ITEM # __30_____
DATE:__12-11-12

COUNCIL ACTION FORM

SUBJECT: OUTDOOR WARNING SYSTEM ACTIVATION CRITERIA

BACKGROUND:

The City of Ames updated the siren equipment in the City's 15 outdoor warning system sirens (OWS) approximately five years ago. This system is designed to provide a warning of severe weather to citizens who may be **outside** their homes. Modern home construction methods often limit the ability to hear sirens indoors. It is not practical to have outdoor warning devices that can consistently penetrate today's homes or workplaces with a warning tone. **Indoor warnings are best achieved through household use of a weather radio.**

The outdoor warning sirens are controlled through the City Emergency Communications Center with backup control at Iowa State University. ISU has installed several outdoor devices that can broadcast voice messages on central campus and near the stadium.

Historically, the sirens have been activated when a tornado has been forecast for the city or when a tornado has been identified by a trained spotter and is approaching the city. The specific criteria for activating the sirens are:

1. The National Weather Service upgrades a tornado watch to a tornado warning for the City of Ames.

2. The receipt of information from a legitimate weather forecaster who has indicated a radar report showing a tornado affecting Ames.

3. An actual sighting that would threaten Ames is received from the Story County Sheriff's Office or their deputies, ISU DPS Communications (Dispatch) Center or their officers, Des Moines State Radio, or the State Patrol, the Emergency Management Coordinator, Ames patrol units; or reports from private citizens when there is some supportive evidence available.

Therefore, the sirens have meant that a tornado is imminent and citizens should immediately seek cover and obtain additional information from their weather radio or local media.

In 2010 Polk County (Iowa) adopted a policy of activating the outdoor warning system in the event of winds over 70 mph. Across the country there has been a trend toward OWS activation in the event of high winds or potentially dangerous hail. An EF0 tornado contains winds of 65-85 mph so this threshold is, in principle, consistent with the risk associated with tornadoes.

The Story County Emergency Management Commission considered these factors and, on October 17, 2012, recommended that activation criteria include forecast winds in excess of 70 mph or hail in excess of 1.75 inches. The concept driving this change is to assist in warning citizens who might be outside or at least out of their homes when high winds or hail are forecast.

It is important to note that our warning system is dependent on the ability of forecasters and storm spotters to anticipate the behavior of these storms. Currently, this information is included in NWS teletypes to the Communications Center. Unfortunately, it is embedded at the conclusion of the narrative forecast. In addition, the affected areas are generally described as a geographic polygon rather than as cities or towns. Even with careful interpretation, history suggests that we will be unable to warn citizens of every wind or hail event due to the limitations of the forecast capabilities.

In reviewing this recommendation, it must be noted that the most recent high wind events within the City of Ames were not forecast with sufficient advance warning to allow utilization of the OWS. The storm of July 1, 2011, built right over Story County and the NWS did not have time to issue a warning. The May 2012 storm warning did not meet the threshold for OWS activation. Over the previous years there were no events that met these criteria in 2012, one in 2011, four in 2010, and six in 2009. Nonetheless, it seems prudent to provide a public warning if we are notified of wind or hail that could be injurious.

Ames and Iowa State University have coordinated their use of the OWS for many years. The shared system allows control from either the city or the university. Because of the close working relationship and the proximity of our service areas, we have also had very similar policies. Public safety staff from Ames and ISU have discussed this policy change and support the proposed additional activation criteria. There is value in having a policy that is consistent across the community, county, or even across the region.

The challenges in implementing the additional high wind and hail criteria include obtaining and interpreting good forecast information from the NWS and developing public understanding of the OWS. **While more warning is generally thought to be a benefit, these criteria will require more detailed monitoring of NWS forecasts and more time in the Communications Center interpreting the forecast information. It will also be important to collaborate with our public safety partners and media partners to educate the public about the new meaning of the sirens.**

ALTERNATIVES:

1. Direct staff to add Outdoor Warning System activation criteria for winds in excess of 70 mph and hail in excess of 1.75 inches.

2. Direct staff to add Outdoor Warning System activation criteria for either:
    a. winds in excess of 70 mph
    or
    b. hail in excess of 1.75 inches.

3. Do not change the OWS activation criteria at this time.

MANAGER'S RECOMMENDED ACTION:

The Outdoor Warning System is intended to alert residents and visitors to the potential of hazardous weather conditions and the need to take immediate protective action. The key to this warning system is prediction of the severe event with some degree of advance notice. Although history suggest that this is not always possible, activation of the sirens may still be of benefit even though we may not have sufficient forecast information to allow this to occur every time. **The trend toward warning citizens of high wind and hail events has been considered by public safety personnel and the net benefit to citizens seems to be of value.**

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, thereby directing staff to add high wind and hail events to the existing Outdoor Warning System activation policy.