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MEMORANDUM

To: Mayor and City Council

From: Kimberly Greer, Assistant to the City Manager

Date: August 12, 2013

Subject: **Discussion of Emergency Notification Systems**

ITEM DESCRIPTION

For the Council's continued discussion of creating a multi-faceted approach to warn citizens of severe weather events, staff has prepared an overview of benefits and challenges associated with different emergency notification systems including sirens, lightning detection systems, and weather radios.

BACKGROUND

Per Councilman Shortal's request, in 2010 staff began researching emergency notification sirens and how they could benefit Dunwoody. When discussed with Council in 2010, the consensus of Council was to pursue grant funding to offset the cost of purchase and installation. Few grants exist that can be used towards notification sirens. FEMA's Hazard Mitigation Grant Program (HMGP) is the main source of such funding but is only available when authorized under a major disaster declaration. The last such declaration in Georgia was April 29, 2011. Staff applied but was unsuccessful due to limited funding availability. When discussed with Council in late 2011, the consensus was to continue to pursue grant funding if available and look into implementing a telephone-based emergency notification system.

In May 2013, the City implemented the telephone-based emergency notification system CodeRED. As it relates to severe weather, the CodeRED Weather Warning alert is an automated system directly tied into the National Weather Service. As an example, if the National Weather Service issues a Tornado Warning, the CodeRED customers with addresses within the expected path of that Tornado will receive an alert.

UPDATE

When discussed with the Council as part of the July 8th Council Meeting, the Council reached consensus that further research was needed into the alternatives available for emergency notification systems. In particular, staff was asked to research the benefits and challenges to weather radios, sirens, and lightning detection systems that could complement our telephone-based emergency notification system. Specifically the Council discussed potentially looking a pilot program in Dunwoody Park and Brook Run Park with sirens, lightning detection systems, or some combination thereof to warn residents that may be recreating away from their smart phones, weather radios, or other devices that could warn them of pending severe weather.

ALTERNATIVES



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Sirens

Emergency notification sirens are typically mounted on stand-alone poles, about the height of a telephone pole through tone or a combination of tone and voice. To research the effectiveness, benefits, and challenges of sirens staff reached out to siren vendors, local cities with siren systems, and nationally known cities with recent experience such as Moore, Oklahoma and Joplin, Missouri.

Benefits: audible outdoors for long ranges, little to no explanation required to understand the message conveyed, can run as an automated system, multi-year effectiveness (with appropriate maintenance).

Challenges: not designed to be heard indoors, alerts based on predictive modeling not conditions on site, most systems tied to NOAA alerts, high upfront costs, on-going maintenance/operating costs, location siting issues, potential confusion from different policies with neighboring cities siren systems.

Potential Cost: For a pilot program aiming to cover Dunwoody Park and Brook Run Park, the five siren companies contacted provided rough estimates between \$50,000 and \$75,000. The price may be more reasonable after a competitive Request for Proposals.

Lightning Detection Systems

Lightning detection/prediction systems are typically mounted on the side of a building or on stand-alone poles and are often connected to small sirens or strobe lights. To research the effectiveness, benefits, and challenges of lightning detection/prediction systems staff reached out to vendors, and local parks and golf courses with detection systems.

Benefits: alerts based on site conditions not predictive modeling, can run as an automated system, often tied to small sirens or strobes, can be interfaced to remote computer systems such as to City Hall.

Challenges: learning curve in experience and use of system, can create false positives/failure to alarm depending on instrumentation used, false sense of security as does not eliminate danger, and time delay before 'all clear'.

Potential Cost: For a pilot program aiming to cover Dunwoody Park and Brook Run Park, the five lightning detection companies contacted provided rough estimates between \$25,000 and \$70,000. Worth noting, the pricing on the low end of this spectrum would need to be combined with a siren or strobe system. The price may be more reasonable after a competitive Request for Proposals.

Weather Radios

Weather radios are typically small, personal devices about the size of a desk phone. To research the effectiveness, benefits, and challenges of weather radios staff reached out to vendors and the National Oceanic Atmospheric Administration



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(NOAA). Staff also discussed with other cities and counties that have provided weather radios to their citizens.

Benefits: Can be programmed to receive alerts for DeKalb County and adjacent counties, provides either voice or voice and tone alerts for severe weather, and can be customized to provide only alerts for tornados.

Challenges: some radios do not have battery back-up, if power supply (electric or batteries) is unavailable the alerts will not be received, some individuals have trouble programming radios, and some homeowners may need multiple radios to be within hearing distance throughout their homes.

Potential Cost: Range between \$15 and \$50 at bulk purchase rates, exact cost varies by features of the radio.

FUNDING

Should the Council reach consensus to augment our use of our existing telephone-based emergency alert system with another emergency notification system; staff could include funding in the Fiscal Year 2014 Budget or in a 2013 Budget amendment. Should the Council wish to move forward with a pilot program for sirens or lightning detection systems, a formal request for proposals or invitation to bid could follow once funds are appropriated.

Alternatively, staff could continue to search for grant opportunities and apply for any related funding that becomes available.

RECOMMENDATION

Which notification system to add, if any, is a policy decision for the Mayor and Council. Staff recommends complementing any additional notification systems with additional outreach and an educational campaign for our community. Agencies including NOAA, FEMA, and GEMA all have helpful resources about preparing for severe weather that we could work to share with the community.