

**VILLAGE OF DOWNERS GROVE
REPORT FOR THE VILLAGE COUNCIL MEETING
JULY 5, 2010 AGENDA**

SUBJECT:	TYPE:	SUBMITTED BY:
Report on June 21 Storm Event and Changes to VOC Siren Activation Policies and Procedures	Resolution Ordinance Motion ✓ Discussion Only	Dave Fieldman Village Manager

SYNOPSIS

A report has been prepared to inform the Council and community about the changes that have been implemented regarding the Village Operation Center (VOC) policies and procedures for siren activation following the storm event of June 21.

STRATEGIC PLAN ALIGNMENT

The goals for 2011-2018 include *Exceptional Municipal Organization*.

FISCAL IMPACT

N/A

RECOMMENDATION

N/A

BACKGROUND

During the evening of Tuesday, June 21, 2011, the Chicago area experienced a severe weather event that significantly affected the Village. This event included the occurrence of an EF-1 tornado that was confirmed by the National Weather Service (NWS) the following day after assessing the damage caused by the storm (see attachment #1). The tornado began at 8:31pm and lifted at 8:33pm, traveling a distance of 2.1 miles through the southwest portion of Downers Grove. Severe winds caused significant damage to trees and widespread power outages throughout the Village. A tornado warning was issued by the National Weather Service for a seven-county area including all of DuPage County at approximately 7:50pm extending to 9:00pm.

During the storm, the Village’s outdoor warning system (or warning sirens) was not activated. The Village has a VOC policy for siren activation (see attachment #2) which is based on guidelines issued by the DuPage County Office of Homeland Security (see attachment #3). The policy was reviewed earlier this year by the National Weather Service as part of the Village’s recertification process as a Storm Ready Community (see attachment #4 for letter from NWS).

The circumstances surrounding this storm did not meet the specific criteria that are listed. (explained in detail below). However, the Village recognizes, given the nature and significant impact of the storm, the importance of reviewing and updating the policies and procedures to avoid a similar situation in the future where a tornado and/or damaging winds significantly impact the community, yet the policy does not provide sufficient criteria regarding the activation of the siren.

In addition to the specific change to the VOC policies and procedures, this report also describes related circumstances that occurred during the storm that contributed to uncertainty throughout the community and surrounding area. Also outlined are future actions that the Village plans to take to help bring about broader County-wide coordination related to severe weather events and warning siren activation.

VOC Policy and Procedure Change

In reviewing the VOC Policies and Procedures for warning siren activation, the Village has established the following (currently in effect) to replace the existing criterion #3 (see attachment #2 for previous policy language)

During a severe weather incident, local warning systems should be activated if any of the following criteria are met:

- 3. *The receipt of a tornado warning issued by the National Weather Service for any area within five (5) miles of the community or which indicates that the community is in the direct path of an oncoming tornado.*

Activation of the warning under criterion number three (3) shall be made by a designated and trained Village official who has determined that the Village is facing an imminent threat from a tornado or severe winds. Such a determination shall be made by monitoring all available weather reporting system information, as well as reports received by the Village Operations Center. The officials that are designated to make this determination are as follows:

- *Emergency Management Coordinator or Deputy Coordinators*
- *VOC Manager or Supervisor*
- *Highest ranking sworn police or fire official on-duty*

Existing Policy Criteria

The Village Operations Center (VOC) policies and procedures for warning siren activation that were in effect during the time of the June 21 storm included specific criteria to determine when the sirens should be activated. The policies and procedures were based on the Guidelines for the Activation of Outdoor Warning Sirens adopted by the DuPage County Office of Homeland Security and Emergency Management. The table below identifies each criterion and explains the circumstances that occurred on the night of June 21 to indicate specifically why each criterion was not met.

Criteria	Actual Occurrence/Explanation
1. A confirmed sighting of a tornado, or funnel cloud aloft reported by a trained weather spotter within five (5) miles of the community.	Neither the tornado that impacted Downers Grove nor any tornado within five-miles of the community was sighted during the storm. The tornado was confirmed by the National Weather Service on June 22 after assessing storm damage.
2. A confirmed sighting, by a trained weather spotter, of severe winds causing structural damage within five (5) miles of the community.	Although reports of heavy winds causing tree damage were received, no confirmed sightings of severe winds causing structural damage within five miles of the community were received in advance of the occurrence of the tornado.
3. The receipt of a tornado warning, issued by the National Weather Service, indicating that a community is in the direct path of an oncoming tornado.	The tornado warning that was issued by the National Weather Service was a blanket warning for a 7-county area indicating that the storm was capable of producing tornadoes and strong damaging winds.

Other Related Circumstances

The following also occurred during the night of the storm and relates to the Village's review of policies and procedures:

- Many communities surrounding Downers Grove (included Lombard, Lisle, Woodridge and Darien) are members of and receive their dispatch services through DuPage Public Safety Communications (DU-COMM). As part of this arrangement, DU-COMM is responsible for activating sirens in most member communities. DU-COMM has a policy that includes a different set of criteria than Downers Grove uses for siren activation. The criterion appearing in the DU-COMM policy states that sirens will be activated based on the following criteria:
 1. Upon issuance of a National Weather Service Tornado Warning for a community adjacent to a DU-COMM member community, or for a county in which DU-COMM member communities reside.
 2. Upon notification by on-duty Member Agency personnel who have observed a funnel cloud or tornado, in or adjacent to a DU-COMM member community.
 3. Upon notification by on-duty Member Agency personnel who have observed severe weather causing damage to property.
 4. Upon direction or order from a Member Agency community member of competent authority; defined as but not limited to: Mayor, Village President, Police Chief, Fire Chief, Village Manager, City Manager, DU-COMM Administration, ESDA/OEM/Civil Defense Director, Watch Commander, Shift Commander, Police Officer, or Firefighter. In this instance, the On Duty Operations Manager or OIC will direct immediate activation and will note the name and title of the reporting authority and the time the order was given.
 5. The siren activation will also be based on the direction in which the storm is heading as it relates to DU-COMM Member Agencies.
- It was reported that DU-COMM's sirens were activated in all communities for which DU-COMM is the responsible agency on five separate occasions during the duration of the tornado warning.
- The Village's policy includes a requirement that all siren activations require the use of the DuPage County Emergency Radio Network (DCERN) system to announce and explain the activation to other jurisdictions within the County. DU-COMM policies do not include this procedural requirement and the DCERN system was not used following the activation of DU-COMM sirens.
- As a result of the DU-COMM siren activations, 911 calls to DU-COMM exceeded the capacity of that organization's system. When this occurs, calls are automatically rerouted to other dispatch operations, including Downers Grove. This additional volume compounded the high call demand from Downers Grove and Westmont residents.

Future Actions

The Village has identified several other opportunities that can be pursued to ensure that siren activations are better coordinated among responsible agencies, leading to a clearer understanding by residents throughout the County regarding the use of the emergency warning system. The following opportunities and actions have been identified:

- A meeting of the Public Safety Answering Point (PSAP) Supervisors in DuPage County is scheduled for July 22 and includes discussion of a county-wide siren activation policy. The VOC Manager will attend this meeting on the Village's behalf.
- A meet of the DuPage County Emergency Management Coordinators is scheduled for July 19 and includes discussion of issues related to coordinated siren activation. The Police Chief and Emergency Management Coordinator will attend this meeting on the Village's behalf. These two groups are coordinating their efforts.
- Once it's clear how changes to policies and procedures to achieve greater county-wide coordination have been determined, the Village will use its communications vehicles and resources to inform and educate residents regarding these changes.

ATTACHMENTS

1. National Weather Service EF-1 Tornado Summary
2. Village Operations Center Policies & Procedures for Warning System Activation (no longer in effect)
3. DuPage County Guidelines for the Activation of Outdoor Warning Systems
4. Letter from National Weather Service

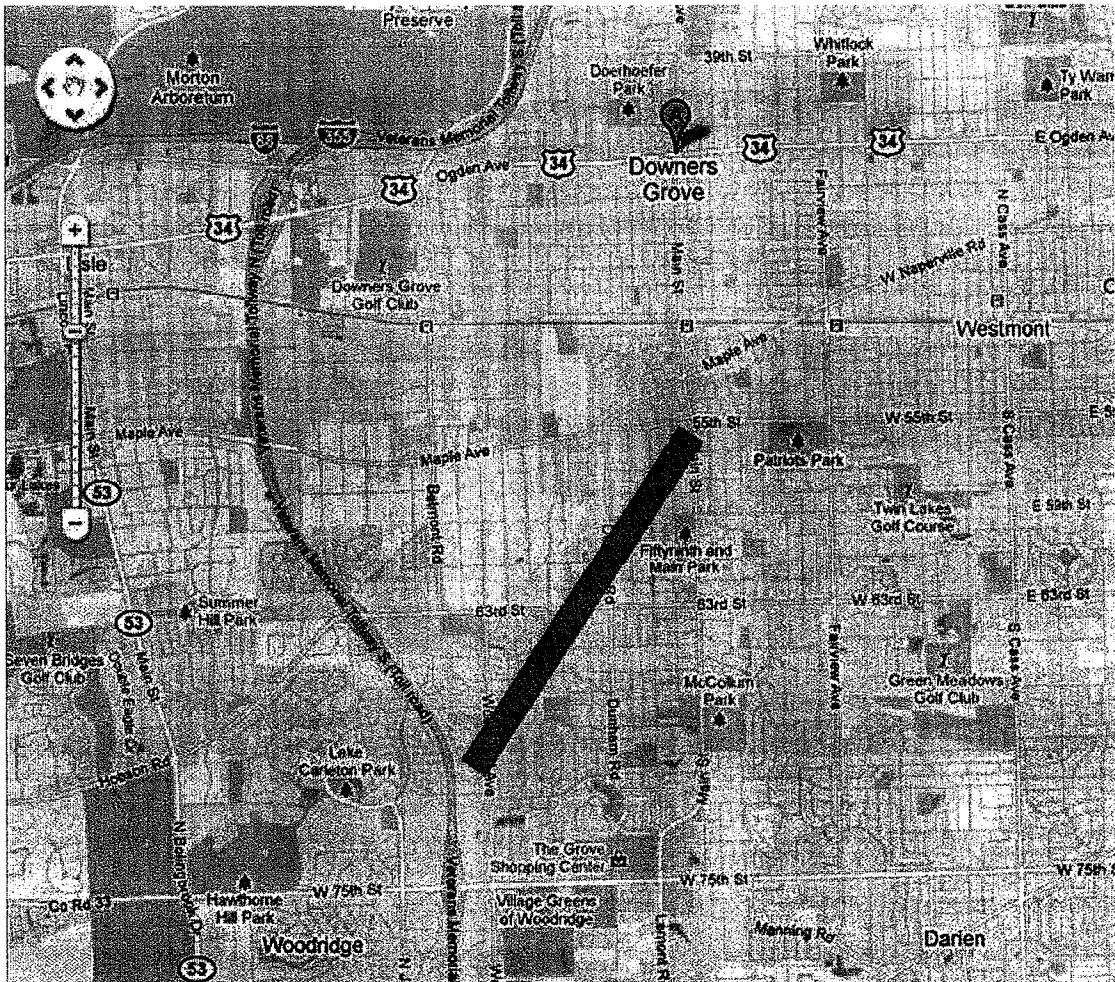


June 21st Suburban Chicago Tornadoes

Downer's Grove Tornado

Intensity Rating	EF-1
Estimated Max Winds	90-100 mph
Tornado Began	8:31 PM
Tornado Lifted	8:33 PM
Path Length	~2.1 miles
Maximum Width	200 yards

Figure 1: Map showing path of Downers Grove Tornado.



EF-1 Tornado Path

Figure 2 (Below): Four panel image of radar reflectivity from the Romeoville, IL (KLOT) WSR-88D. Note in the upper left quadrant on the 0.5 degree elevation scan, the weak echo area bounded by higher reflectivity (arrows indicate inferred rotation from velocity data). This is indicative of a small-scale area of rotation along the leading edge of the line of thunderstorms lifting northeast across the Downers Grove area. This radar image corresponds with the time of the Downers Grove

VILLAGE OPERATIONS CENTER POLICIES & PROCEDURES

(THIS POLICY
NO LONGER IN EFFECT,
UPDATED AS OF 7/1/11)

8.5.3 Activation Criteria

During a severe weather incident, local warning systems should be activated if the following criteria are met:

1. A confirmed sighting of a tornado, or funnel cloud aloft reported by a trained weather spotter within five (5) miles of the community. This five-mile perimeter should be extended geographically around the perimeter of the community from the farthest northern edge to the farthest southern edge, at minimum.
2. A **confirmed** sighting, by a trained weather spotter, of severe winds causing structural damage within five (5) miles of the community. A confirmed sighting is defined as a sighting that is observed by either a trained municipal, county employee, or trained weather spotter.
3. The receipt of a tornado warning, issued by the National Weather Service, indicating that the community is in the direct path of an oncoming tornado.
4. An **unconfirmed** sighting is a report that is received from one or more members of the public. A radio equipped municipal vehicle should be dispatched to investigate an unconfirmed report, to determine if the report is valid or not.
5. Prior to activating the Tornado sirens an activation announcement shall be made over the DCERN emergency channel. The announcement would be:

Attention - Emergency Notification...

The Village of Downers Grove is going to activate the tornado sirens. A funnel cloud has been sighted at moving (specify) in a (specify) direction. This is for information only. Repeat the message.

The same message would then be dispatched over the following radio frequencies: Police Channels 3 & 5, and the Fire channel. This can be accomplished separately or through the console simulcast feature and do one activation for all the frequencies.

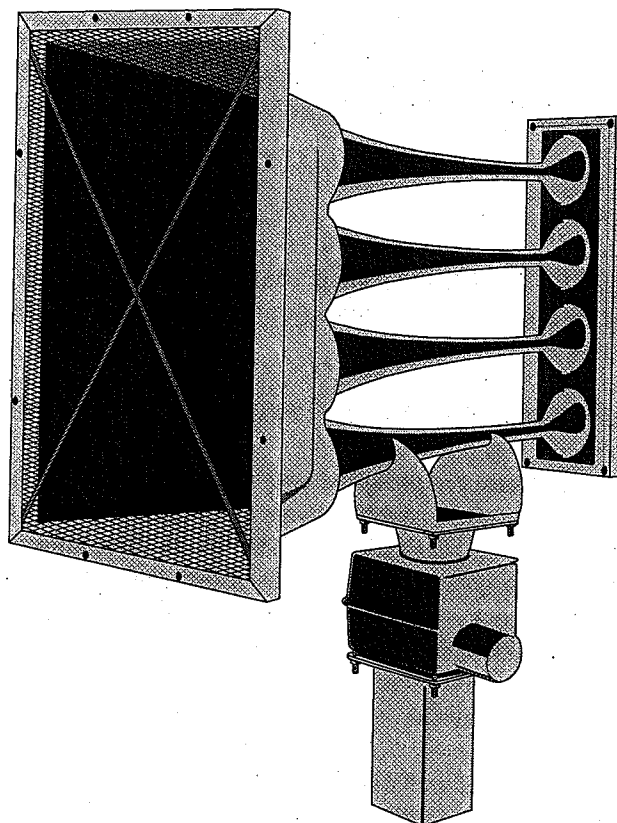
6. The sirens will be activated for a period of three (3) minutes. The warning system will be reactivated for any new confirmed sighting.

VILLAGE OPERATIONS CENTER POLICIES & PROCEDURES

7. Local tornado warning systems will not be activated for watches.
8. Notify VOC Management of any pending activation's. They in turn will make notification to senior staff.

Effective: 05/07/2002
Revised: 04/15/2004
Revised: 07/01/2010

GUIDELINES FOR THE ACTIVATION OF OUTDOOR WARNING SYSTEMS



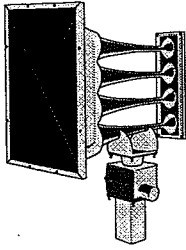
FOR DU PAGE COUNTY COMMUNITIES

PREPARED BY:

DuPage County Office of Homeland Security
and Emergency Management
136 North County Farm Road
Wheaton, Illinois 60187



Revised: March 20, 2006



OUTDOOR SIREN ACTIVATION GUIDELINES

For DuPage County Communities

PURPOSE

The purpose of this document is to provide guidance to DuPage County municipalities for the activation of community outdoor warning systems. This guidance is not a policy statement, but is presented to serve as a foundation on which a common approach can be used to provide warning on impending danger to County residents.

LEGAL BASIS FOR WARNING

The issuance of warning, and the approved signals that are used to convey that warning, as well as the procedures used to test those systems, are based on authority provide by Federal and State law and supporting guidance documents.

Pursuant to the provisions of federal law, the term emergency management is defined as:

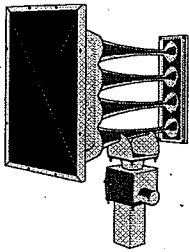
... those activities and measures designed or undertaken (1) to minimize the effects upon the civilian population caused or which would be caused by an attack upon the United States or by a natural disaster, (2) to deal with the immediate emergency conditions which would be created by any such attack or natural disaster, and (3) to effectuate emergency repairs to, or the emergency restoration of, vital utilities and facilities destroyed or damaged by such an attack or natural disaster. Such term shall include, but shall not be limited to , (A) measures to be taken in preparation for an anticipated attack or natural disaster [including ... the provision of suitable warning systems].

This statement charges federal, state, and local agencies with developing and maintaining the capability of warning the civilian population of impending disasters.

The Illinois Emergency Management Act (Public Act 87-168 as amended), further clarifies and assigns these responsibilities to units of local government. The Act defines emergency management as:

"... the coordination of such functions by the State and its political subdivisions, other than functions for which military forces are primarily responsible, as may be necessary and proper to prevent, minimize, repair, and alleviate injury and damage resulting from any natural or technological causes. These functions include, without limitation, ... warning services, communications, ... together with all other activities necessary or incidental to protecting life or property.

Providing effective warning is accomplished by a variety of warning systems, which emanate from the federal government level and ultimately rest with units of local government.



OUTDOOR SIREN ACTIVATION GUIDELINES

For DuPage County Communities

LOCAL WARNING SYSTEMS

The local portion of the system includes local government controlled warning and/or communications systems that are used to fanout warning and emergency information to local government officials, the general public, and special facilities including schools, hospitals, nursing homes, and other facilities that require special warnings. These local systems include outdoor warning sirens, tone alert radio systems, and indoor warning systems, supported by the Emergency Alerting System (EAS).

The outdoor warning system includes sirens and public address systems that are used to alert residents who are outdoors when a warning is given.

Standardized signals, for outdoor warning devices, have been established by the Federal Emergency Management Agency (FEMA). These standardized signals are used to alert the public and indicate survival actions to be taken in an emergency. These signals are ATTACK WARNING and the ATTENTION or ALERT WARNING signal.

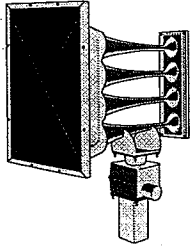
Attack Warning Signal

An attack warning is a three (3) to five (5) minute wavering siren tone. The ATTACK WARNING signal means that an actual attack or detected missile launch against the United States has been detected and that protective action should be taken immediately. Per federal guidance. *"this signal will be used for no other purpose and will have no other meaning"*.

Attention or Alert Warning Signal

An ATTENTION or ALERT WARNING signal is a three (3) to five (5) minute steady signal from sirens. This signal may be used by local government officials to alert the public of peacetime emergencies, including the occurrence of severe weather. In addition to any other meaning or requirement for action, as determined by local government officials, the ATTENTION or ALERT signal shall indicate to all persons *"turn on your radio or television and listen for essential emergency information"*.

Indoor warning systems are necessary for a well-balanced warning system. Outdoor warning systems are not effective for warning in air conditioned and tightly insulated buildings, and it is not economical to use such devices in areas of low density population. Indoor warning systems include: commercial broadcast radio and television stations, the Emergency Alert System (EAS), tone activated radio receivers, and public



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For DuPage County Communities

address systems.

The EAS, as a component of the indoor warning system, provides a means for local government to provide timely warning and emergency instructions to residents through the use of commercial radio, cable television override, special EAS equipped tone activated radio receivers, and electronic message boards. The EAS should be activated whenever a warning is disseminated to provide specific warning information.

SYSTEM TESTS

It is especially important that local warning systems be tested on a periodic basis to be certain that they are operating properly and to help the public learn to recognize the warning signals.

Frequency of Tests

FEMA recommends regularly scheduled tests of warning systems accompanied by advance publicity to inform the public of the tests. FEMA also recommends testing once a month, at a minimum.

The Illinois Emergency Management Act (20 ILCS 3305 / 12) specifically indicates:

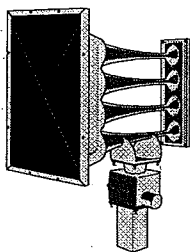
"... the testing of disaster warning devices, including outdoor warning sirens, shall be held only on the first Tuesday on each month at 10 o'clock in the morning and during disaster training exercises that are specifically and expressly approved in advance by the Illinois Emergency Management Agency".

Activation of the countywide EAS should also occur as part of these regular monthly tests. The purpose of this activation is to educate county residents of the association between outdoor warning sirens and the EAS. A schedule for EAS tests is outlined in the DuPage County EAS Plan.

Siren Test Procedure

Federal guidance indicates that monthly warning systems tests should occur in the following manner.

"The ATTENTION or ALERT WARNING signal should be sounded for one (1) minute. This should be followed by one (1) minute of silence, followed by the ATTACK WARNING signal sounding for one (1) minute."



OUTDOOR SIREN ACTIVATION GUIDELINES

For DuPage County Communities

This testing procedure will establish a test pattern different from that used in an actual emergency, when the ATTENTION / ALERT WARNING or ATTACK WARNING signal will be sounded for three (3) to five (5) minutes.

EMERGENCY ACTIVATION OF OUTDOOR WARNING SYSTEMS FOR SEVERE WEATHER

As indicated previously, the ATTENTION / ALERT WARNING signal may be utilized by local government officials for peacetime emergencies including severe weather. During a severe weather incident, local siren warning systems should be activated in the event of the following:

1. A confirmed sighting of a tornado, or funnel cloud aloft reported by a trained weather spotter within five (5) miles of the community. This five mile perimeter should be extended geographically around the perimeter of the community from the farthest northern edge to the farthest southern edge, at minimum.
2. A confirmed sighting, by a trained weather spotter, of severe winds causing structural damage within five (5) miles of the community.
3. The receipt of a tornado warning, issued by the National Weather Service, indicating that the community is in the direct path of an oncoming tornado.

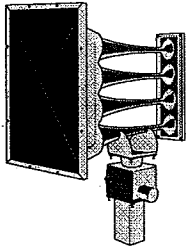
A CONFIRMED sighting is defined as a sighting that is observed either by a trained municipal or county employee or Skywarn weather spotter.

An UNCONFIRMED sighting is a report that is received from one or more members of the general public. A radio equipped municipal or county vehicle should be dispatched to investigate an unconfirmed report, to determine if the report is valid or not. In the absence of a county or municipal vehicle, a radio equipped spotter can also provide such verification. Confirmation of the sighting will result in a CONFIRMED report issued by the governmental official or spotter.

Activation Procedure

Following the occurrence of a weather event, meeting the above criteria, the dispatch center should activate the outdoor warning siren system.

Once activated, the warning system should not be re-sounded for the same storm or sighting.



OUTDOOR SIREN ACTIVATION GUIDELINES

For DuPage County Communities

The warning system should be re-sounded for an new confirmed sighting, from a second storm cell, that meets the activation criteria described above.

All Clear Procedures

In keeping with the policy of the National Weather Service, the issuance of an "all clear" statement should not be issued by local government.

Severe weather watches, whether severe thunderstorm or tornado, are traditionally issued for a period of four (4) to six (6) hours. The Weather Service may terminate a "watch" early if weather conditions change and the threat of severe weather no longer exists.

Severe weather warnings, whether severe thunderstorm or tornado, are traditionally issued for periods of thirty (30) minutes to one (1) hour. Warnings are usually allowed to expire on their own, without early termination by the Weather Service.

Residents requesting "all clear" information should be advised to monitor commercial radio and television stations for further weather information, but local government should not issue an "all clear" statement.

No activation of outdoor warning signals should be used to signify the termination of a weather watch or any kind of an "all clear" advisory.

REFERENCES

Public Law 93-288 The Robert T. Stafford Disaster Relief Act

Public Act 87-168 The Illinois Emergency Management Act of 1991, as amended

FEMA CPG 1-14 Principles of Warning

FEMA CPG 1-17 Outdoor Warning Systems Guide



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL WEATHER SERVICE

Forecast Office

Chicago
333 West University Drive
Romeoville, Illinois 60446-1804

April 18, 2011

ATTACHMENT 4

Jennifer Rizzo
Downers Grove Police Department
Village Operations Center
825 Burlington Avenue
Downers Grove, IL 60516-4783

Jennifer:

On behalf of the StormReady Advisory Board, congratulations on Downers Grove being recertified as a StormReady Community. Your leadership and the progressive preparedness measures taken by Downers Grove continue to be outstanding. Since StormReady certification in 2005, Downers Grove has continued to meet all of the requirements of the StormReady program.

Downers Grove is authorized to continue to display the StormReady logo on official letterheads, brochures, and other official documentation. The logo is trademarked and thus subject to certain restrictions requiring the National Weather Service to monitor its use, so please send us copies or descriptions of the way it is used. I can send the logo to you as an email attachment.

You have received 3 new date stickers to be applied to your StormReady road signs. Additional signs and stickers can be made at Oklahoma Corrections Industries for \$35.00 each. If you want to order signs, contact OSI at 405-962-7007.

This special StormReady designation will need to be recertified before May, 2014. Congratulations! Downers Grove continues to maintain a "prototype" county severe weather preparedness program and is very deserving of this prestigious recognition.

Sincerely,

Jim Allsopp
Warning Coordination Meteorologist

