - Hoosick Falls
 - Petersburgh
 - Poestenkill
 - Stephentown
 - Troy



Participating Jurisdictions

Table 1.5
Rensselaer County Jurisdiction Plan Participation
*Plan: D0 is current as of 01/2/2010

Jurisdiction	Revised or Amended by	Mitigation Strategy				Key Deliverables/Status															
		MSWWS 7/2/10	Progress (08/09)	Risk Assessment (04/09)	Mitigation Strategy (04/09)	Staplee	Staplee	Staplee	Staplee	Staplee	Staplee	Staplee	Staplee	Staplee	Staplee	Staplee	Staplee	Staplee	Staplee	Staplee	
Rensselaer County		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Rensselaer, Town of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hoosick, Town of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Chatham-on-Hudson, Vill. of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
East Greenbush, Town of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
East Nassau, Village of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Capitons, Town of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hoosick, Town of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hoosick Falls, Village of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Nassau, Town of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Nassau, Village of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
North Corinthia, Town of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Petersburgh, Town of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Petersburgh, Town of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Petersburgh, Town of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Small Falls, Village of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Schlaghacks, Village of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Schlaghacks, Village of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Schlaghacks, Village of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Stephentown, Town of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Troy, City of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Valley Falls, Village of		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Participating Jurisdictions

- Missing MSWS sheets will need to be submitted for FEMA to see your municipality as having ‘participated’ in the project
- Deadline was 12/15. The Draft includes anything received through Sunday, 1/23
 - Prioritization Worksheet (STAPLEE)
 - Implementation Strategy Worksheet
 - NFIP Compliance Actions Worksheets

The Draft Plan

- Your submittals regarding actions/projects:
 - Appendix D – Prioritization (STAPLEE)
 - Appendix E – Implementation
 - Appendix F – NFIP
- These are exactly as you provided to me, with the exception of...

The Draft Plan

-additional County-led action items with direct involvement and participation from each municipality (back half of Appendices D and E)
 - Required by FEMA to capture “lesser hazards”
 - To meet requirement for an action item for each municipality for each identified hazard
 - We used what FEMA has accepted previously for other NYS plans



The Draft Plan

Public awareness program on Hazards, Prevention, and Mitigation: County will maintain a hazard mitigation and mitigation planning web presence (local municipal web sites to link up to this site, if they haven't already done so); all participating jurisdictions to support preparation of a joint annual hazard mitigation and mitigation planning fact sheet and its distribution; periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/tv announcements, etc. at the discretion of each jurisdiction (incorporating as much free information as possible from the FEMA Publications Warehouse and other appropriate sources). *(public education)*



The Draft Plan

Code update: Review existing local codes and ordinances against the identified hazards to determine whether there need to be any amendments to address identified hazards and, where a need is identified, modify/amend the codes/ordinances as applicable. *(prevention)*



The Draft Plan

Code enforcement: Enforcement of NYS and Local Building Codes with Continual CEO training. *(prevention)*



The Draft Plan

Ensure that local comprehensive plans incorporate natural disaster mitigation techniques through a courtesy review of draft plans by the County Planning Department *(prevention)*



The Draft Plan

Hold periodic workshops for municipalities regarding zoning and planning issues that arise regarding natural hazards and hazard mitigation. *(prevention)*



The Draft Plan

- DO NOT ADOPT THE PLAN JUST YET!
- We have to wait until FEMA approves it
- Anticipate several months (six+ typical)



 CPG comments/feedback to:

Anna Foley
URS
201 Willowbrook Boulevard, 3rd Floor
Wayne, New Jersey 07470-7005
Phone: 973-785-0700 ext. 339
Fax: 973-812-0985
Email: anna_foley@urscorp.com

 What happens next?

- Draft will undergo review by NYSOEM
- NYSOEM will forward to FEMA
- FEMA will review; comments likely
- Revised Draft will be submitted → NYSOEM → FEMA
- FEMA will deem "approvable pending adoption"
- Municipalities adopt and send adoption resolutions to County
- County → NYSEOM → FEMA
- FEMA 'approves' the plan one municipality at a time

 Questions????

