# GWINNETT COUNTY GEORGIA

# AMATEUR RADIO EMERGENCY SERVICE


## Operations Plan

### National Weather Service Support Plan 100
### (Operation SKYWARN)

September 21, 2002
(Revised July 14, 2003)

# National Weather Service Support Plan 1
# (Operation SKYWARN)

September 21, 2002

## I. Overview:

The National Weather Service Support Plan 1, short titled "Operation SKYWARN", is in support of national and state agreements to provide support to the National Weather Service (NWS) and its local office in Peachtree City, Georgia, by providing real-time weather information that can be used to forecast weather warnings for the citizens of the covered area.

The NWS provides a program to train "Spotters" to identify weather conditions critical to providing real-time information that weather forecasters use in times of potentially severe weather to provide information to the public. Those who are trained are then to report those weather conditions to the local NWS office.

"Spotters, both point and mobile, should have access to reliable hazardous weather information. Many spotters have access to amateur radio networks. These networks will likely have one or more amateur radio operators stationed at NWS offices for providing radar and other meteorological information to the net. Spotter networks not affiliated with amateur radio groups should consider having one or more members monitor NOAA Weather Radio and other outlets for weather information. These networks may wish to select a liaison person who could work with nearby amateur radio groups or the local NWS office." (From *Basic Spotters' Field Guide* - NOAA PA 97050)

Many times, amateur radio operators, knowing the potential for severe weather, may be found monitoring adjacent counties' repeaters for severe weather activity. They will track the storm's progress through other amateur reports as well as NOAA Weather Radio broadcasts.

An informational net may be activated by a member of Gwinnett ARES as a prelude to formal Spotter net activation by the local office of NWS. During this time, available Spotters will be asked to check into the net to allow the NCS to identify where Spotters are available should NWS request activation. This net also permits Spotters to report any reportable conditions prior to NWS activation should they occur.

Normally the NWS requests Spotter activation through NOAA Radio broadcasts. NOAA broadcasts information about expected as well as actual activations. To enhance the activation process in the State of Georgia, the Georgia Section of the American Amateur Radio League's Amateur Radio Emergency Service in cooperation with the Peachtree City office of the NWS has implemented a pager system that alerts amateur radio operators in the counties where Spotter activation is requested. This service is provided free to the Georgia amateur community with the amateur radio operator only required to purchase an alphanumeric pager compatible with the paging service.

When the Spotter network is activated, amateur radio operators respond to the NWS offices to staff two amateur radio positions located in the offices. They proceed to activate a linked repeater system to receive reports from local Spotter networks.

Gwinnett County Amateur Radio Emergency Service (Gwinnett ARES) supports the NWS Spotter network by providing amateur radio operators trained as Spotters by the NWS. In the event of actual destruction by a storm system, Gwinnett ARES may transition to net Condition 4 to provide support the Gwinnett County agencies as requested by those agencies.

## II. Related Documents/Information:

*Basic Spotters' Field Guide* - NOAA PA 97050

Gwinnett ARES Plan: Gwinnett County Support Plan 200-2

Gwinnett ARES SOP: NET 1-1 Net Management

Gwinnett ARES SOP: NET 1-2 Net Operation

Web Site for Peachtree City Office of the National Weather Service – www.srh.noaa.gov/ffc

Georgia Skywarn WX4PTC NWS-PTC, Peachtree City, Georgia (Provided June 2003 by Chris Wilkie, W1LKE, Assistant DEC NWS)

## III. Definitions and Terminology:

**ANCS** – Alternate Net Control Station.

**ARES** – Amateur Radio Emergency Service.

**Downburst** – A strong downdraft with an outrush of damaging wind on or near the ground.

**DRS** – Designated Relay Station.

**EOC** – Emergency Operations Center

**Flash Flood** – A rapid rise in water, usually within 12 hours of a period of heavy rain or other causative agent (i.e., dam break).

**FRS** – Family Radio Service.

**Funnel Cloud** – A rotating, funnel-shaped cloud extending downward from a thunderstorm base.

**GCFES –** Gwinnett County Fire and Emergency Services.

**NCS** – Net Control Station.

**NOAA** – National Oceanic and Atmospheric Administration of the U. S. Department of Commerce.

**NWS** – National Weather Service.

**REACT** – Radio Emergency Associated Communications Teams: responsible for developing system of nationwide monitoring of Citizens Band channel 9. Have nationwide license for 151. 625 MHz simplex for tactical communications.

**Severe Thunderstorm** – A storm that produces hail 3/4 inch in diameter or larger and/or wind gusts of 58 mph or more.

**SOP** – Standard Operating Procedure.

**Tornado** – A violently rotating column of air attached to a thunderstorm and in contact with the ground.

**Warning** – The severe weather event is imminent or occurring in the warned area. Warnings are issued for tornadoes, severe thunderstorms, flash floods, and river flooding.

**Watch** – Conditions are favorable for the severe weather event in or near the watch area. Watches are issued for tornadoes, severe thunderstorms, and flash floods.

## IV. Activation:

**Pre-NWS Activation -**

An informational net may be activated by a member of Gwinnett ARES who assumes the role of Net Control Station (NCS), as a prelude to formal Spotter net activation by the local office of NWS. The informational net may be activated as a result of a severe weather watch issued by NWS and will commence at Condition 3. During this time, available Spotters will be asked to check into the net to allow the NCS to identify where Spotters are available should NWS request Spotter net activation. This net also permits Spotters to report any reportable conditions prior to NWS activation should they occur.

The NCS should proceed with the assignment of an Alternate NCS (ANCS) and may also assign a Designated Relay Station (DRS) at this time to relay reports from the local net to the NWS Peachtree City office through the linked repeater network or via telephone, in order of preference.

**NWS Activation -**

Formal activation of the Gwinnett ARES will commence when alerted by the NWS network through the paging network, via a warning issued for Gwinnett County over the NOAA Weather Radio system, or via telephone to a member of the Gwinnett ARES Planning Staff.

Activation of the Gwinnett ARES net (local net) in response to a request by NWS will commence at Condition 2 if an informational net has not already been established as described in the Gwinnett ARES NET 1-2 Net Operation SOP. The net will function as a tactical net. If an informational net had been established, the net will move from Condition 3 to Condition 2 operation.

The first Gwinnett County ARES member on the primary operating frequency able to record Spotter check-ins will assume the role of Net Control Station (NCS).

The NCS will assign an ANCS and a DRS, if not previously assigned, to relay reports from the local net to the NWS Peachtree City office through the linked repeater network or via telephone, in order of preference. The linked repeater network frequencies that may be available from Gwinnett County are provided in Section IX.

The NCS will also assign a DRS for relaying information to Gwinnett County Fire and Emergency Services' (GCFES) Command Center if public safety issues are identified that require notification to GCFES.

## V. Deployment Locations and Required Assets:

Normal operation will be from wherever responders are located at the time of activation using VHF/UHF communications typically carried by the responders.

## VI. Hours of Operation:

The net will remain in operation until released by the Peachtree City office of the NWS.

## VII. Resources Required:

All Gwinnett ARES members trained by NWS as Spotters are asked to respond.

## VIII. Tactical Call Signs:

Tactical call signs will not be used except by the NCS and DRS.

| Location | Tactical Callsign |
|---|---|
| Net Control Station (NCS) | NET |
| Designated Relay Station (DRS) | RELAY |

## IX. Frequencies:

Logistics: None.

Agency Support: Standard local net operating frequencies.

Health and Welfare: None.

NWS Liaison: 146.820 MHz FM – (PL 146.2)
224.340 MHz FM
444.825 MHz FM + (PL 146.2)
3.975 MHz LSB
7.275 MHz LSB

By phone for severe weather information only when the net is not available: 770-486-9629 or 888-529-5300.

## X. Liaison Requirements:

National Traffic System (NTS): None.

REACT: None.

Family Radio Service (FRS): None.

NWS Liaison Net: Designated Relay Station to move Spotter reports from the local net to the Peachtree City office of the NWS. Station must be capable of supporting both the local net and the NWS net.

GCFES Command Center: Telephone: 770-523-5602 – Chief McElfish or Chief Lee Mitchell

## XI. Logistics:

None.

## XII. Operation

Once a Spotter checks into the net, the operator should listen and report only as defined below (based on *Basic Spotters' Field Guide*):

**Spotter Reporting Procedures:**

- Report severe weather observations to the DRS under direction from the NCS.
- Report promptly as the storm may interrupt communications.

**Report Briefly:**

- **What** you have seen: tornado, funnel cloud, wall cloud, waterspout, flash flooding, etc.
- **Where** you saw it: the direction and distance from a known location, i.e., 3 miles south of Lawrenceville. To avoid confusion, make sure you report the event location and not your location.
- **When** you saw it: make sure you note the time of your observation.
- **What** it was doing: describe the storm's direction and speed of travel, size and intensity, and destructiveness. Include any amount of uncertainty as needed, i.e., "funnel cloud; no debris visible at the surface, but too far away to be certain it is not on the ground."

**Report:**

1. Tornado, funnel cloud, waterspout, or wall cloud.
2. Large hail: Dime-size or larger.
3. Wind speeds or damage caused by wind: How wind speed determined, winds of 58 mph or greater.
4. Flash flooding: Rain rates of over 1 inch per hour and how measured; street flooding and how deep.
5. Lightning: Report any deaths, injuries, or fires caused by lightning.
6. Other criteria as defined by the local NWS office.

**Reporting Criteria (from *Basic Spotters' Field Guide*):**

Many types of weather information are needed from storm spotters; however, some types of information are much more important than others. Strict adherence to the reporting criteria allows vital information to be communicated as soon as possible. Also, some of the reporting criteria should receive higher priority communication than others. You should report the following weather events.

**Urgent Priority**

Tornado
Funnel cloud
Rotating wall cloud
Flash flowing

**High Priority**

Hail 3/4-inch diameter or larger
Wind speed greater than 58 mph
Persistent non-rotating wall cloud
Rainfall 1 inch or more per hour

**Lower Priority**

Hail 1/2-inch diameter or larger
Wind speed greater than 40 mph
Cloud feathers suggesting storm organization
Other locally-defined criteria

**NOTE:** When reporting 1/2-inch diameter hail, do not use the term "**marble**" since marbles can come in a variety of sizes. Other reporting tips are contained in Appendix A.

**Damage Reporting:**

Any damage reports requiring emergency services should be reported to the Gwinnett County 911 center.

If an incident command center has been established by GCFES, a liaison should be established to relay information on damage using the contact information provided in Section X until a response team establishes communications at the incident command center. Appropriate Gwinnett County Operations Plans will be implemented to support immediate damage assessment.

If damage is extensive and the Gwinnett County Emergency Operations Center (EOC) is activated, the EOC Response Team will be activated and reporting will be as directed from the EOC under Gwinnett County Operations Plans.

## XIII. Deactivation:

Operations will be deactivated at the direction of the Peachtree City office of the NWS. If significant destruction has been done by the storm system, operations may transition to provide support to Gwinnett County agencies under net Condition 4.

If any damage was observed that was not previously reported to Gwinnett County Emergency Management, a report should be filed with the Director of Gwinnett County Emergency Management within 48 hours of the termination of the event.

# APPENDIX A

# ESTIMATING TIPS

(Provided by Peachtree City Office of the National Weather Service)

## Hail Size Estimates

| | | | |
|---|---|---|---|
| Pea | 0.25 inch | Ping Pong Ball | 1.50 inches |
| Marble (not used) | 0.50 inch | Golf Ball | 1.75 inches |
| Mothball | 0.50 inch | Pool Ball | 2.00 inches |
| Penny | 0.75 inch | Hen Egg | 2.00 inches |
| Dime | 0.75 inch | Tennis Ball | 2.50 inches |
| Nickel | 0.88 inch | Baseball | 2.75 inches |
| Quarter | 1.00 inch | Grapefruit | 4.00 inches |
| Half Dollar | 1.25 inches | Softball | 4.50 inches |

## Wind Speed Estimates

| Speed (MPH) | Effects |
|---|---|
| 25-31 | Large branches in motion; whistling in telephone wires. |
| 32-38 | Whole trees in motion. |
| 39-54 | Twigs break off of trees; wind impedes walking. |
| 55-72 | Damage to chimneys and TV antennas; pushes over shallow rooted trees. |
| 73-112 | Peels surface off roofs; windows broken; trailer houses, i.e., mobile homes, overturned. |
| 113+ | Roofs torn off houses; weak buildings and trailer houses destroyed; large trees uprooted. |