

# After Action Report / Improvement Plan

Report: May 2012

## Tropical Storm Lee Flood Response

Event: September 2011



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## HANDLING INSTRUCTIONS

1. The title of this document is Tioga County Tropical Storm Lee Flood Response.
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## SECTION 1: OVERVIEW

### Purpose

The Tioga County Tropical Storm Lee After Action Report/Improvement Plan (AAR/IP) is intended to identify areas of emergency management planning that need improvement, to make recommendations for such improvement, and to capture key lessons learned from the event. This AAR/IP will identify and analyze critical issues from the Tropical Storm Lee Flood Response that may impede future operations if left unresolved.

### Scope

The Tioga County Tropical Storm Lee Flood Response AAR/IP is an analytical report that deals only with those issues that have an important bearing on future operations. It complements other reports, such as Situation Reports, Action Plans and detailed chronologies. Contributions from organizations that were most directly involved in the disaster operation were considered in preparation of this report. The key components discussed in this AAR/IP include an overview of the incident, an analysis of the response outcomes, an analysis of Tioga County capabilities, and recommendations both generally as well as specifically as they relate to each community partner.

### Relation to HSEEP

The Tioga County Tropical Storm Lee Flood Response AAR/IP is in compliance with Homeland Security Exercise and Evaluation Program (HSEEP) as it adheres to the mandated practices for improvement planning. Following the disaster, an After-Action Conference (AAC) was conducted, whereby key personnel were presented with findings and recommendations from the draft AAR/IP. Corrective actions addressing the draft AAR/IP's recommendations have been shared with responsible parties. The recommendations have been organized by target capability as defined in the Target Capabilities List (TCL): A companion to the National Preparedness Guidelines, U.S. Department of Homeland Security, September 2007.

## SECTION 2: COMMUNITY PROFILE

### Community/Area Description

Tioga County is 518.60 square miles (2010 U.S. Census) and is considered part of the Southern Tier region of New York State. The County is west of Binghamton and directly north of the border with Pennsylvania. The highest elevation is an unnamed 1,994 foot (607.8 m) hill in the county's northern corner. The Susquehanna River flows into Pennsylvania from Tioga County. The Susquehanna River Basin is one of the most flood-prone watersheds in the nation. The Susquehanna and its tributaries drain 27,510 square miles of New York, Pennsylvania, and Maryland – where nearly 4 million people live. The Susquehanna Basin is vulnerable to frequent local flash floods which often affect smaller tributaries with little advance warning.

Tioga County is comprised of the nine towns (Barton, Berkshire, Candor, Newark Valley, Nichols, Owego, Richford, Spencer and Tioga) and six villages (Candor, Newark Valley, Nichols, Spencer, and Waverly). The county seat is Owego. Based on 1990 Census data, 68% of the population is rural, as much of the county is comprised of agricultural districts.

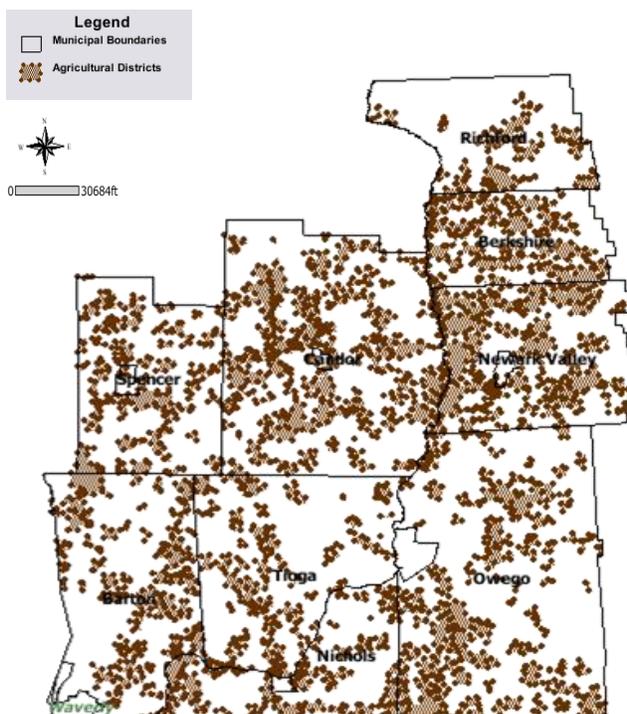


Figure 1 Tioga County Agricultural Districts

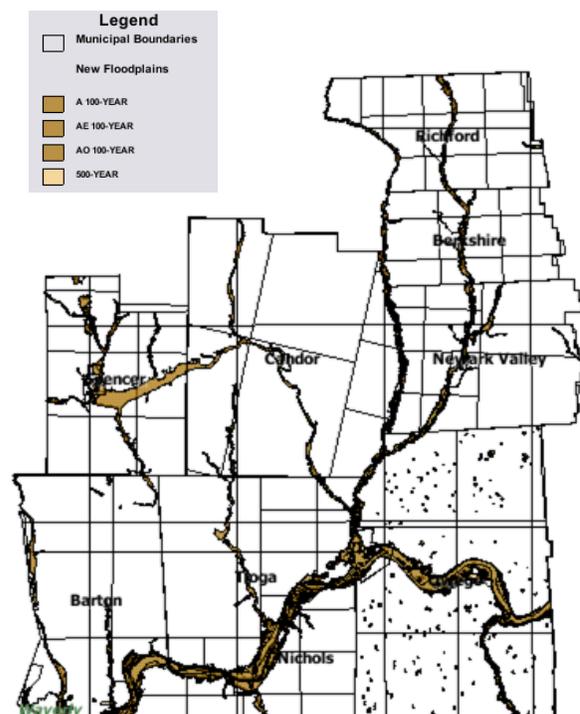


Figure 2 Tioga County Floodplains

\* Tioga County Community Online Mapping Information Tool

According to the 2006-2009 U.S. Census American Community Survey, there are 22,109 total housing units in Tioga County. Of those housing units, 15,577 are a one unit detached structure and 3,438 are mobile homes. According to the 2006-2010 U.S. Census, the homeownership in Tioga County is 80%.

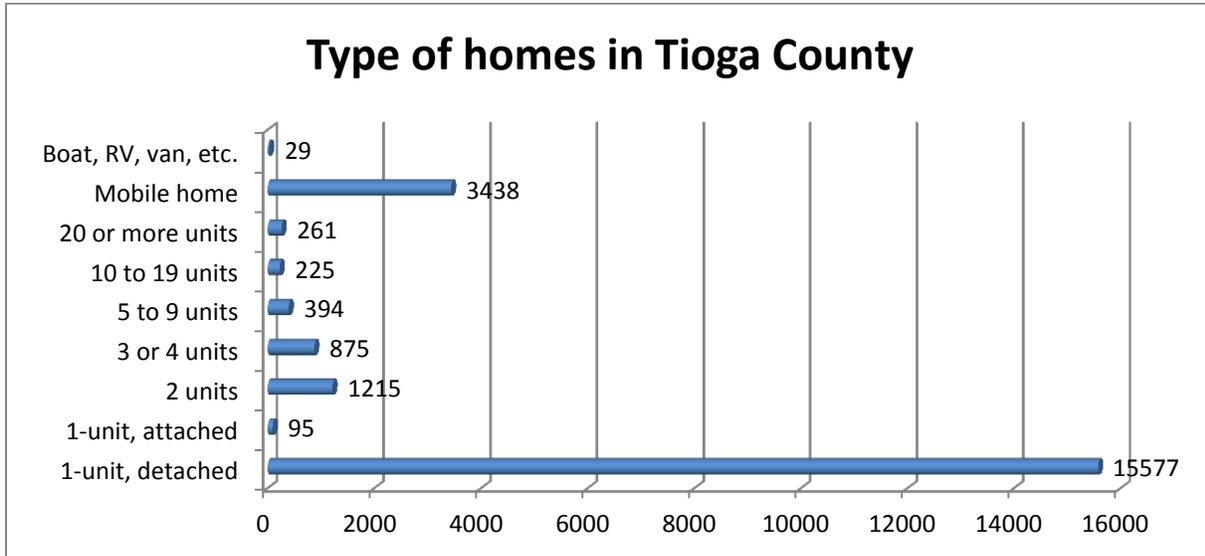


Figure 3

\* 2006-2009 U.S. Census American Community Survey

## Population Demographics

According to the 2010 U.S. Census, there are 98.6 persons per square mile in Tioga County. With a population of 51,125 in 2010, 9.6% of persons are below poverty level (2006-2010 U.S. Census Bureau). There are approximately 2.38 persons per household (2010 U.S. Census Bureau). The median age in Tioga County is 42 years of age according to the 2010 U.S. Census.

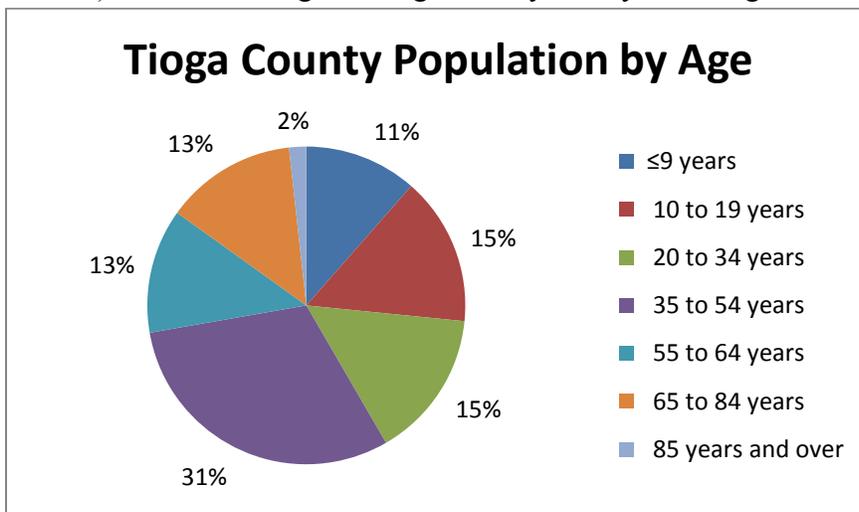


Figure 4

\* 2010 U.S. Census

## SECTION 3: FLOOD HAZARD PROFILE

### Flood Facts and Data

#### Hurricane Irene (FEMA-DR-4020)

On August 28, 2011, Governor Andrew M. Cuomo requested an expedited major disaster declaration due to Hurricane Irene during the period of August 26 to September 5, 2011. Tioga County was not included in this declaration. Many considered Tioga County to have escaped the brunt of Irene. Residents in the Tioga County region received the remnants of the storm and were inconvenienced with minimal power outages and standing water.

#### Tropical Storm Lee (FEMA-DR-4031)

During the period of September 7-11, 2011 remnants of Tropical Storm Lee greatly affected Tioga County. On Saturday, September 8, 2011 Governor Andrew M. Cuomo requested a major disaster declaration due to the Remnants of Tropical Storm Lee. On September 13, 2011, President Obama declared that a major disaster exists in the State of New York. This made Individual Assistance requested by the Governor available to affected individuals and households in Tioga County. According to information provided from the National Weather Service (NWS) Binghamton, New York, the Susquehanna River at Owego was at flood stage 30 feet and the latest stage was 16.2. A historical crest was recorded at 39.62 feet on September 8, 2011.

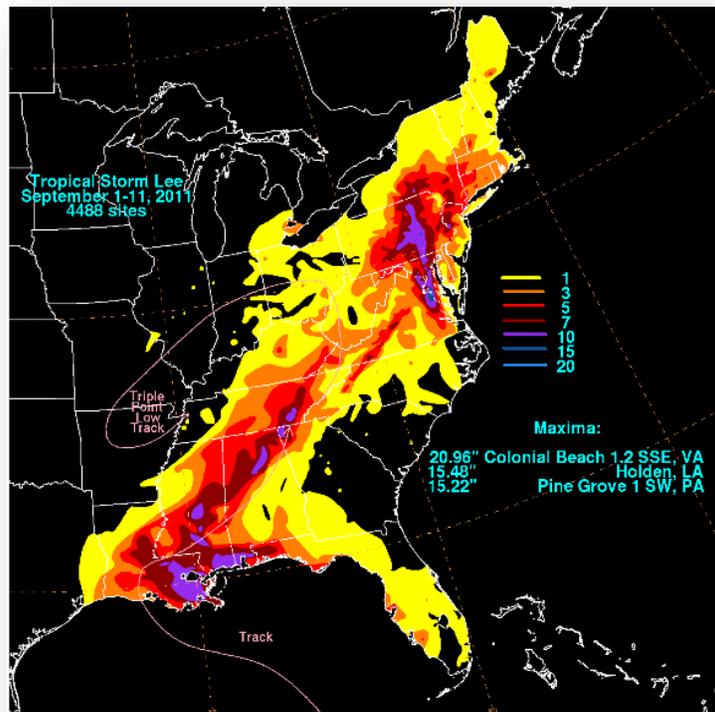


Figure 5

Flood Categories (in feet)

Major Flood Stage:	33
Moderate Flood Stage:	32

A portion of Route 17C west of Owego was threatened. A section of Nichols began to flood. The level noted was about 8 feet lower than the first floor of the Treadway Inn.

Flood Stage	30
-------------	----

Owego experienced flooding in backyards of homes and businesses. Owego Creek continued to back up and the fairground as well as a portion of Route 96 was flooded.

Action Stage	29
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Owego Creek began to back up and flooding began to spread towards the fairgrounds in Owego.

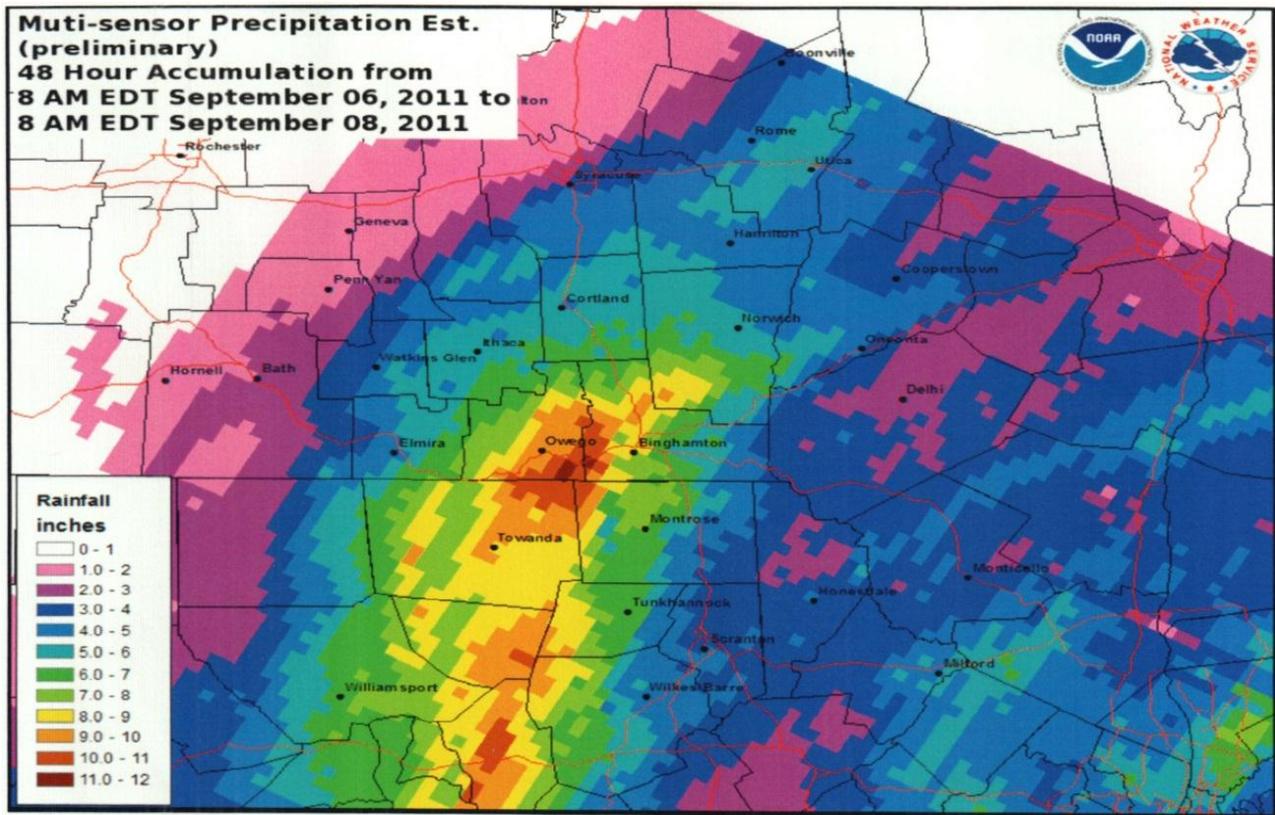


Figure 6

\* National Weather Service/National Oceanic and Atmospheric Administration

According to local spotter reports, the total storm rainfall in Tioga County for the flood of September 7<sup>th</sup> – 8<sup>th</sup>, 2011 was as follows:

Table 1

Location	Total Storm Rainfall (in inches)
Tioga Terrace II	11.24
Tioga Terrace	10.39
Valley Mobile	10.31
Price Home	6.64
Berkshire	6.62
Newark Valley	6.30
Upper Fairfield	5.88

Based on gauge and manual observations reported to USGS and NWS Binghamton, the Susquehanna River Crest Levels set new records in the September 2011 flooding.

Table 2

	June 2006	September 2011	Record Previous to 2006
Owego	35.90	39.62	33.18 (2005)
Waverly / Sayre	22.52	26.67	21.40 (1936)

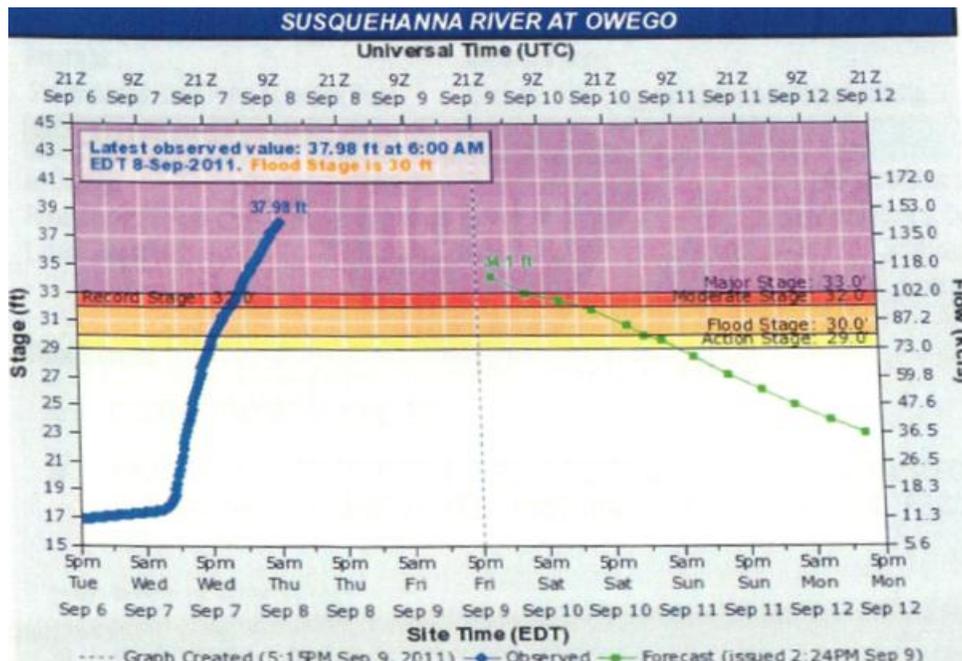


Figure 7

\* U.S. Geological Survey

## SECTION 4: IMPACT / DAMAGE

In September of 2011, the Tioga County sustained severe damage as a result of and Tropical Storm Lee. Cumulative effects of Tropical Storm Lee and subsequent rainfall prevented Tioga County from starting projects immediately necessary to protect property. Water overflowing from the Susquehanna River and other sources forced schools and some businesses to close, including the Tioga Downs casino on Interstate 86. That highway, along with Route 17C, was shut down in both directions across Tioga County. Water had run over many of the roadways leaving numerous roads impassable. Roads closed in Tioga County include:

<i>Berkshire</i>	Shirley, Brown and Ballou Hill Road
<i>Newark Valley</i>	Shirley, Howard Hill, Brown, Dalton, Lamb, Bailey Hollow, Russell, Dodson, Newark Valley, Barber and Gage Roads
<i>Candor</i>	State route 96, Park Settlement and Catatunk Hill Road
<i>Spencer</i>	Sabin and County Road 801/Halsey Valley Road
<i>Barton</i>	Interstate 86, Lincoln Street and Halsey Valley Road
<i>Tioga</i>	Halsey Valley, State HWY 96, Glen Mary Drive, Sections of State Rt 17C and Allyn Road
<i>Owego</i>	Dutchtown Road, Gary Hunt, 17C, Main Street Taylor, Bodle, RT 86, Marshland, Hilton Road, Long Creek Road, Pennsylvania Ave; Long Creek Road, Sulpher Springs and Valley Road
<i>Nichols</i>	Rt 86, West River Road, South Main Street, Moore Hill, Briggs Hill, Decker Hill and Sulpher Springs Road

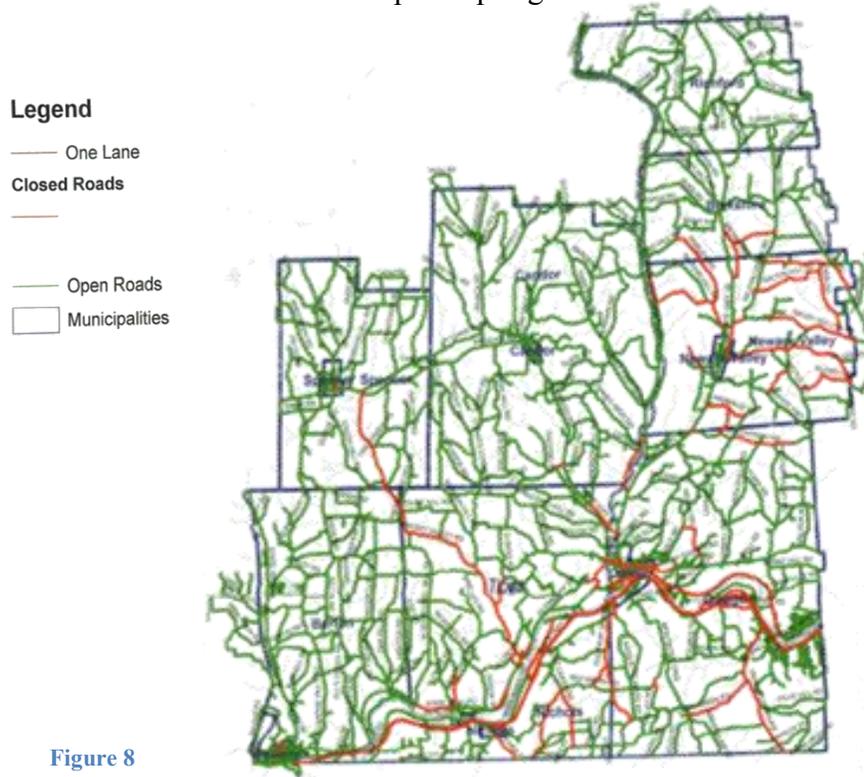


Figure 8

Water also entered many homes, causing great damage and disrupting utilities. According to NYSEG, as of September 22, 2011, 1,628 electric meters and 1,457 natural gas meters were disconnected in impacted areas of Tioga County.

Table 3

City	Electric Disconnected	Gas Disconnected	Total
Apalachin	73	43	116
Barton	12	0	12
Candor	13	9	22
Nichols	128	0	128
Owego	1399	1405	2804
Smithboro	2	0	2
Tioga Center	1	0	1
<b>Total</b>	<b>1,628</b>	<b>1,457</b>	<b>3,085</b>

As of November 5, 2011, a total of 51 applicants were referred for Temporary Housing Units. Temporary Housing Units (THU) were provided to people who needed a place to stay, with utilities, while their damaged homes were in the process of being repaired. The jurisdiction with the greatest number of applicants referred for THU was Owego.

Table 4

City	# Applicants Referred for THU
Owego	36
Nichols	5
Waverly	3
Apalachin	2
Barton	2
Candor	1
Spencer	1
Tioga Center	1
<b>Total</b>	<b>51</b>

As of December 10, 2011, FEMA's total assessed eligibility for Tioga County Individual and Households Program (IHP) was \$12,619,092.44, Housing Assistance (HA) \$11,032,779.49 and Other Needs Assistance (ONA) \$1,586,312.95 as a result of Tropical Storm Lee. The greatest assessed damage occurred in the Village of Owego (Figure 8).

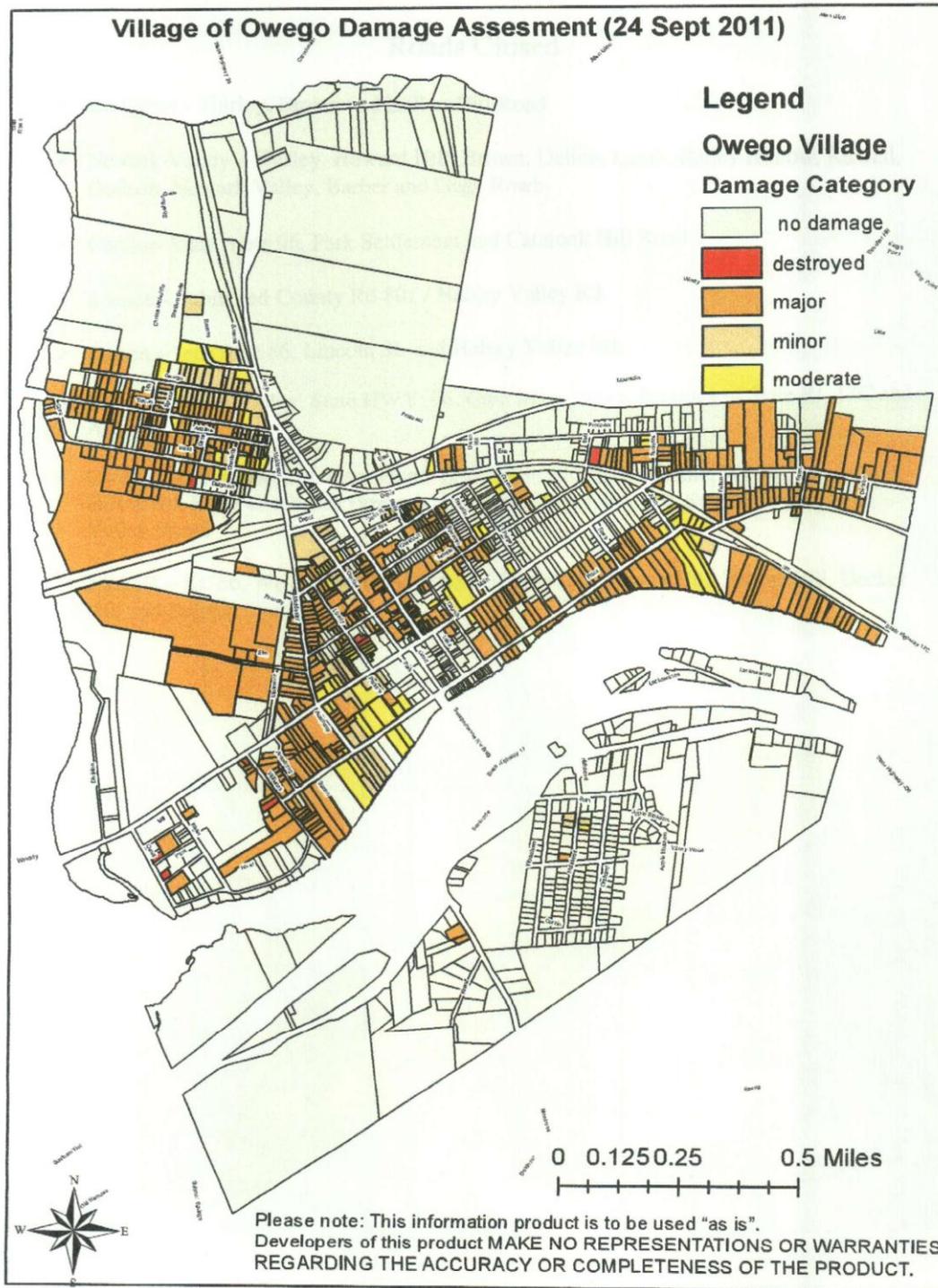


Figure 9

FEMA Disaster 4031  
Individual Assistance County Snapshot (as of January 12, 2012)

Table 5

FEMA Verified Loss	Home Repair	FEMA Verified Loss	Other Needs Assistance (ONA)
<\$6,000	928	<\$6,000	567
\$6,000 - \$11,999	224	\$6,000 - \$11,999	56
\$12,000 - \$17,999	62	\$12,000 - \$17,999	1
\$18,000 - \$23,999	80		
≥\$24,000	107		
<b>Small Business Administration (SBA) (by county)</b>			
	<b>Home Apps</b>	<b>Business Apps</b>	<b>Total</b>
Issued	2,141	580	2,721
Received	501	108	609
Approved	194	39	233
Dollars Approved	\$11,416,200	\$4,098,800	\$15,515,000
<b>Declaration Date: 09/13/11</b>			
Registrations			3,218
Housing Assistance Referrals			2,609
Housing Assistance Eligible			2,096
Housing Assistance Ineligible			434
Home Repair – Eligible			1,395
Replacement – Eligible			6
Rental Assistance – Received			1,117
Housing Assistance Eligible Amount			\$11,301,155.89
Other Needs Assistance Referrals			1,671
Other Needs Assistance Eligible			618
Other Needs Assistance Ineligible			1,052
Other Needs Assistance Eligible Amount			\$1,631,452.80
Received Max Grant (\$30,200)			68
Flood Insured			549
Non-Compliant			72*
<b>Direct Housing</b>			
PPI Referrals			1,064
Identified for Direct Housing			17
Licensed In			17

\* Applicants that did not maintain their flood insurance requirement after receiving previous FEMA award. They are not eligible for housing repair/replacement awards, but may be eligible for Rental Assistance, Temporary Housing Unit and certain ONA grants.

## SECTION 5: RESPONSE SUMMARY

On September 8, 2011 the Chair of the County of Tioga declared a State of Emergency due to a large amount of rainfall from Tropical Storm Lee. The response was supported by approximately 200 volunteers who assisted in the flood response in Tioga County. The waters caused severe flash flooding, destroying homes and infrastructure. On September 10, 2011, the Tioga County Emergency Management Office requested the assistance of the Disaster Assistance Response Team (DART) in inspecting 3,750 homes in Tioga County.

Table 6

Townships	# of homes in need of inspection
Owego	3,000
Tioga	400
Candor	100
Nichols	100
Barton	75
Spencer	50
Berkshire	25
<b>Total</b>	<b>3,750</b>

The Incident Command System (ICS) was utilized in the response to include area command and organization for two (2) incident management teams. This incident management approach established a common process for planning and management. The ICS structure utilized in Tioga County may be found in [Appendix C](#).

In the Town and Village of Owego, Town and Village of Nichols, and the Town of Tioga, only authorized emergency traffic were allowed. In addition, a curfew was in effect from 9pm to 6am whereby no one was allowed outside their residence. As of September 10, 2011, residents of the Village of Owego were required to have proper ID on their person if driving or walking to their residence. The Court Street Bridge was closed to curtail the amount of traffic anticipated to pass through the village in regards to remaining flooded/damaged roadways. The Fire Police manned roadblocks and checkpoints.

Effective September 10, 2011, a Boil Water Order was established for individuals living in the Village and Town of Owego, the Village of Nichols, and those on Public Water Systems. Additionally, individuals on Public Water systems in these communities were asked to conserve water as there was a limited supply.

Town of Owego developed a Media Release that contained information pertaining to an Information “Hot Line”. The Information Hot Line was set up at the Owego Town Hall from 8:00am to 4:30pm, starting Monday September 12, 2011. The Information Hot Line was established to assist with the public’s questions regarding emergency services and to provide flood related information. A phone number and email address was provided.

On September 13, 2011 the Lourdes Walk-In Clinic in Owego was relocated to the Tioga County Health and Human Services Building. The clinic was open Monday thru Friday from 9:00am to 8:00pm as well as Saturday and Sunday from 9:00am to 5:00pm.

Points of distribution were established as early as September 13, 2011. The following distribution sites were established in Tioga County to provide food water, dry ice, MRE's and other supplies:

- Apalachin Fire Station (Pennsylvania Ave., Apalachin)
- Barton Community Center (Old Barton Road, Barton)
- Campville Fire Department (New York 17C, Endicott)
- County Health and Human Services Building (State Route 38, Owego)
- Methodist Church (Candor)
- Owego Nazarene Church (Waverly Road, Owego)
- Presbyterian Church (North Ave., Owego)
- Southside Fire Station (Waites Road, South Owego)
- St. Patrick's Church (Main Street, Owego)
- Tioga Center Fire Station (Fifth Ave., Tioga Center)
- Tioga Opportunities (Sheldon Guile Blvd, Owego)
- Village Fire Department (Talcott Street, Owego)
- Village of Nichols Fire Station (West River Road, Nichols)
- Nichols Elementary School (Roki Blvd., Nichols)

On September 20, 2011, a staff of four (4) FEMA personnel opened and operated a Disaster Recovery Center (DRC) at Nichols Elementary School. Additionally, on September 26, 2011, a staff of nine (9) FEMA personnel opened and operated a Disaster Recovery Center in Tioga County at the Church of Nazarene. Both DRC were open from 8:00am to 8:00pm Monday thru Saturday and were closed on Sundays.

Seven (7) shelters were established as a result of the flooding. The following shelters were established to serve the needs of the human population:

- Baptist Church (Candor)
- Methodist Church (Appalachian)
- Abide in the Vine Church (Owego)
- Christian Missionary Church (Apalachin)
- Nazarene Church (Owego)
- El Rancho De Paz (Owego)
- Nichols Elementary School (Nichols)

Later in the response the number of shelters was decreased to two (2) sites (Nichols and Nazarene Church). Alternate shelters were also established, for example the Presbyterian Church and Emergency Operations Center (located at 103 Corporate Drive, Owego) housed firemen from outside the jurisdiction. The Health and Human Services (HHS) building was utilized as a special needs shelter site. The special needs shelter provided nursing, medical needs, and medications, as some of the individuals were hospice patients. Once the HHS shelter was closed, the individuals were transferred to the Nazarene shelter.

At one point, more than 600 people were estimated to be temporarily housed in the shelters. Many agencies and organizations assisted in providing resources to shelters and the local community. Helicopters from the Army National Guard dropped two loads of supplies at Nichols Elementary School; Wegman's dispatched a truckload of non-perishable foods to help victims of the flood, to the Food Bank of the Southern Tier in Big Flats.

Public health precautions following the flood were addressed with the release of several press releases by the Tioga County Health Department to notify the public on various topics including mold removal, prevention of possible illness from flood waters, and tetanus shot recommendations.

Flood Response Timeline

Table 7

DATE	EVENT
September 5	NWS Forecasters monitor Tropical Storm Lee exiting the Gulf and moving toward the Ohio Valley
September 6	NWS Conducts Conference Call Briefings with Local Officials
September 6	Flood Watch Issued
September 6 – 8:00 am	Rain begins moving through the region
September 6 – 5:00 pm	River level at Owego measures 17 feet, well below flood stage of 30 feet
September 7 – 9:00 am	Local spotters begin to report flooding in tributary streams
September 7	Flood Warning Issued
September 7	Record Flooding is Forecasted
September 7 – 12:00 pm	Water level in the Susquehanna River begins to rise quickly and dramatically. Within the next 24 hours the river will rise 22 ½feet and crest at 39.62 feet
September 8	Tioga county declares a State of Emergency
September 8 – 12:00 pm	River crests at record level of 39.62 feet
September 8	Governor Cuomo declares a State Disaster Declaration and requests the President to declare a federal disaster
September 8	The first of 7 community shelters are opened in the county
September 8	Riverview Nursing Home in Owego is evacuated
September 8	President authorizes a federal emergency declaration for immediate assistance to Tioga County
September 9	State and local officials initiate search and rescue operations
September 9	National guard helicopters drop food and water to stranded flood victims
September 9	Wegman’s Markets donates food and resources to disaster victims and the Red Cross
September 10	State Disaster Response Teams (DART) are requested to inspect 3,750 damaged homes in Tioga County
September 11	President Obama approves a major disaster declaration for Tioga County to aid recovery
September 13	Lourdes Walk-In Clinic is relocated to County Health and Human Services Building and reopened
September 13	Points of distribution for food and water are opened
September 20	A FEMA/State Disaster Recovery Center is opened in Nichols

## Major Strengths

The major strengths identified during this event are as follows:

- Many of the partnering local agencies and organizations are familiar with one another and have a great willingness to work together
- The Tioga Area Recovery Program (TARP) aided in forming strong relationships
- Unified process for releasing press releases
- Use of the Reverse 911 System
- Assistance and resources from NYS OEM, State Police, OFPC, NYS DOT, National Guard, NYS DOH and DEC
- Prompt declarations authorizing emergency and major disaster recovery assistance from the Governor and President
- Prompt opening of community Disaster Assistance Centers
- Citizen cooperation and community support where neighbors help neighbors
- Action by local churches, community organizations and volunteer fire departments to open shelters and community based disaster service centers
- Strong volunteer support and participation through fire departments and community organizations
- Independent citizens and residents that help themselves and help others
- Strong support and mutual aid from citizens, organizations and governments in neighboring communities and counties
- Support from area businesses and that serve the community

## Primary Areas for Improvement

Throughout the event, several opportunities for improvement in Tioga County's ability to respond to the incident were identified. The primary areas for improvement, including recommendations, are as follows:

- Ability to move and deploy resources and material in flooded conditions
- Improved plans and agreements for sharing emergency resources (MOU, MOA, LOA, Mutual Aid, etc.)
- Greater integration of municipal government emergency operations with the County EOC
- Multiagency participation and representation in County EOC
- Increase EOC staffing; including staff necessary to manage and process information, respond to calls from the public and to coordinate with other governments and agencies
- Identify and improve a secondary EOC location
- A more comprehensive application of the principals and organizational capabilities available when using the Incident Command System (ICS)
- Communication Planning
  - Communication among the villages, towns and County EOC
  - Build a more comprehensive disaster public information program
  - Rumor Control management
  - Defined Travel Advisories
  - Assessment and information sharing of closed bridges and roads
  - Develop supplemental and backup communications and IT plans
  - Identification of media sources
  - Communications for Human Services

## SECTION 6: AAR/IP DEVELOPMENT PROCESS

### Evaluation Process

Government and community service representatives that were involved in managing flood response activities for Tropical Storm Lee, participated in an After-Action workshop on December 14, 2011 which was located at the Tioga County Emergency Operations Center (EOC). The workshop provided an opportunity for the responding agencies and individuals to evaluate issues and concerns associated with the flood response and to make suggestions for improving local disaster operations. An Evaluation Questionnaire ([Appendix B](#)) was utilized to facilitate the discussion.

The After-Action Report and Post-Disaster Improvement Plan (AAR/IP) evaluates participant findings and suggestions and provides recommendations that can be implemented to improve disaster response capabilities for the community

Prior to the workshop, Cannon Design staff met with the Tioga County Emergency Management Director to discuss local response and mission capabilities based on the Department of Homeland Security's (DHS) Target Capabilities List (TCL). The TCL identifies critical emergency preparedness areas and tasks that should be evaluated for strengths and weakness, and form the basis for required improvement actions. The After-Action workshop, evaluation and report were based on the following target capabilities and mission descriptions outlined in the Department of Homeland Security Target Capabilities List (TCL):

- **Emergency Operations Center (EOC) Management** is the capability to provide multi-agency coordination for incident management
- **On-Site Incident Management** is the capability to effectively direct and control incident activities by using the Incident Command System (ICS)
- **Human Services / Citizen Preparedness** is the capability to execute the safe and effective sheltering and human services
- **Structural Damage Assessment** is the capability to conduct damage and safety assessments
- **Communications** represents the ability of public safety agencies and services to communicate and share information using a variety of primary and alternate technologies
- **Emergency Public Information and Warning** capability includes public information, alert/warning and notification.

*\* For additional information relating to these capabilities see Section 7*

## AAR/IP Planning Team

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## Participating Organizations

### *Federal*

Federal Emergency Management Agency (FEMA)

### *State*

New York State Department of Transportation (NYSDOT)

New York State Division of Homeland Security and Emergency Services (DHSES)

New York State Environmental Conservation Officers

New York State Office of Emergency Management (NYSEMO)

New York State Police

### *Non-Governmental Organizations (NGOs)*

American Red Cross

Catholic Charities of Tioga County

Cornell Cooperative Extension

First Presbyterian Union Church

Salvation Army

### *Local*

Accord – dispute resolution services

Chamber of Commerce

Council of the Arts

Family Planning

Head Start

Industrial Development Agency (IDA)  
Local Development Corporation (LDC)  
Rural Economic Area Partnership (REAP-LDC)  
Soil and Water Conservation District  
Tioga County Bureau of Fire  
Tioga County Council on Alcoholism and Substance Abuse (TCCASA)  
Tioga County Department of Aging Services  
Tioga County Department of Community Services  
Tioga County Department of Family Health Services  
Tioga County Department of Health  
Tioga County Department of Housing Services  
Tioga County Emergency Management Office  
Tioga/Chemung County Farm Services Agency (FSA)  
Tioga/Chemung Natural Resource Conservation Services (NRCS)  
Tioga County Highway Department  
Tioga County Legislature  
Tioga County Opportunities Inc.  
Tioga County Sheriff's Office  
Tioga County Tourism Office  
Women, Infants, Children (WIC)

## SECTION 7: CAPABILITIES

### COMMUNICATIONS

Communications is the fundamental capability within disciplines and jurisdictions that practitioners need to perform the most routine and basic elements of their job functions. Agencies must be operable, meaning they must have sufficient wireless communications to meet their everyday internal and emergency communication requirements before they place value on being interoperable, i.e., able to work with other agencies.

Communications interoperability is the ability of public safety agencies (police, fire, EMS) and service agencies (public works, transportation, hospitals, etc.) to talk within and across agencies and jurisdictions via radio and associated communications systems, exchanging voice, data and/or video with one another on demand, in real time, when needed, and when authorized. It is essential that public safety has the intra-agency operability it needs, and that it builds its systems toward interoperability. (U.S. Department of Homeland Security, Target Capabilities List, September 2001, p. 29)

### ON-SITE INCIDENT MANAGEMENT

Onsite Incident Management is the capability to effectively direct and control incident activities by using the Incident Command System (ICS) consistent with the National Incident Management System (NIMS). (U.S. Department of Homeland Security, Target Capabilities List, September 2001, p. 197)

### EMERGENCY OPERATIONS CENTER MANAGEMENT

Emergency Operations Center (EOC) Management is the capability to provide multi-agency coordination (MAC) for incident management by activating and operating an EOC for a pre-planned or no-notice event. EOC management includes EOC activation, notification, staffing, and deactivation; management, direction, control, and coordination of response and recovery activities; coordination of efforts among neighboring governments at each level and among local, regional, State, and Federal EOCs; coordination public information and warning; and maintenance of the information and communication necessary for coordinating response and recovery activities. Similar entities may include the National (or Regional) Response Coordination Center (NRCC or RRCC), Joint Field Offices (JFO), National Operating Center (NOC), Joint Operations Center (JOC), Multi-Agency Coordination Center (MACC), Initial Operating Facility (IOF), etc. (U.S. Department of Homeland Security, Target Capabilities List, September 2001, p. 209)

## **CITIZEN EVACUATION AND SHELTER-IN-PLACE**

Citizen evacuation and shelter-in-place is the capability to prepare for, ensure communication of, and immediately execute the safe and effective sheltering-in-place of an at-risk population (and companion animals), and/or the organized and managed evacuation of the at-risk population (and companion animals) to areas of safe refuge in response to a potentially or actually dangerous environment. In addition, this capability involves the safe reentry of the population where feasible. (U.S. Department of Homeland Security, Target Capabilities List, September 2001, p. 377)

## **EMERGENCY PUBLIC INFORMATION AND WARNING**

Develop, coordinate, and disseminate accurate alerts and emergency information to the media and the public prior to an impending emergency and activate warning systems to notify those most at-risk in the event of an emergency. By refining its ability to disseminate accurate, consistent, timely, and easy-to understand information about emergency response and recovery processes, a jurisdiction can contribute to the well-being of the community during and after an emergency. (U.S. Department of Homeland Security, Target Capabilities List, September 2001, p. 421)

## **MASS CARE (SHELTERING, FEEDING, AND RELATED SERVICES)**

Mass Care is the capability to provide immediate shelter, feeding centers, basic first aid, bulk distribution of needed items, and related services to persons affected by a large-scale incident. Mass Care is usually provided by nongovernmental organizations (NGOs), such as the American Red Cross (ARC), or by local government. The capability also provides for companion animal care/handling through local government and appropriate animal-related organizations. This capability covers those individuals who have disabilities that can be accommodated in general population shelters. (U.S. Department of Homeland Security, Target Capabilities List, September 2001, p. 493)

## **VOLUNTEER MANAGEMENT AND DONATIONS**

Volunteer Management and Donations is the capability to effectively coordinate the use of volunteers and donations in support of domestic incident management (U.S. Department of Homeland Security, Target Capabilities List, September 2001, p. 237)

## SECTION 8: RECOMMENDATIONS FOR IMPROVEMENT

### 1. Emergency Authorities and Decision Making (On-Site Management)

#### *Concern*

Local responders expressed a need for improved understanding of the roles and responsibilities related to the use and purpose of emergency declarations, executive orders and authority for local decision making, including the dissemination of public information. Much of this concern centered on response activities and initiatives taken at the county and municipal levels and recognition that improved coordination among the county and local jurisdictions is required.

#### *Discussion*

Under provisions of NYS Executive Law, Article 2-B, the Chief Executive of the county and the chief executives of each Town and Village have the authority to declare a State of Emergency for their jurisdiction, and when such declaration is made they can issue emergency orders. It is commonly recommended that the county and any municipalities affected by a disaster each declare a local State of Emergency in order to effectively establish the legal authority and protection needed to manage a disaster response and to focus public attention and participation on appropriate protective measures.

Section 20 of the Executive Law, Article 2-B establishes the following policies for disaster preparedness and response in New York State.

- Local governments and emergency service organizations shall continue their essential role as the first line of defense in a disaster
- Local chief executives shall take an active and personal role in disaster preparedness programs and have authority and responsibility to insure success of such programs
- Local disaster and emergency response functions must be coordinated using recognized practices in incident management

Section 23 of the Executive Law, Article 2-B establishes the following policies regarding local emergency management planning.

- Each county, town and village is authorized to prepare emergency plans and each city, town and village plan must be coordinated with the county plan
- Plans for the coordination of resources, manpower and services must provide for centralized coordination and direction of requests for assistance
- Plans for coordination of assistance shall provide for the utilization of existing organizations and lines of authority

*Recommendation - A Unified Command Structure that Links Agencies and Local Governments*

A well-organized incident management system that has an integrated command structure, clear lines of authority and an effective means of communication is intended to address much of the misunderstanding about disaster authorities and roles that was noted in the after-action review. A commitment by all agencies, county departments and municipal leaders to effective implementation of the Incident Command System (ICS) and coordination of the disaster response efforts using a Unified Command Post or county Emergency Operations Center will overcome many of the organizational challenges highlighted by this disaster.

*Recommendation – Improved Use of the Incident Command System (ICS)*

Sections 20 and 23 of the Executive Law, as noted above, both call for coordination of local disaster preparedness and response activities, and Section 20 further states that local emergency functions shall be coordinated using recognized practices. Federal directives, state executive orders and the Tioga County Comprehensive Emergency Management Plan, Annex 11 all establish that the Incident Command System (ICS) be used as the recognized practice for incident management.

*Recommendation - Unified Command Post and Emergency Operations Center (EOC)*

When the Incident Command System (ICS) is used, there is a requirement that the response be managed using a single integrated command structure. Establishing a unified Command Post or managing disaster operations from the county EOC are both ways to meet the requirements for ICS and those outlined in NYS Executive Law, Article 2-B that local disaster response activities be coordinated. In a disaster having widespread multi-jurisdictional impacts, it is common for each jurisdiction to establish a local Command Post, and the requirements for overall incident coordination, as called for by ICS and the Executive Law, are achieved by using an ‘area command’ – or in New York State, by coordinating countywide response from an Emergency Operations Center (EOC).

*Recommendation – Define Executive Roles and Functional Management*

In a properly executed Incident Command System, local chief executives (Board Chairman, Mayor, Supervisor) perform a policy role, where they are involved in decisions about emergency declarations, emergency orders, public information and setting overall strategy and objectives for the response.

Performance of emergency functions, the delivery of disaster services and carrying-out response objectives is generally undertaken by agency leaders, department heads, program managers and their deputies or designees. Their position in the response organization and the authority they have over other response personnel and participants is determined by the role they are assigned in the Incident Command System. An agency representative assigned as the Incident

Commander has overall management and leadership responsibilities for all areas, functions and personnel. Those assigned as Section Chiefs (Planning, Operations, Logistics, Finance/Admin) have a supervisory and management role related to the services and people assigned to their section. In each section there could be one or more units or groups and each Unit Leader manages the staff and tasks that are specific to that unit or group.

When using the Incident Command System, an individual's role and their supervisory responsibilities are determined by their assignment or position in the ICS structure; and while they may retain supervisory functions in managing the staff and resources of their department, they also have a specific and defined role in the incident command system.

When staffing an ICS organization, it is common to select leaders and supervisors from the function or agency that has a dominant role or principal responsibility based on the hazard that exists or the service being provided. For example, for a fire, key ICS leaders would usually be fire officers, but if sheltering or related services are required, those functions would be supervised by human services leaders.

In ICS, it is possible to meet staffing needs by using qualified personnel from other functions or disciplines. For example, a good planner from a law enforcement agency could manage the planning section for a flood or health outbreak, while an individual with good management skills from a health or human service agency may be a good Logistics Chief for a transportation accident or haz-mat incident.

More about leadership roles, disaster organization and functional responsibilities follow in the sections about local coordination, public information and human services.

## 2. County Leadership and Coordination with Towns and Villages (Communications and On-Site Management)

### *Concern*

Recurring comments and suggestions identified in the after-action reviews centered on the need to improve coordination and communications between the County Emergency Operations Center (EOC) and town and village officials.

### *It was a 'communication' problem!*

Almost every discussion of good points and bad about the flood response noted there were “problems with communication”, or there was “lack of communications”, or “poor communications” was blamed. But communications means different things to different people. For some, they are saying there were not adequate radios, phones or communications technology - or that such technologies were disrupted or not available. To many others, however, problems with communications refers to inadequate organization, where people are failing to share information. In many cases, communications technology may be available, but underlying management and organizational factors are such that people are not distributing or exchanging information with others.

Inadequate communications technology will contribute to organizational break-downs and limit information exchange, but communications problems are just as often linked to inadequate planning, insufficient training and experience, poor supervision and failures in process management.

### *Discussion*

Much of the difficulty related to coordination between county and local governments is linked to the preparation and execution of plans and procedures for integrating emergency operations. In this instance, technical communication problems (disrupted or slow cellular and landlines) resulted in temporary difficulties, but preparedness and organizational improvements must be considered.

Disaster management procedures and systems for coordinating county and local government disaster operations are outlined in the county emergency plan, but even in municipalities that have disaster plans, town and village officials are not always familiar with basic procedures for integrating county-wide emergency operations. The preparation and maintenance of effective emergency plans can be time-consuming and requires a certain level of emergency planning skill and experience. The key leaders in most local Tioga County communities serve part-time and have multiple responsibilities, and staff that could prepare detailed plans simply do not exist. Rapid and regular turnover of local officials and key leaders in many municipalities also makes it difficult to maintain familiarity with emergency policies and procedures.

*Recommendations*

Planning support to municipal governments should continue to be coordinated at the county level and should emphasize and focus on a few basic and critical coordination issues that include the following.

- Municipal leaders - which at a minimum include the Supervisor, Mayor, Highway Superintendent, Fire and Law Enforcement – need to come together during a disaster at a single pre-designated facility, Command Post or EOC in their town or village to jointly plan and execute local emergency operations. Just as the county joins forces at the county EOC, and in keeping with the requirements and principals of sound incident management and local coordination responsibilities established by state law, municipal officials must also commit to organizing at an integrated local command site.

When a county or local government establishes a unified command or operations site, where key leaders and decision-makers assemble to share information and solve problems, it will almost automatically attract other community leaders and resource providers -- they will quickly realize that being part of the local command environment is the best way to advance their own objectives.

- The technology and methods for establishing this communication should be outlined in a county communications plan that also addresses alternate or back-up methods for municipal and county communications. During a disaster, and preceding a disaster when possible, local officials in each town and village must establish and maintain communication with the county EOC. Depending on available resources, this would normally be done using landline and cellular phones, internet service and public safety radio systems. Regional or local briefings, conference calls, tele-faxing, internet and social network meetings and postings and video conferencing should all be considered.
- A Liaison Officer should be assigned at the county Emergency Operations Center (EOC) whose primary role is to maintain contact and promote effective communication and information sharing with the towns and villages. In a complex or major disaster, this liaison may need to be assigned a deputy or assistants.
- When limited resources constrain the preparation and implementation of comprehensive emergency plans at the town and village level, basic checklists should be prepared, updated and periodically reviewed to provide or set in place the fundamental emergency preparedness measures outlined on the next page.

*\* See sample checklist on the next page*

### Municipal Emergency Preparedness Worksheet

Town / Village \_\_\_\_\_

**The following town/village officials will participate in a unified local command during or in anticipation of a disaster or emergency:**

Supervisor / Mayor  
Fire Chief(s)

Highway Superintendent  
Law Enforcement

**The following local government officials can also be called upon to assist with local emergency operations at a designated unified command site:**

Attorney  
Codes / Buildings  
Water / Sewer  
School Superintendent (where applicable)

Clerk  
Assessor  
Animal Control

**The following municipal facility will be used as the local government command post or operations center where the above officials will assemble to coordinate emergency operations. These facilities should not be located in a flood hazard zone:**

Primary Facility:

Alternate Facility:

**Immediate and continuing coordination and communication with the county EOC should be established using the following systems where appropriate and as identified in the Tioga County Communications Plan:**

Landline

Cellular

Internet

Fire / Police / and Highway Radios

Other

- Preparation of *Continuity of Operations Plans (COOP)* - Preparation of comprehensive COOP plans may be beyond the resources of most town and village governments in Tioga County, but basic COOP procedures can be developed using available planning checklists. This type of planning will improve county and local government coordination for disasters because it addresses the vital priorities and links that support and enhance integrated county and local emergency operations. Using COOP checklists that are widely available in emergency planning toolkits, such basic preparedness measures will help local governments identify and set priorities for the essential functions and services they provide and can be used to designate primary and alternate requirements for staff, facilities, communications and other critical resources.

### 3. Emergency Operations Center (EOC)

#### *Concern*

There was general agreement about the important role the EOC performs in managing emergency operations in Tioga County; and the support and level of commitment local personnel have toward using the EOC to successfully manage emergency operations was positive. Areas of improvement related to the EOC center on reinforcing wider agency participation at the EOC, expanding ICS functional services at the EOC and establishing a more influential role for the EOC related to local government coordination.

#### *Recommendation – Participating Agencies and Services*

To reinforce the EOC's role as a principal and central county command and resource management facility, all key response agencies need to be represented at the EOC and involved in operational support of disaster services from the EOC. Of the agencies not physically present and involved in managing emergency operations at the EOC, health and human services were the most notable. The basic and principal elements of effective incident command center on bringing key leaders, decision makers and resource managers together in a unified command environment. It is common for departments and agencies to continue managing services from their own facilities, but when health, human services and other key functions become a dominant part of the emergency response, leaders of these services need to join the unified command and participate in integrated agency operations at the EOC.

#### *Recommendation – ICS Functional Organization in the EOC*

Key executives and principal leaders of Tioga County government, including the Chairman and Chief Executive, Sheriff and Emergency Manager, were active in the EOC and jointly participated in command activities. Fire, law enforcement, highway and related public services were also active in the management of disaster operations, including those related to delivery of emergency food and water, transportation, public information and assessment. With the kinds of

complex and rapidly evolving disaster services demanded by this event, however, response management could be dramatically improved through stronger application of ICS organizational structure in the EOC. Even in the earliest stages of a disaster, when it is determined that an EOC is needed, establishing a Planning Section to begin development of an Incident Action Plan (IAP) and the preparation of reports can be quite valuable.

In this disaster, the Sheriff and Emergency Manager were actively involved in public information and preparing press releases, but they were also active in coordinating food and water distribution, preparing emergency orders and coordinating activities with town and village officials.

This is a point where implementation of the clear and distinct organizational elements of the Incident Command System would benefit the response by defining responsibilities, identifying functional leaders and targeting areas where help and resources are needed.

At a minimum, the complexity of the food and water distribution effort signals that robust, well-staffed Planning and Logistics sections are required at the EOC.

In a similar way, the active pace of public information duties will continue to require the involvement of key leaders, but much of the public information activity can be delegated to a Public Information Officer and assistants or staff if required. And the demand for coordinating and updating information with municipal officials clearly indicates it is time to assign a Liaison Officer to assist with these requirements.

As noted previously, human service agencies were operating from facilities other than the county EOC. Since human services are such a high profile activity in most community disasters, it is recommended that a Human Services Task Force or committee be permanently established at the EOC, which would go a long way toward integrating their multi-agency resources into the incident management core. As part of an integrated ICS organizational structure in the EOC, human service objectives and delivery can also be directly supported by the planning, logistics, public information and other ICS functions at the EOC.

#### *Recommendation – EOC Staffing Support*

Few counties have the staff available to support and sustain the kind of emergency operations demanded by a disaster of this scope and magnitude, particularly when EOC operations involve 24-hour staffing for several days or weeks.

Just as the fire and emergency services have relied on mutual aid for years to address expanding personnel requirements for major incidents, other agencies also need to plan for increasing workloads and extended 24/7 operations, including EOC staffing, during a major disaster. Even departments not traditionally involved in emergency operations are expected to make these kinds of preparations; including those providing human and financial services, records management,

building and engineering and other public services. Sources of mutual aid and EOC staff support include the following:

- Other county departments and agencies
- Other community agencies or organizations that provide similar services
- Similar services in neighboring counties or in the region
- Companion state agencies
- State and regional Incident Management Teams (IMT)
- Professional associations that organize resources to support fellow members

It is generally recommended that mutual aid and related staff support arrangements be prepared in writing, usually in a plan and supported by a written agreement. While the terms of an agreement can take many forms, disaster mutual-aid among local governments rarely involves pre-established charges or payments, especially when a community needs help in a crisis. Mutual-aid systems have traditionally been very successful because they rely on the concept of neighbor-helping-neighbor, where I help you today because I know that in the next disaster I'll need your help.

#### *Recommendation – Early Mobilization*

Officials are always cautious about mobilizing help that is ultimately not needed, and always hopeful that things will not be too severe, and just as often confident that they have enough help at-hand. But experienced emergency managers and government leaders know that the demands of a community emergency can rapidly outpace the ability to organize and/or provide sufficient help, particularly in the early stages of a catastrophe as complexity mounts.

It is recommended that procedures be implemented to formally initiate, when possible, a situation monitoring unit, advance team or limited mobilization of emergency staff at the EOC in advance of a potential or approaching threat.

For weather systems and other hazards where approaching or undetermined threats can be evaluated and anticipated, certain key agencies should be assigned or plan to gather at the EOC to assess the situation and initiate applicable preparedness measures in advance. It may also be appropriate to begin pre-notification of EOC contacts and agencies so they can initiate preparations and staff resources in anticipation of an EOC mobilization. Some of these advance measures were undertaken in this instance, and given the overwhelming nature of the disaster and its demanding impacts, it is suggested that such actions become a formal part of the EOC plan. A few options that can be considered include the following.

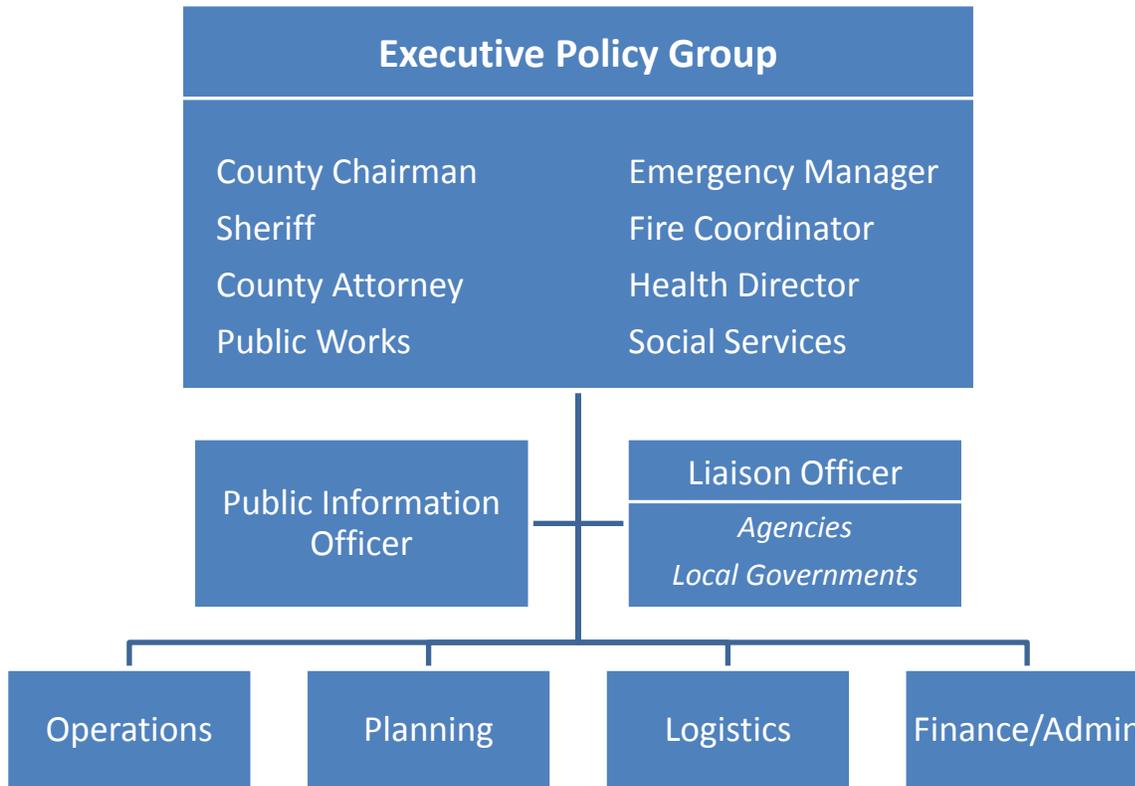
**Crisis Monitoring Team** – A few key public safety and government leaders that would meet when there is an anticipated, potential or undetermined threat that requires monitoring and evaluation. This team would consider preparedness actions that could be initiated early, or as a precaution in order to stay ahead of a threat that could quickly expand.

**Limited Activation** – A limited activation of primary EOC representatives can occur, even in advance or as a precaution against a rapidly expanding event. The group can be released if not needed, but also could start building an Incident Action Plan (IAP), initiate preparations and coordinate with resource providers so the response system is able to keep up and swiftly increase capabilities if necessary.

**ICS Planning Section** – The ICS system can be implemented early or in advance of an unfolding situation to initiate preparedness and plan for potential mobilization needs. A principal objective of the ICS Planning Section is to consider and evaluate what resources and support are needed for the next operational period, which is typically the next day or the next shift, but they should also be looking forward several days to determine the kinds of staffing, organization and resources that will be needed. A key role of the Planning Section is to assess the potential growth or changing scope of the incident and consider options for expanding or reassigning staff and resources to meet incident objectives.

*\* See EOC organization on the next page*

Recommendation - Organization in the Tioga County EOC



EOC Committees or Task Groups	
Permanent	Provisional
Human Services	
Highway Task Force	
Communications and Technology Support	

#### 4. Disaster Public Information (Public Warning)

##### *Concern*

After action reviews suggested that county-wide public information activities were not integrated and that media releases and announcements to the public were being made independently by governments and agencies without any consolidated evaluation or coordination.

##### *Discussion*

Much of the public information process in an emergency is focused on media relations and answering questions or providing data and interviews for press and media reports. In an effective emergency response organization, however, the underlying purpose of a comprehensive public information program is to insure the public and disaster victims are well-informed. Good media relations and press participation are clearly essential to keeping the public informed, but the goal is to combine media support with other resources and opportunities that will provide citizens and those affected by the disaster with reliable, timely and accurate information.

Disaster information is commonly obtained from multiple sources, including county and local governments, various departments and agencies, any number of public officials, plus federal and state governments. It must be expected that each of these sources will have information that is valuable and useful to the public, but in a major disaster with complex and far-reaching impacts, any single official or agency has only limited access, involvement or knowledge of multiple issues and widely applied resources associated with the disaster response. The most significant problems surface when authorities speak or act independently, without coordinating their message with a central or joint incident information center, and thus fail to integrate their message with other facts and priorities that influence the event.

Establishing a strong county public information organization is essential to effective and reliable public information efforts.
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Public information is typically managed at the Incident Command Post, the county Emergency Operations Center (EOC) or a Joint Information Center (JIC) designated by the Incident Commander or county leaders. Once a strong, unified and effective public information capability is established, other local leaders and spokespeople will be naturally drawn and want to eagerly cooperate in such an integrated system. A united and well-organized public information group will eliminate many of the problems with misinformation and confusion seen when local officials and agencies act independently. It will be quickly recognized that an effective central public information point provides everyone with the best opportunity to insure their message is heard.

*Recommendation – Build a Comprehensive Public Information Capability That Can Quickly Expand*

The County disaster public information program must be adapted to address the scope and complexity of each emergency. In an emergency of limited scope, public information needs can be managed by the Incident Commander or Emergency Manager; or by key department heads, such as when it is primarily a law enforcement or health issue.

In disasters of greater complexity, including those requiring activation of the Emergency Operations Center (EOC), a Public Information Officer (PIO) should be identified - and in a major disaster it is usually necessary to assign deputies, assistants and staff to support a multi-functional public information program.

Disaster Public Information Activities

- Press releases
- Public advisories
- Safety information
- Coordination with media
- Photos and video
- Media monitoring
- Disaster site tours
- Rumor Control
- Coordination with local governments
- Coordination with state and federal agencies
- News conference organization
- Information about disaster services and assistance
- Website and social network applications
- Responding to public inquiries
- Community and group outreach

Public Information Leadership

The Tioga County Comprehensive Emergency Plan needs to be modified to establish and identify that the county will perform a strong and central role in coordination and leadership of county-wide disaster public information activities.

- The emergency plan should include a comprehensive public information section that emphasizes the strong role the county EOC will perform in integrating public information activities for a multi-jurisdiction, multi-agency emergency response
- The plan should establish provisions for staffing and resources to sustain a public information capability at the EOC for major emergencies
- Planning should identify options for designating one or more individuals who can serve as a full-time Public Information Officer for major emergencies. This individual(s) should be someone who does not have others emergency roles or assignments and can fully commit to managing public information needs
- For major emergencies, the plan should (at a minimum) call for designating an assistant to the Public Information Officer that will serve as a liaison specifically assigned to

maintain communications with towns and villages and key agencies regarding integrated public information activities

The plan should outline how a county public information capability can be organized early, even in advance of a threatening situation, and expanded if necessary to meet the demands of an escalating and increasingly complex event.

### Planning for Public Information Needs

Public information organization and resources must usually be expanded or adapted during the course of an emergency response. It may often be necessary to initiate integrated public information efforts in advance of a threatening situation and public information capabilities must often quickly increase to accommodate an escalating and complex event.

The ability to expand and modify local public information capabilities mirrors the kind of adaptability that is needed in other areas of an emergency response. In some sections, the county emergency plan addresses provisions for initial and large disaster response, but modifications to the plan should be considered that establish response activation levels for county EOC operations, including public information.

Response activation levels are recommended and outlined in state and federal planning guidance and typically call for an initial monitoring posture, then limited, major and full activation of local resources and outside assistance. Depending on the guidance, activations levels are often identified in four phases that help response managers plan for staffing and other resource requirements based on the anticipated and expanding scope of the incident or disaster.

**Level 1: Controlled Incident** An existing or potential situation exists but there is no serious threat to life, health or property. No immediate assistance is needed beyond that provided by first responders, but monitoring and continuing evaluation are necessary.

- Public Information activities would normally be handled by the Incident Commander or the primary responding department or agency

**Level 2: Limited Emergency** A serious and/or potential threat to life, health or property exists, but is confined to a limited area, usually within one municipality, or involves and is likely to remain confined to a small population.

- Public information activities would be handled locally or onsite by the Incident Commander, the primary responding department or agency or a local official. The county Emergency Management Office, using the EOC if necessary, would be prepared to offer support as needed

**Level 3: Major Emergency** A significant multi-agency response to an emergency with widespread community impacts and sustained or expanding response and recovery demands.

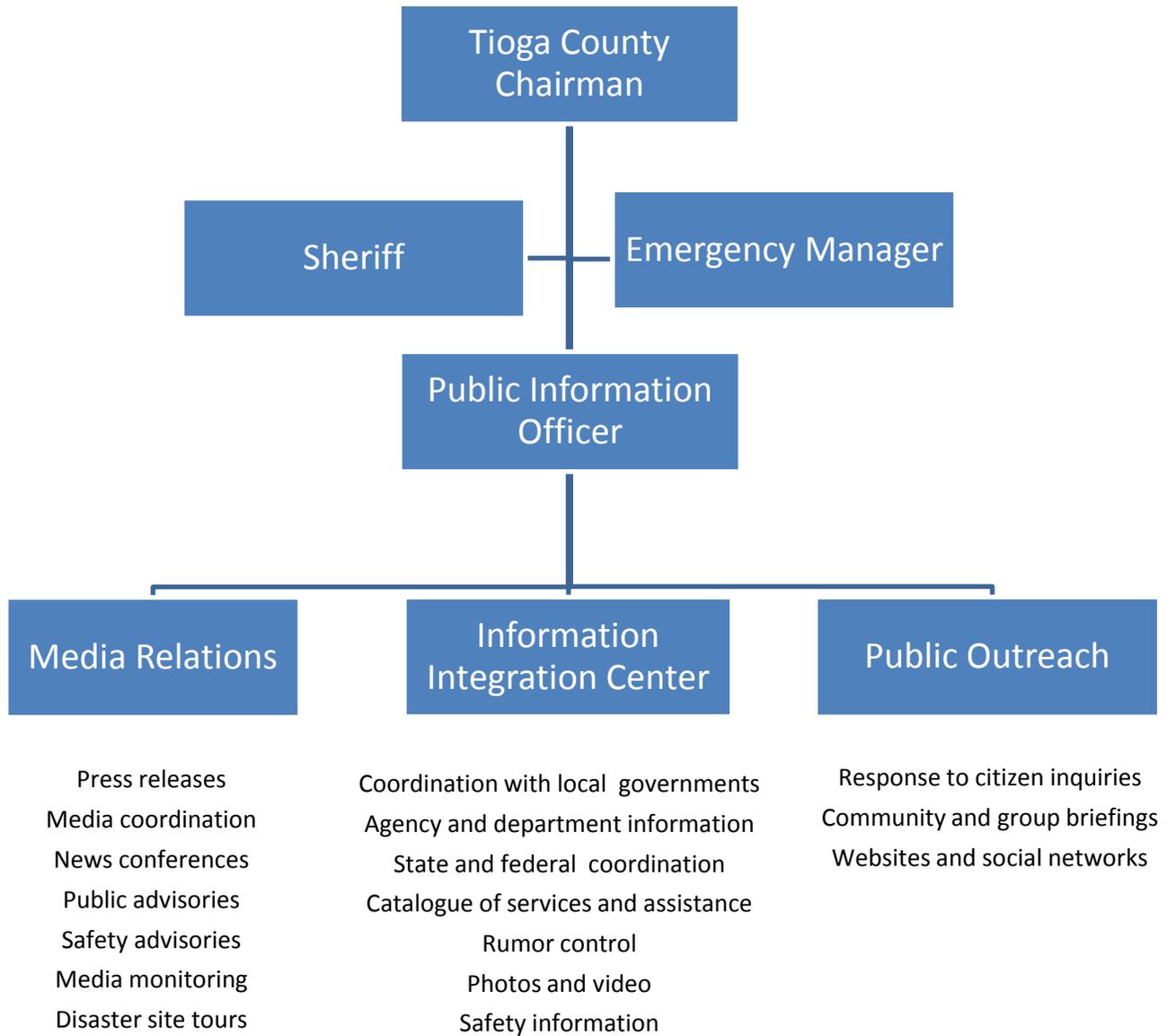
- A Public Information Officer would be assigned at the Tioga County EOC and will consider staffing needs and requirements for expanding or building-out a comprehensive public information capability at the EOC

**Level 4: Full County Activation** A major disaster with overwhelming community impacts that exceeds the resources and capabilities of local governments and requires extensive state, federal and outside support

- The Public Information Officer would prepare a plan and provide recommendations to the Incident Commander regarding necessary staff and resources needed to support an expanding multi-functional public information program that meets the demands and scope of the emergency
- The public Information Officer will consider identifying an assistant or assigning staff as necessary to meet key information requirements – particularly by designating a Liaison Officer to coordinate the exchange of public information with town and village governments and key responding agencies
- Identify resources for obtaining public information support staff for a major disaster. This can be done in advance and included in the emergency plan, or during an incident the Public Information Officer can use the ICS system and work with the Planning Section to identify and obtain public information support. Public information staff and personnel would normally be sought from the following sources.
  - Other county departments and agencies
  - Neighboring counties and regional organizations
  - Emergency Managers and Health Officers from other counties
  - State agencies
  - Regional and State Incident Management Teams (IMT)

Much of the work associated with disaster public information can be performed by those with basic management skills, and a lot of the work is administrative and clerical. Only the PIO and key program leaders require specific training or experience.

Emergency Public Information Organization



## 5. Managing the Distribution of Emergency Resources

### *Concern*

Managing the distribution of emergency supplies, particularly food and water to stranded flood victims, was particularly challenging in this incident

### *Discussion*

Such a complex undertaking involves the coordination of numerous groups and agencies; including those of local and state government, transportation, security, safety, air support, human services, military, vendors, suppliers, facilities, public information and others. The logistical challenges, organizational demands and coordination of information associated with this kind of activity are extensive.

### *Recommendation – Apply the ICS Structure to Manage Complex Resource Distribution*

The purpose of a comprehensive and well-organized incident command system is to address this type of complex resource management task. When an ICS structure is established, with Operations, Planning and Logistics capabilities that are supported by a Public Information Section and Liaison Officer, it can break-down the various elements and requirements associated with this task and then design a system and integrate a response to effectively achieve this objective. If there are difficulties obtaining or transporting needed supplies, the Logistics Section can help with a solution. If coordination with local officials is a problem, the Liaison Officer can take corrective actions. If selecting suitable staging and distribution sites becomes a challenge or a ‘quick action plan’ for the task is needed, the Planning Section is available. And, as this work is progressing, the Public Information Officer would be working on instructions for disaster victims and briefing the officials to meet with the media.

This situation is a good example and also reinforces the recommendations noted in other sections of this report that strengthening ICS functional capabilities at the county EOC will significantly improve emergency response. Successful organization of complex emergency response activities, such as the distribution of food and water to stranded flood victims, requires a well-designed system that applies the functional elements of ICS in the EOC.

In this example, and as noted in other recommendations, establishing a strong Human Services section in the EOC that is supported by a Public Information staff and a local government Liaison Officer are essential.

## 6. Transportation and Highway Assessment

### *Concern*

In most natural disasters, highway issues and transportation concerns are dominant factors for local government and emergency officials. In this disaster, the assessment of closed and inaccessible highways and the ability to confirm, summarize and share information about the status of flooded and closed roads was a significant matter.

### *Recommendation - Integration of Agency Services and Emergency Task Force*

The organizational infrastructure needed to improve road and highway management in an emergency already exist among several local and regional agencies, including the resources of the Tioga County Highway Department, the Tioga County Geographic Information System (GIS), NYS Department of Transportation and the impacted municipalities.

NYS DOT, through its system of regional Transportation Infrastructure Groups (TIG) has the technical staff and resources that can assist Tioga County with the assessment of roads and highways affected by a disaster. TIG has been successfully applied in local disasters in Erie County and other areas of the state. DOT typically assigns staff to county EOCs affected by a disaster and Tioga County could be linked into TIG resources using these contacts and channels. The Tioga County Highway Department can undertake a leadership role in working with ICS command, the Emergency Manager, EOC staff, Sheriff and law enforcement and 9-1-1 staff to consolidate information about affected roads and bridges throughout the county. This would be supplemented by establishing contacts with towns and villages through their highway or municipal offices, and county GIS staff could help to assemble and catalogue the data and findings.

This would normally be accomplished by establishing a multi-agency highway emergency task force in the EOC where each of the agencies assign representatives to assist with task force objectives.

Coordination with county public safety and information management systems would be required to assure that telephone, cellular and data communications systems and alternate technology capabilities are in place.

## 7. Stream Gauge Improvements and Retention (Public Warning)

### *Concern*

Local officials expressed concern that the existing system of stream monitoring gauges should be reevaluated, that additional gauges need to be considered for feeder creeks and streams, and that action is needed to insure funding and resources to retain existing gauges.

*Recommendation – Establish and/or strengthen the efforts of an active, influential committee of regional leaders that can advance programs and services for flood protection and stream gauge management*

Stream gauge monitoring systems are usually supported by the integrated efforts of multiple governments in the region, state and federal partners and related interests. A strong inter-governmental committee, with unified public and private sector participation, prominent leadership, and a commitment to community flood protection as a principal goal, are essential to a successful stream gauge monitoring program.

An active committee of area leaders, united in purpose can do a lot to help maintain the funding and resources needed to provide continuing support for a comprehensive flood warning system. In the face of threatened funding cuts, other areas of New York have had success in retaining funding through difficult budget periods, or in some cases they have redesigned or modified their stream gauge systems to sustain effectiveness in more economical ways. Still others have focused on mobilizing local and regional sources to continue stream gauge operations and even add capabilities.

Local officials should concentrate efforts on strengthening regional organizational forces that are directed at stream monitoring and warning improvements. Area leaders could examine the kinds of flood warning organization and capabilities that have been successful in other areas, such as that of the Flood Warning Service in Chemung, Schuyler and Steuben counties.

*Recommendation – Conduct a technical evaluation of existing gauges and expanded gauge requirements*

A technical evaluation of the existing gauges, combined with an analysis of how gauges on feeder creeks and streams could contribute to local flood protection can also be pursued. It is often easier to identify funding, grants and support resources when you have a plan in place and know the specific objectives to be achieved.

Flood monitoring procedures should also not dismiss manual monitoring methods and how they can contribute to flood warning capabilities in a cost effective way – especially when manual observations are combined with technical tools. Manual monitoring can often be supported by volunteers or existing local government staff, and if they are reporting to a central data collection

point using the internet, text messaging or similar technologies it can be very efficient. Manual systems also provide the valuable alternative or backup arrangements essential to any emergency plan.

## 8. Managing Risks of Rescue Operations (Assessment)

### *Concern*

The overwhelming hazards associated with this disaster and the scope of the emergency response left many local officials and emergency officers uneasy about how they can effectively evaluate the extent of risks and related safety concerns connected with flood rescue actions.

### *Recommendation – Improve incident planning and organization that focuses on safety*

In the face of challenging emergency response activities that carry significant risks but can also have substantial life safety benefits, the best protection for both emergency responders and disaster victims can be achieved by applying thorough planning and analysis that looks at all aspects of preparedness, training, technical and equipment capabilities, relevant conditions and environmental factors and execution

The Incident Command System (ICS) has several features designed to assist with this kind of risk analysis and decision making in emergencies, which include the following:

- **Safety Officer** – The Incident Commander should assign an incident Safety Officer that can monitor and evaluate safety issues and concerns associated with the response. The Safety Officer can bring together key officials and response managers to evaluate safety measures and work to implement safety monitoring systems. A viable safety program is an effective way to assure safety oversight, especially when the response is demanding and fast-paced.
- **Planning Section** – Establishing an incident Planning Section is an effective way to improve safety analysis and monitoring. In evaluating and considering incident activities, the planning process will commonly identify safety problems, needs, solutions and resources.
- **Incident Action Plan (IAP)** – A strong, well-prepared Incident Action Plan will provide a clear and articulate set of incident objectives that serve to guide priorities, eliminate freelancing and maintain agency focus – all things that will help reduce risks and keep an emphasis on safety.
- **Executive Policy Group** - When the Tioga County Emergency Operations Center (EOC) is activated, establishing an Executive Policy Group, as called for in this report under

EOC recommendations, serves to evaluate and review response objectives and contribute to risk assessments and safety considerations.

## 9. Human Services and Citizen Preparedness

Disaster human services provide for the basic and essential needs of disaster victims. Disaster human services include government, not-for-profit and volunteer resources of the community that are brought together to provide a unified and focused delivery of wide-ranging resources that can help individuals and families maintain life and safety when a disaster strikes. Disaster human services center on self-help and preparedness measures citizens can take to protect themselves and provide support for their families and others they care for. Human services provide the leadership and organization needed to implement resources to care for those evacuated or displaced by a disaster, including community shelters, emergency feeding and medical services. They further provide critical resources necessary to help a community deal with the disruptions that result from a disaster; including transportation, medical supplies, assistance with childcare and other care-giver needs, clothing, security, financial loss, crisis counseling and mental health, public education and support for pets and service animals.

### *Concern*

Existing human service agencies in Tioga County could be better integrated into overall county emergency operations and stronger human services leadership and organization will improve the delivery of multi-agency human services in a disaster.

### *Discussion*

The comprehensive participation and resources of all human service providers throughout the region is essential to helping citizens and families recover from a devastating disaster. The Red Cross and Salvation Army have respected and well-established disaster service programs that focus on short term shelter, feeding and other immediate human needs. Assistance provided by the Tioga County Department of Social Services in a disaster is generally limited to those who would otherwise qualify or be eligible for existing social service benefits. In a major disaster, the human and social impacts extend far beyond what the Red Cross can provide at community shelters, or what is covered by Department of Social Service benefits. Human service resources are available from a wide range of agencies and community organizations that are not part of county government, but in a disaster, strong county leadership and central coordination of services at the county EOC is essential to effective and efficient delivery of aid to citizens.

### *Recommendations*

It is recommended that county emergency planning and disaster organization place a greater emphasis on multi-agency human service coordination and delivery by implementing the following actions:

- Strengthen the inter-agency human services coordinating group and insure they meet regularly and have wide-ranging community participation and leadership
- Improve management of disaster human services in Tioga County by coordinating the efforts of multiple county and regional human service agencies under strong county human services leadership
- Plans should require that key human service agencies assign staff and coordinate overall human service activities from the Tioga County Emergency Operations Center (EOC)
- Human service agency representatives should plan to mobilize at the EOC in advance of an approaching disaster, when possible, to discuss and review potential problems and be prepared to address an expanding situation or an emergency that could rapidly become more complex
- Human service agencies with limited staff need to make pre-arrangements with other departments, companion agencies, neighboring counties and related providers to set in place mutual aid and supplemental staffing for disasters
- It is important that human services leaders be active participants in the unified command at the EOC
- Earlier mobilization of additional human services support from state, federal and voluntary agencies will enhance human services response capabilities

### Human Service Task Groups

To accomplish coordination of human services in a major disaster, it is often necessary to organize human services delivery into task groups where certain agencies or traditional providers maintain responsibility for key leadership in each area of service.

In pre-disaster planning and preparedness, a Disaster Human Services Committee can consider developing plans and operational capabilities centered on the functions and services listed in the table below. When a disaster occurs, the committee must evaluate the scope of the disaster and related needs for disaster human services and can organize emergency operations at the Tioga County EOC or other designated facility using these applicable task group(s). These task groups are modeled after plans and guidance prepared by New York State.

Task Group	Lead Agency/ Agencies
General Population Shelters	Red Cross
Special Needs Shelters/Housing	Health Department Red Cross
Medical Needs Sheltering	Department of Health
Food at General Population Shelters	Red Cross
Counseling and Mental Health	Department of Mental Health Red Cross
Other Food Needs Emergency food supplies Meal/Food pick-up Meal/Food for home confined	To be determined by the scope of the emergency and the organizational resources mobilized
Long-Term Housing	
Support Disaster Assistance Centers	
Unmet Needs	
Management of Donated Goods	

## Emergency Operations Center (EOC)

EOC Manager



Human Services Coordinator



### Human Services Committee

#### *-- Human Services Task Groups --*

- \* General Population Shelters
- \* Long Term Housing
- \* Special Needs Shelter/Housing
- \* Medical Needs Shelters
- \* Emergency Feeding
- \* Counseling and Mental Health
- \* Support Disaster Assistance Centers
- \* Donated Goods Management
- \* Unmet Needs

### Potential Disaster Human Service Requirements

Most disasters do not require that a full range of human services always be mobilized, but each disaster will present a unique set of demands, and even the workload associated with routine programs that agencies provide on a daily basis can increase substantially. Human service providers must be prepared to address the following kinds of issues and services, which are common when communities across New York State have a disaster. Not all these services can be addressed by the agencies and resources available in Tioga County, and in major disasters assistance is available from the state and federal government and voluntary or other social support groups.

Monitoring and assessment undertaken by the Tioga County Disaster Human Services Committee should identify the specific unmet needs of disaster victims and citizens, and is used to determine which of these programs and services are needed and the kinds of outside help that will be required.

In all situations, and regardless of who provides the service or where it is provided from, the resources should be coordinated through the Incident Command and the county EOC.

- Publication of media and website summaries that identify available services and contacts
- Information call-in center
- Shelter and emergency housing
- Food and meals
- Transportation to vital services for victims with mobility restrictions
- Delivery of vital services and supplies to mobility restricted victims and families
- Special dietary needs
- Medical services access and transportation
- Debris removal from homes and property
- Management of donated goods
- Stress and crisis management
- Disaster mental health response teams
- Financial and legal services
- Pastoral services
- Child care
- Funeral services
- Substance Abuse Information and Referral
- Contacting and notifying family members
- Identifying lodging for victim's families
- Translation services
- Cultural diversity issues

### Organizing Human Service Operations in the EOC

#### *Concern*

Provisions for organizing unexpected human service operations are not always detailed in existing emergency plans and procedures. In many cases it is necessary to use the Incident Command System and resources of the EOC to organize a system that can address unforeseen response demands. This was the case with distribution of food and water to stranded flood victims and others displaced before they had access and could be served at shelters. As a result of this experience, preparation of emergency plans that address the distribution of essential supplies and provisions to isolated populations is recommended, but when such plans are not available, the ICS system can be used to address emergency mobilization and response requirements not specifically outlined in emergency plans.

#### *Recommendation – Use the ICS Structure to deliver Disaster Human Services*

When not included as part of existing emergency plans and procedures, the execution of unanticipated emergency operations are organized and carried out using the integrated functions of the Incident Command System (ICS), either from an Incident Command Post or through the resources of the Emergency Operations Center (EOC).

In this case, once government and public safety officials recognized the critical need to provide emergency food and water, the Incident Commander will establish Operations, Planning and Logistics sections, set-up a Public Information capability and prepare an Incident Action Plan (IAP) that sets a priority and objectives to insure this food and water requirement is fulfilled.

Under the direction of the Incident Commander and with supervisory support of the EOC Manager, the Planning Section would determine the scope of the emergency food and water response, the kind of services and agency participation needed, and design a food and water distribution process. The Logistics Section will identify and obtain the needed food and water supplies and the resources needed for distribution; and the Public Information Officer would determine how disaster victims will be informed. With this planning and organization in place, the Operations Section would then execute the delivery and distribution of emergency supplies to disaster victims.

### American Red Cross - Role and Scope of Services

#### *Concern*

The after-action reviews generated considerable discussion about the role of the Red Cross and the scope of services they are able to provide in this and other disasters.

#### *Discussion*

The American Red Cross provides extensive and vital community services in an emergency, but is not tasked with managing the overall delivery of county and multi-agency disaster relief. Under the charter the American Red Cross has with the U.S. Congress and in the disaster

services agreement the Red Cross maintains with the State of New York, the Red Cross provides a comprehensive set of disaster services for sheltering, help to families and disaster victims, crisis counseling and aid to the military.

In a local disaster, the Red Cross is an essential and important partner that provides several critical disaster services; however, there are many other agencies and organizations that also support community disaster needs. The Red Cross, several government agencies and numerous community organizations are commonly brought together as a team – and when combined under a unified strategy with effective county leadership - serve as an integrated and dynamic resource for addressing community disaster services. A community cannot solely rely on the Red Cross to meet or organize human services support for disaster victims; the community’s overall multi-agency human services response must be organized at the county level and its success relies on the joint contributions of the participating agencies and the strength of the group’s leadership. In a local emergency that affects one or a few families, or even in an incident that impacts a single community, the Red Cross will often perform a more direct and dominant role in the delivery of essential human services.

In a major disaster that involves multiple communities and wide-ranging demands, the integrated participation of numerous agencies is required and the level of organization and leadership needed extends beyond the role and capabilities of the local Red Cross.

### *Recommendations*

- In providing emergency shelter services, the Red Cross mission is to establish general population shelters. Other shelter needs, including functional, medical needs and animal sheltering must be organized using other community resources
- In a major disaster that affects several communities and a wide population, Red Cross shelter operations must be consolidated at one or two central service facilities in the county. The Red Cross cannot support simultaneous shelter operations in multiple communities. When local shelter plans identify that Red Cross shelter facilities exist in several or most local communities, it is only possible for the Red Cross to actually staff and operate one or two of the shelters at the same time. Identification of multiple community shelters is intended to address local shelter requirements when an incident is limited to, or only affects one or two communities or a local population. In a regional or multi-jurisdiction disaster, and even when national Red Cross support is mobilized, plans and county leadership must emphasize the need to consolidate shelter services.
- The Red Cross provides meals for disaster victims at general population shelters; they are not involved in other kinds of disaster feeding and meal operations. Other meal or food services, such as pickup or home delivered food, and food for emergency workers can be provided through other county and community resources.

- Planning for Red Cross disaster shelters should include provisions for using only one or two centrally located facilities in a major community-wide disaster. All shelter facilities should be located outside any floodplain or other high hazard areas, and even when only one principal shelter is identified, plans should include provisions for a backup or alternate shelter facility. Planning must also consider the accessibility of primary or alternate routes to the shelter, and must address critical facility support systems such as emergency power. Selection of shelter sites should follow guidance and requirements established in Red Cross policy.

*\* More about disaster human services and organization of emergency resources is included in other sections of this report.*

### Shelter Planning and Services

#### *Concern*

The number of unplanned shelters and the inability to coordinate activities and information among shelters resulted in independent shelter operations functioning outside the established incident command system. This made it difficult to manage shelter resources and support, assess the status of victims and coordinate public information.

#### *Discussion*

Shelters that were dedicated and identified in local plans could not be used because they were located in areas inundated by flooding. Red Cross shelter support, discussed in a section above, could not provide the scope of assistance required to address the number of spontaneous shelters that were operating and many were located in facilities that were not evaluated or did not meet Red Cross shelter criteria.

There was no pre-planned or established means of communications available to coordinate activities with these independent shelters and the various human service agencies that assist with shelter services were not operating from the principal command environment at the county Emergency Operations Center.

#### *Recommendations*

- Preparation of a comprehensive shelter plan that emphasizes the role of established community shelters and also takes into account that alternate shelter arrangements are needed will go a long way toward reducing the kind of confusion and disruption that were evident in this disaster. A strong shelter plan that identifies one or two principal shelters for all incidents in the county, as noted in the Red Cross discussion above; which are well-staffed and have adequate resources will have a significant impact on reducing the need or reliance on unplanned or spontaneous shelters. Once community officials are confident that a sound and effective plan for shelter services has been established, and

they know that the kinds of services and support their citizens require will be directed to these shelters, they are less likely to insist on opening multiple local shelters that have access to only marginal services.

- A comprehensive shelter plan can also anticipate demands for unplanned shelters, such as when a community is cut-off from access and services by floodwaters, and it is thus possible to plan for supply and services to such shelters, which reduces the kind of tension and confusion that surfaced in this disaster. In these cases, services would need to be provided by organizations other than the Red Cross, which will typically include the Salvation Army, local fire departments, senior services, food banks and community kitchens, civic organizations and faith-based groups.
- Provisions for alternate shelter sites and back up services at shelters are important to successful shelter preparedness. Locating shelters outside of floodplains and hazard zones is also critical, as is transportations and access and other important feature outlined in Red Cross shelter guidance.

A well-organized human services task force or committee with effective leadership that is integrated into the incident command and the county Emergency Operations Center would provide an effective structure that can manage and adapt to the demanding shelter service requirements of a disaster.

### Disaster Food Services

#### *Concern*

Issues surrounding the distribution of food and meals to disaster victims are related to the fact that established Red Cross shelters identified in local plans were not used and no structure or process existed for providing meals and food through the numerous unplanned disaster service sites that were spontaneously organized.

#### *Discussion*

Disruption of food supplies and access to food and meal services is a common problem in disasters. The Red Cross performs a primary role in feeding disaster victims, but their food service is generally centered on and limited to that provided at community shelters the Red Cross operates. In many disasters, local organizations and human services organizers must consider other related meal programs and options for feeding disaster victims and emergency workers. Many local organizations are able to assist with providing food and/or meals, but they might need help from other groups with various aspects of the effort; such as obtaining supplies, personnel, transportation and facilities; or in identifying disaster victims, their specific needs and locations. Disaster food and meal services can sometimes be in the form of prepared on-site or home delivered meals, meals or prepared food available for pick-up and bulk food supplies. Distribution is usually organized in one or more of the following ways.

*Recommendations*

In this disaster, local plans and processes that would normally guide the implementation of most human services, including food and meals, were disrupted because designated shelters were flooded and other sites not part of local planning were used. As with other human service areas, improvements in disaster food and meal support are primarily linked to more detailed emergency planning that can account for alternate or adaptive solutions.

Increase the human services structure at the Emergency Operations Center so it is possible to use the multi-agency ICS functions to respond to problems and implement corrective actions.

Pre-disaster human services planning and response personnel assigned to the Emergency Operations Center during a disaster need to consider the following opportunities and options for management and delivery of food services in an emergency.

*Community Shelters* – operated by the Red Cross (often at school facilities)

*Community Facilities* – at fire halls and community centers, staffed by volunteers

*Pick-Up Food Supplies and/or Meals* – residents and disaster victims may be able to remain in their homes and have transportation, but they need help obtaining food supplies because power and the use of appliances and refrigeration are disrupted

*Meal Delivery* – residents and disaster victims may be able to remain in their homes, but may not have the ability to prepare food and lack access to transportation to obtain meals or supplies

Community organizations that can often assist with disaster feeding and meals include the following:

- |                               |                                          |
|-------------------------------|------------------------------------------|
| Red Cross                     | Salvation Army                           |
| Office for the Aging          | Churches and religious organizations     |
| Civic organizations           | Fire and emergency service auxiliaries   |
| Food banks                    | Restaurants, markets and food service    |
| Caterers and contract feeding | Food and beverage suppliers/distributors |
| Correctional facilities       | Colleges and universities                |
| Senior services               |                                          |

### Emergency Responder Training

Extensive requirements are placed on emergency response personnel to participate in a wide range of training, so targeting specific training that will most effectively help in coordinating the management and delivery of services in a major disaster is important. When combined with improved planning, disaster human service operations could be significantly improved through a multi-agency commitment to concentrate training in the critical areas of incident command and EOC operations.

- ICS Training that is consistent with the local NIMS implementation plan

All responders should complete ICS 100

Emergency program managers, agency and department supervisors and resource personnel should complete ICS 200

Department and agency personnel involved in ICS and EOC organization and management should complete ICS 300

- Disaster Operations Briefings and Tabletop Exercises

Basic two or three hour programs could be organized once or twice per year where department and agency staff who are assigned EOC and ICS roles could review plans, policies and issues and then participate in a brief Tabletop exercise to maintain familiarization with ICS operations and EOC functions. This could be done using a multi-functional approach where public safety, highway, health and human services all participate in a unified session; or specific training opportunities could be identified, like combining training with another human services meeting or activity.

### Citizen and Family Preparedness

#### *Concern*

After-action reviews were consistent in determining that efforts to improve the ability of citizens and families to care for themselves is one of the most effective means of disaster protection.

#### *Recommendations*

- An improved disaster public information program, as outlined in a previous section of this report, would support efforts to provide consistent and reliable public advisories when an emergency threatens or is occurring. There are many public information fact-sheets and prepared announcements available from the state, FEMA, Red Cross and other disaster service organizations that could be combined with information and public announcements that are issued by local officials.

Individual and family disaster preparedness materials are the most commonly available resources that local officials can obtain and distribute to support citizen preparedness activities.

- Disaster preparedness information and toolkits are widely available for distribution and can be used in print, audio, video and social networking applications. Local public information and preparedness activities that would best help with the kind of public support needed for natural disasters include the following.
  - Natural hazard recognition and safety
  - Family disaster planning
  - Family disaster supplies kit
  - Plan for the care of children and other dependents (include primary and alternate or backup provisions)
  - Plan for sheltering inside your home, plan for evacuating your home
  - Plan home and neighborhood evacuation routes
  - Know the location of the community shelter and drive the route and an alternate route to shelter or meeting places in advance
  - Maintaining a battery operated radio
  - Set a family meeting place outside and adjacent to the home
  - Set a family gathering place outside the neighborhood, if you cannot get home
  - Share a family contact name and number with someone outside the community where you can coordinate the whereabouts and status of family members
  - Monitor public announcements
  - Heed warnings and advisories
  - Avoid driving in floodwaters
  - Avoid downed wires and electrical hazards
  - Plan for your pets, including primary and alternate provisions

# APPENDIX A: IMPROVEMENT PLAN

THIS IMPROVEMENT PLAN IS DEVELOPED BY TIOGA COUNTY TO ADDRESS RECOMMENDATIONS MADE BY LOCAL OFFICIALS AND PARTICIPATING AGENCIES INVOLVED IN THE COUNTY RESPONSE FOR TROPICAL STORM LEE, WHICH AFFECTED THE JURISDICTION IN SEPTEMBER 2011. THESE RECOMMENDATIONS ARE BASED ON THE AFTER ACTION MEETINGS, REPORTS AND WORKSHOPS

	Recommendation		Corrective Action	HSEEP Capability	Primary Responsibility	Support Agencies
1.	<b>Authorities and Decision Making</b>	1.1	Clarify roles and responsibilities for issuing declarations and emergency orders authorized in State Executive Law, Article 2-B	On-Site Management	Legislators Emergency Manager Sheriff	County Attorney Town Supervisors Village Mayors
		1.2	Apply Unified Command Principals			
		1.3	Implement provisions and organizational elements of the Incident Command System (ICS) using a countywide structure to more effectively integrate local emergency operations			
		1.4	Use a single Unified Command Post and/or Emergency Operations Center			
		1.5	Define executive policy and functional management roles. The County comprehensive response plan should establish an executive policy group and assign functional leaders			
2.	<b>County Leadership and Coordination with Towns and Villages</b>	2.1	Improve coordination among the County EOC, Towns and Villages by linking a central municipal command structure with the County EOC	On-Site Management	Legislators Emergency Manager Sheriff Town Supervisors Village Mayors	Fire Chiefs Police Chiefs Highway/DPW
		2.2	Each municipality should have a single command site where local leaders gather in an emergency	Communications	Town Supervisors Village Mayors Fire Chiefs Police Chiefs Highway/DPW	

	Recommendations		Corrective Actions	HSEEP Capability	Primary Responsibility	Support Agencies
2.	<b>County Leadership and Coordination with Towns and Villages</b>	2.3	Prepare a communications plan that establishes primary and backup methods for towns and villages to communicate with the County EOC	On-Site Management  Communications	Legislators Emergency Manager Sheriff Town Supervisors Village Mayors	Fire Chiefs Police Chiefs Highway/DPW
		2.4	Identify a Liaison Officer in the County EOC to maintain communications with towns and villages		Legislators Emergency Manager Sheriff	
		2.5	Use municipal checklist to establish a basic disaster organization for each town and village		Legislators Emergency Manager Sheriff Town Supervisors Village Mayors	Fire Chiefs Police Chiefs Highway/DPW
		2.6	Develop and share an Incident Action Plan (IAP) early and regularly through the emergency		Emergency Manager Sheriff	Agency and Department Support
		2.7	Preparation of Continuity of Operations Plans (COOP)		Legislators Emergency Manager Sheriff Town Supervisors Village Mayors	Fire Chiefs Police Chiefs Highway/DPW

	Recommendations		Corrective Actions	HSEEP Capability	Primary Responsibility	Support Agencies
3.	<b>Emergency Operations Center</b>	3.1	Strengthen the leadership role and operational capability of the County EOC by reinforcing the resource and information management role the EOC performs in supporting local governments	Emergency Operations Center	Legislators Emergency Manager Sheriff	Department and Agency Heads
		3.2	Expand agency participation at the EOC by requiring agencies to increase management level staffing at the EOC			
		3.3	Improve ICS organization, role identification and functional delegation of duties in the EOC. Insure every EOC representative has a defined task or assignment and organize EOC activities into task groups or functional sections		Emergency Manager Sheriff	
		3.4	Activate an ICS Planning Section at the EOC early in the response or when a threat exists			
		3.5	Agencies must identify supplemental staff and mutual-aid to support EOC activities in a major disaster			
		3.6	The EOC should be activated early when a threat exists, even before or in anticipation of a worsening situation			
		3.7	Establish functional EOC task groups			

	Recommendations		Corrective Actions	HSEEP Capability	Primary Responsibility	Support Agencies
4.	<b>Disaster Public Information</b>	4.1	Plan for a comprehensive and adaptable public information capability. Effective public information planning must prepare to address a complex set of emergency demands that will require supplemental staff and the assignment of task groups and functional teams	Public Information and Warning	Legislators Emergency Manager Sheriff Town and Village Officials	Agency and Department Heads  State DHS/OEM
		4.2	Designate a strong public information leader (PIO) early			
		4.3	All agencies, towns and villages must coordinate public information activities with the county EOC			
		4.4	Public Information planning should consider the preparation of procedures, checklists, templates and prepared messages that can be applied when an emergency is quickly expanding in scope and complexity			
5.	<b>Managing the Distribution of Emergency Resources</b>	5.1	Implement a comprehensive, multi-functional ICS structure to manage complex resource distribution. Elements of Command, Planning, Logistics, Operations, Public Information, Safety and Liaison must all be staffed, assigned and integrated to successfully carry-out complex resource management goals	On-Site Management	Legislators Emergency Manager Sheriff Human Services	Agency and Department Heads  Town and Village Officials  State DHS/OEM

	Recommendations		Corrective Actions	HSEEP Capability	Primary Responsibility	Support Agencies
6.	<b>Transportation and Highway Assessment</b>	6.1	Implement methods to share reports, data collection and assessments	Assessment	County Highway Municipal DPW State DOT Emergency Manager Sheriff County GIS	
		6.2	Implement an inter-agency emergency task force that shares resources to evaluate and monitor transportation issues and assessment	On-Site Management  Communications		
7.	<b>Stream Gauge Improvements and Retention</b>	7.1	Strengthen local organizational leadership and establish community priorities for flood protection and stream gauge management	Public Information and Warning  Assessment	County Legislators Town Supervisors Village Mayors State Legislators Congressman NYS DEC NYS DHD/OEM USGS NWS	
		7.2	Conduct a technical evaluation of existing gauges			
		7.3	Evaluate requirements and resources for gauges needed on tributary creeks and streams			
		7.4	Organize manual stream monitoring and reporting capability		Emergency Manager Town/Village Leaders	Volunteer Groups RACES NWS

	Recommendations		Corrective Actions	HSEEP Capability	Primary Responsibility	Support Agencies
8.	<b>Managing Risks of Rescue Operations</b>	8.1	Improve incident management and organization that focuses on safety	On-Site Management	Emergency Manager Sheriff Fire Chiefs Highway/DPW	State DHS/OEM  NYS Dept of Labor
9.	<b>Human Services</b>	9.1	Place a greater emphasis on multi-agency human service coordination and delivery	On-Site Management  Emergency Operations Center  Shelter and Mass Care	Legislators	State Human Services Task Force
		9.2	Strengthen the inter-agency human services coordinating group		Emergency Manager	
		9.3	Maintain strong county leadership in the disaster human services process		Community Human Service Providers	
		9.4	Key human services staff should coordinate activities and services at the County EOC			
		9.5	Mobilize disaster human services staff at the EOC in advance of an emergency when possible		Emergency Manager	
		9.6	Human Services agencies must identify supplemental staff and mutual-aid resources that can assist with EOC and emergency operations		Community Human Service Providers	

	Recommendations		Corrective Actions	HSEEP Capability	Primary Responsibility	Support Agencies	
<b>9. Human Services</b>		9.7	Human Services leaders must be included in the Unified Command when appropriate	On-Site Management  Emergency Operations Center	Legislators		
		9.8	Assign a County Disaster Human Services Leader or Coordinator		Emergency Manager		Community Human Service Providers
		9.9	Organize Human Services Task Groups in the EOC	Shelter and Mass Care	Emergency Manager		State Human Services Task Force
		9.10	Use ICS to organize multi-agency disaster human service delivery		Community Human Service Providers		
		9.11	Acknowledge the specific purpose and priorities for Red Cross disaster services and build a community wide human services capability that incorporates all local resources	Shelter and Mass Care	Emergency Manager		
		9.12	Consolidate community shelters supported by the Red Cross at one or two county shelter sites	On-Site Management	Community Human Service Providers		
		9.13	Plan alternate meal site and distribution methods to compliment or supplement meal services the Red Cross provides at community shelters		Town and Village Officials		

	Recommendations		Corrective Actions	HSEEP Capability	Primary Responsibility	Support Agencies
<b>9. Human Services</b>		9.14	Shelter planning must consider floodplains, an evaluation of potential hazards, the need to identify alternate sites and standards for shelter facilities and operations	Shelter and Mass Care	Emergency Manager  Community Human Service Providers  Town and Village Officials	State Human Services Task Force
		9.15	Shelter planning must consider requirements to provide services to, or integrate the operation of, incidental or unplanned shelters	On-Site Management		
		9.16	Emergency responder training for Human Services agency staff that addresses ICS, EOC Operations and resource management			
		9.17	Citizen and Family Preparedness; including pre-disaster preparedness training and materials, and advisory materials and critical information needed when an emergency is occurring or is imminent. Organization and use of Community Emergency Response Teams (CERT) could help with these efforts	Public Information and Warning  Shelter and Mass Care		
		9.18	Improved Public Information capabilities as outlined in Recommendation 4 are important to the successful delivery of disaster human services			

## APPENDIX B: PARTICIPANT FEEDBACK

### EVALUATION QUESTIONS

Facilitators discussed the following (example of questions) with specific workgroups; i.e. EOC Management/Staffing, Police, Fire, EMS response and Human Needs. Individuals participating in the incident feedback session discussed areas of strengths and/or concerns as well as provided/suggested recommendations for related improvements.

#### Emergency Operations Center Management

- Did Tioga County have an EOC Management Plan and/or a standard set of procedures for activation, operations, safety/security and deactivation of their EOC?
- Did the agency representatives requested to staff the EOC, understand their roles/responsibilities and where they assigned to the appropriate ICS function?
- Was EOC activated and fully staffed within a timely manner (2 hours)?
- Was EOC staffed with public sector, non-government agencies and or private sector to collect and review data on incident situation reports coming in?

#### On-site Incident Management

- Did an assessment of initial area impacted by flooding occur?
- Were incident priorities discussed within the present command structure established?
- Was there a need to transition from single IC operation to a Unified Command structure?
- Were communications between IC and EOC established and maintained?
- Were additional local resources discussed and/or requested for in a timely manner?
- Was a request made to NYS OEM and OFPC for additional resources?
- Were Incident Action Plans developed, approved by the IC and followed?

#### Human Needs/Citizen Preparedness

- Did jurisdictions follow their existing evacuation and/or shelter-in-place plans when activated?
- Was accurate emergency information (instructions) provided to the impacted areas and was it delivered in a timely manner?
- Was there coordination between agencies regarding tracking of people in need of evacuation assistance?
- Were numerous press releases sent out by State, County, Towns and Villages regarding mitigation efforts and/or public health advisories helpful?
- Did the transition from County Point of Dispensing (POD) site to local jurisdiction POD sites have an impact on delivery of supplies/.
- General discussion related to Red Cross shelter management and operations

### Emergency Public Information Warning and Communications

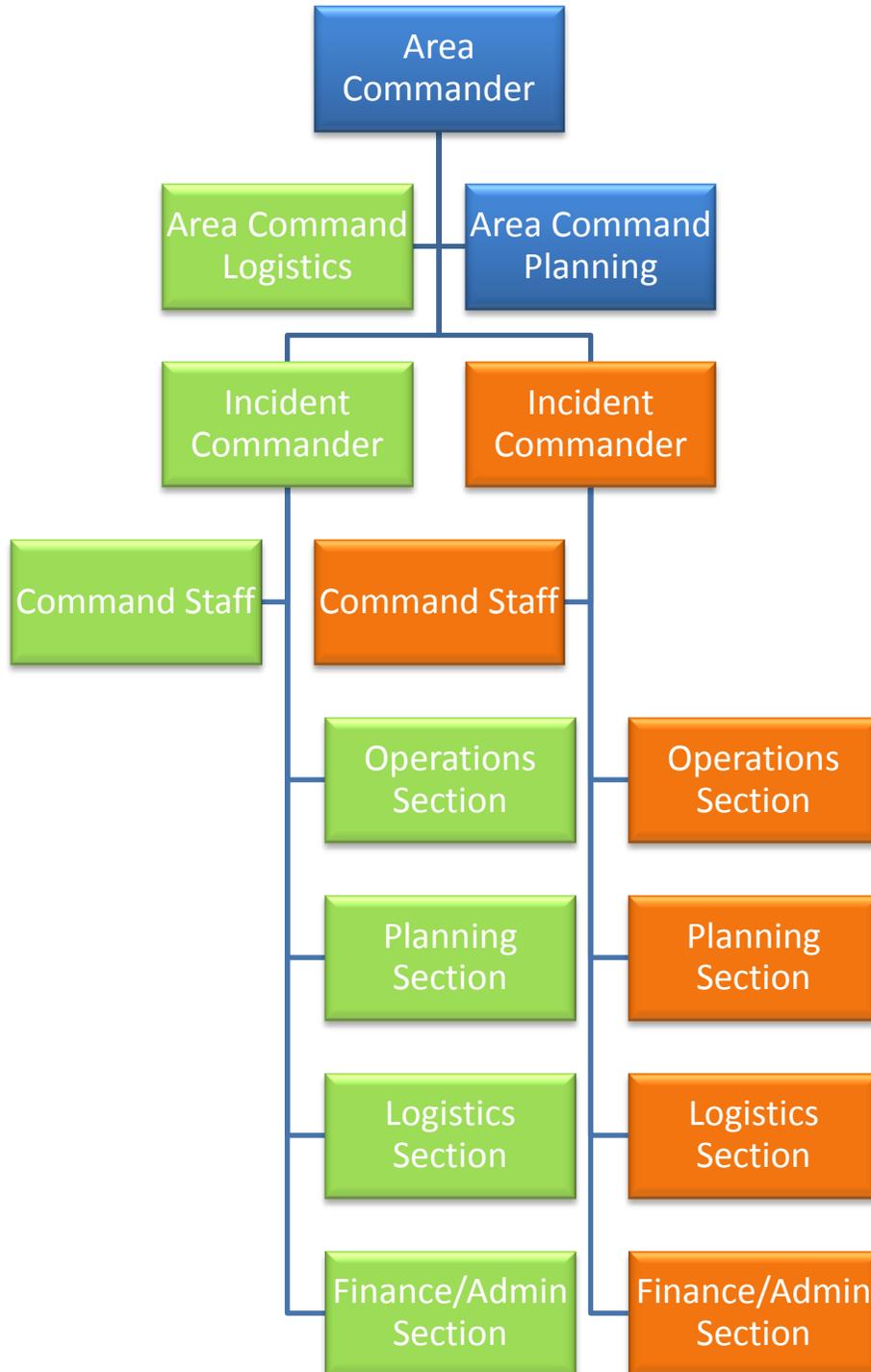
- Did National Weather Service (NWS) provide timely and accurate weather reports?
- Did public safety personnel (incident management team) meet early on to discuss NWS reports and possible need for delivery of evacuation orders?
- Was information and/or warnings provided to the public in a timely manner and that threatening condition(s) were imminent or existed?
- Were the warnings issued in accordance with the County's CEMP warning/activation procedures?
- When the main communication center was lost, were back-up communications provided in a timely manner?
- Were radio communications between local police, fire, EMS and incoming mutual aid agencies satisfactory?

Strengths:

Weaknesses:

Improvement Recommendations:

## APPENDIX C: TIOGA COUNTY AREA COMMAND AND ORGANIZATION FOR TWO INCIDENT MANAGEMENT TEAMS



## APPENDIX D: ACRONYMS

Acronym	Meaning
AAC	After Acton Conference
AAR/IP	After Action Report/Improvement Plan
ARC	American Red Cross
COOP	Continuity of Operations Plan
DART	Disaster Assistance Response Team
EMS	Emergency Medical Services
EOC	Emergency Operations Center
FEMA	Federal Emergency Management Agency
FSA	Farm Services Agency
HA	Housing Assistance
HHS	Health and Human Services
HSEEP	Homeland Security Exercise and Evaluation Program
IA	Individual Assistance
IAP	Incident Action Plan
ICS	Incident Command System
IDA	Industrial Development Agency
IHP	Individual Households Program
IMT	Incident Management Teams
IOF	Initial Operating Facility
JFO	Joint Field Offices
JIC	Joint Information Center
JOC	Joint Operations Center
LDC	Local Development Corporation
LOA	Letter of Agreement
MAC	Multi-Agency Coordination
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NGO	Non-Governmental Organization
NIMS	National Incident Management System
NOAA	National Oceanic and Atmospheric Administration
NOC	National Operating Center
NRCC	National Response Coordination Center
NRCS	Natural Resource Conservation Services
NWS	National Weather Service
NYS DHSES	New York State Division of Homeland Security & Emergency Services
NYSDOT	New York State Department of Transportation
NYSEG	New York State Electric and Gas
NYSEMO	New York State Office of Emergency Management

Acronym	Meaning
ONA	Other Needs Assistance
PIO	Public Information Officer
REAP	Rural Economic Area Partnership
RRCC	Regional Response Coordination Center
SBA	Small Business Administration
TARP	Tioga Area Recovery Program
TCCASA	Tioga County Council on Alcoholism and Substance Abuse
TCL	Target Capabilities List
THU	Temporary Housing Units
TIG	Transportation Infrastructure Group
WIC	Women, Infants, Children