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# USING GIS TO INFORM YOUR PUBLIC MESSAGING



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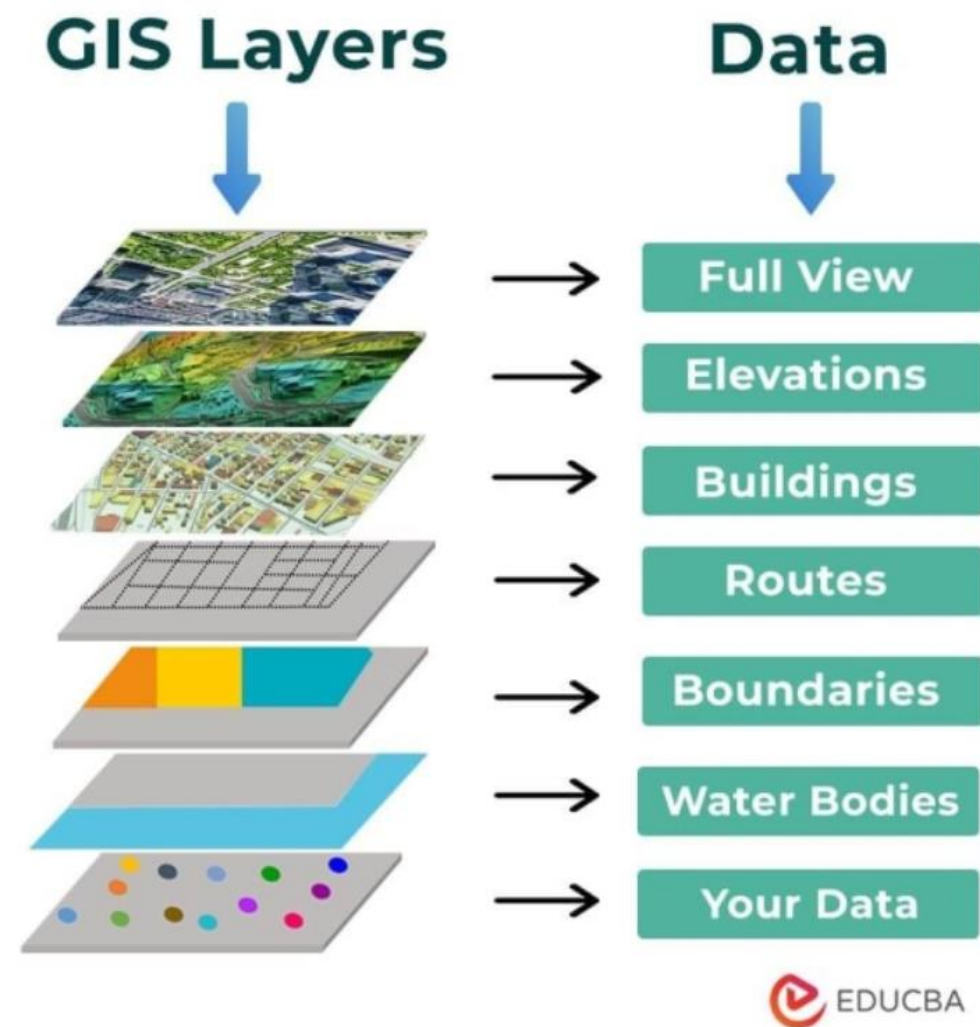
# AGENDA

- Overview of GIS
- Public messaging considerations
- How do we bring these together?

# GIS OVERVIEW

# WHAT IS A GIS?

- A geographic information system (GIS) is a spatial database management system designed to capture, store, manipulate, analyze, manage, and present geographic data.
- GIS applications are tools that allow users to create interactive queries, analyze spatial information, edit data in maps, and present the results of all these operations.



# WHAT DOES A GIS DO?



MAPS



DATA

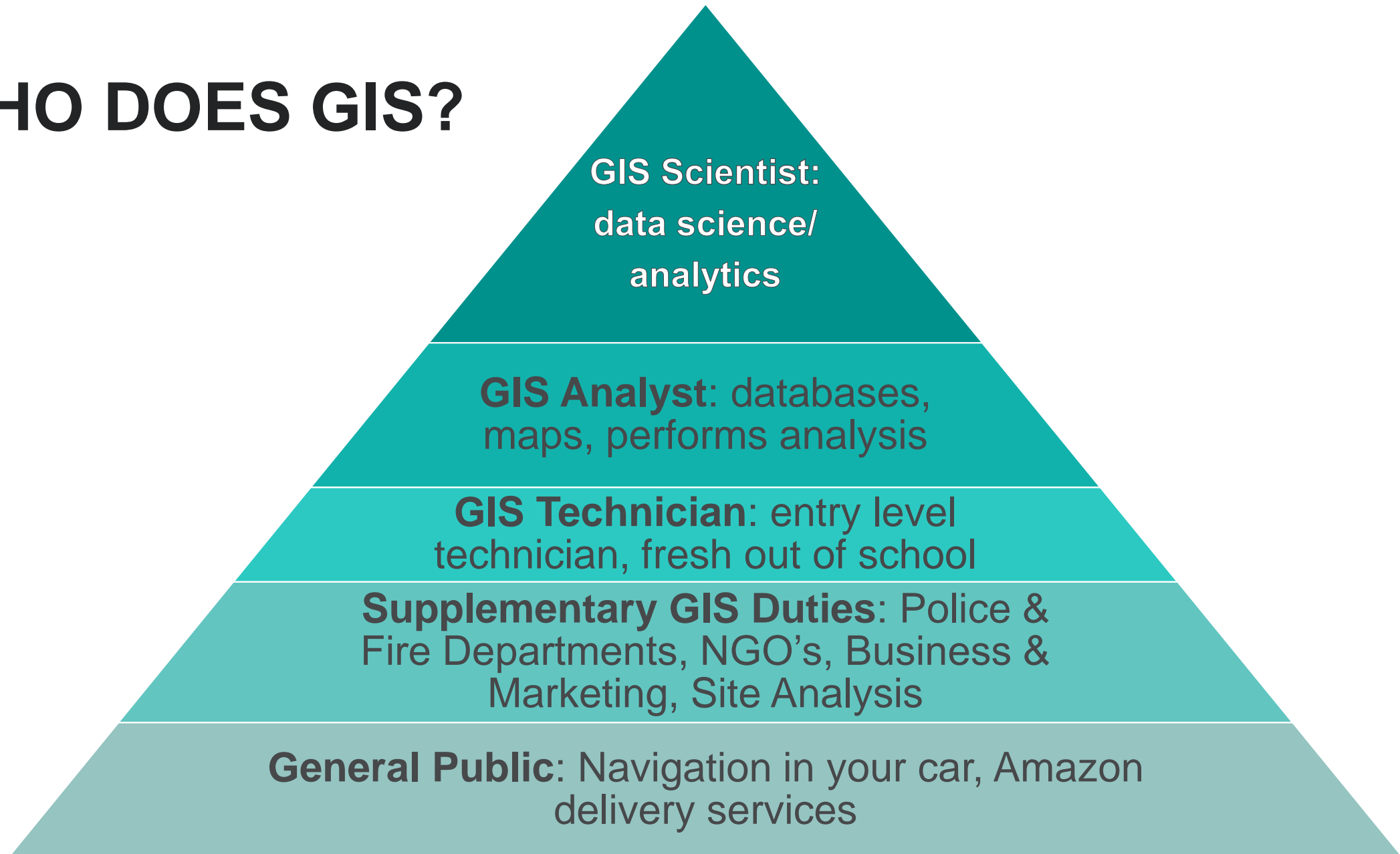


ANALYSIS



APPLICATIONS

# WHO DOES GIS?





# THE GEOSPATIAL SCIENCES

Education

Health

Insurance

Manufacturing

Petroleum

Public Safety

Real Estate

Retail

Sustainability

Telecommunications

Transportation

Electric & Gas  
Utilities

Natural Resources

Government

Water

Source: <https://www.esri.com/en-us/what-is-gis/overview>

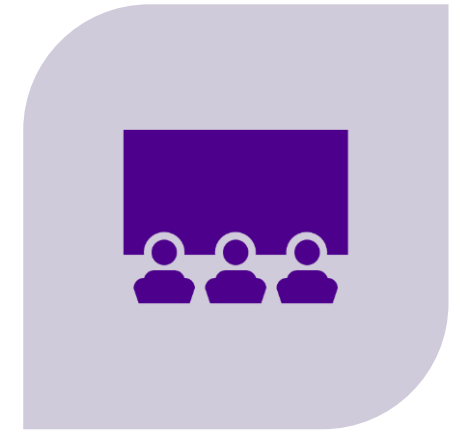
# PUBLIC SAFETY



UNDERSTAND



PLAN



ACT



# PUBLIC MESSAGING

# PUBLIC MESSAGING OBJECTIVES

- Save lives & reduce injury
- Protect property and the environment
- Calm fears and manage expectations
- Instill public confidence



Image Source: <https://publichealth.tulane.edu/blog/what-is-disaster-management/>

# EMERGENCY COMMUNICATION

Differs from routine communications:

## CONSIDERATIONS

- Barriers
- Timeliness
- Required Response

## CHALLENGES

- Individual characteristics
- Perceptions
- Message source
- The message itself

# THE MEDIUM AND THE MESSAGE

How you get the message to the audience is influenced by:

- The audience itself
- Urgency of the message
- Reliability of the medium
- Appropriateness of the medium
- Resources

# EFFECTIVE COMMUNICATIONS

- Present the information in sequence.
- Present the reason for the message, the supporting information, and the conclusion.
- Word the message precisely, making every word count.
- Avoid jargon, codes, and acronyms.
- Use common terminology for all personnel and facilities.
- Omit unnecessary details.
- Speak in sync with other related authorities.
- Keep messages consistent across various media.

# EFFECTIVE COMMUNICATION TOOLS

## GOALS

- Reaches the target audience.
- Gets information to the audience when they need it, for as long as they need it.
- Can be expected to deliver the message reliably.
- Enhances comprehension of the message content.
- Can be accessed within resource limitations.

## METHODS

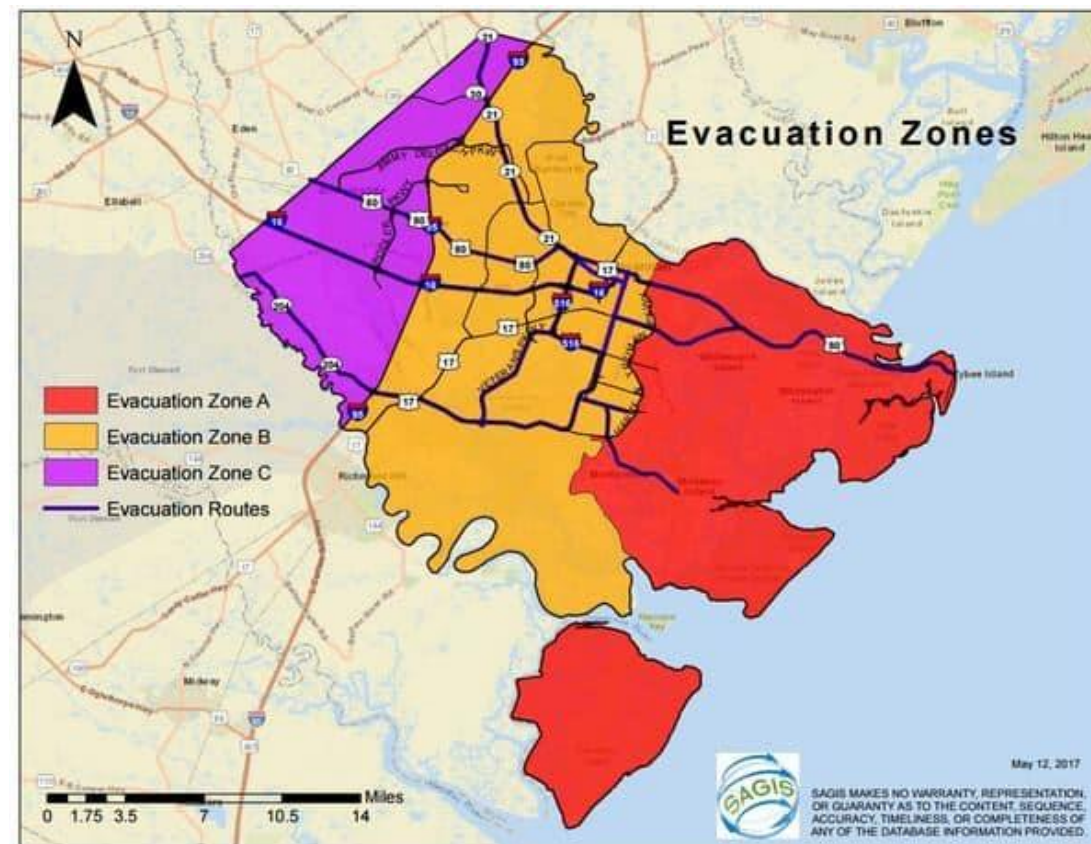
- In-person events—briefings and public meetings.
- **Print media—newspapers and magazines.**
- Broadcast media—television and radio.
- **Internet and social media.**



# PUBLIC MESSAGING CONSIDERATIONS

## Print Media & Social Media/Internet

- Clear and concise messaging is key – but so is a clear and easy-to-read map or graphic
- Web maps can be linked to by reporting agencies to provide the public with an interactive way to see the issued protective actions
- A combination of images and iconography (pictures, icons, or maps) has proven to increase comprehension over only one or the other.





# BRIEFINGS & PUBLIC MEETINGS

- Prepare decision makers in advance
- Prepare a statement and handout materials
  - Fact Sheet
  - Web Product
  - Newsletter Article
  - PSA
  - Brochure, flier, other handout

MDH activates level 1 ICS structure, UMN Summer Public Health Institute, and more!

Minnesota Department of Health sent this bulletin at 03/13/2024 09:32 AM CDT

## Public Health Institute



University of Minnesota School of Public Health

Join practicing public health professionals and graduates of Minnesota School of Public Health (UMN SPH) Public Health Institute (PHI) program held during summer session at the UMN SPH. PHI is a program for public health professionals and students in public health and related fields to expand their professional expertise, learn best practices, and network with other professionals, or explore a new area of public health. Course topics include crisis leadership, health equity, and more. In-person and virtual options are available.

Public health professionals in Minnesota may apply for a scholarship. UMN SPH will be offering scholarships for 14 emergency preparedness related courses at the 2024 Public Health Institute. Applications are due Friday, April 12. Registration is open now! Course information is available on the 2024 Public Health Institute - School of Public Health website.



## Emergency Preparedness and Response News

[View this as a webpage](#)

### In This Edition

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- [Program Spotlight: CHEMPACK](#)
- [Important Dates](#)

### From the Director



Happy Spring to you all!

As we transition into this vibrant season, I'm pleased to share an update from our Public Health Emergency Preparedness (PHEP) and Healthcare Preparedness

## Program Spotlight: CHEMPACK



Image Source: <https://www.health.state.mn.us/about/org/epr/news/index.html>

# WHEN DESIGNING GRAPHICS

- Text and Audio Explanations: Ample text and audio should be provided to explain images or maps, so that message recipients can understand the meaning of what is being conveyed graphically.
- Consider Templates: Use pre-approved language, map scales and symbologies, and deploy quicker
- KISS: Sometimes GIS folks make overly complicated maps. Your GIS staff should be exposed to public messaging training

# BRINGING IT ALL TOGETHER

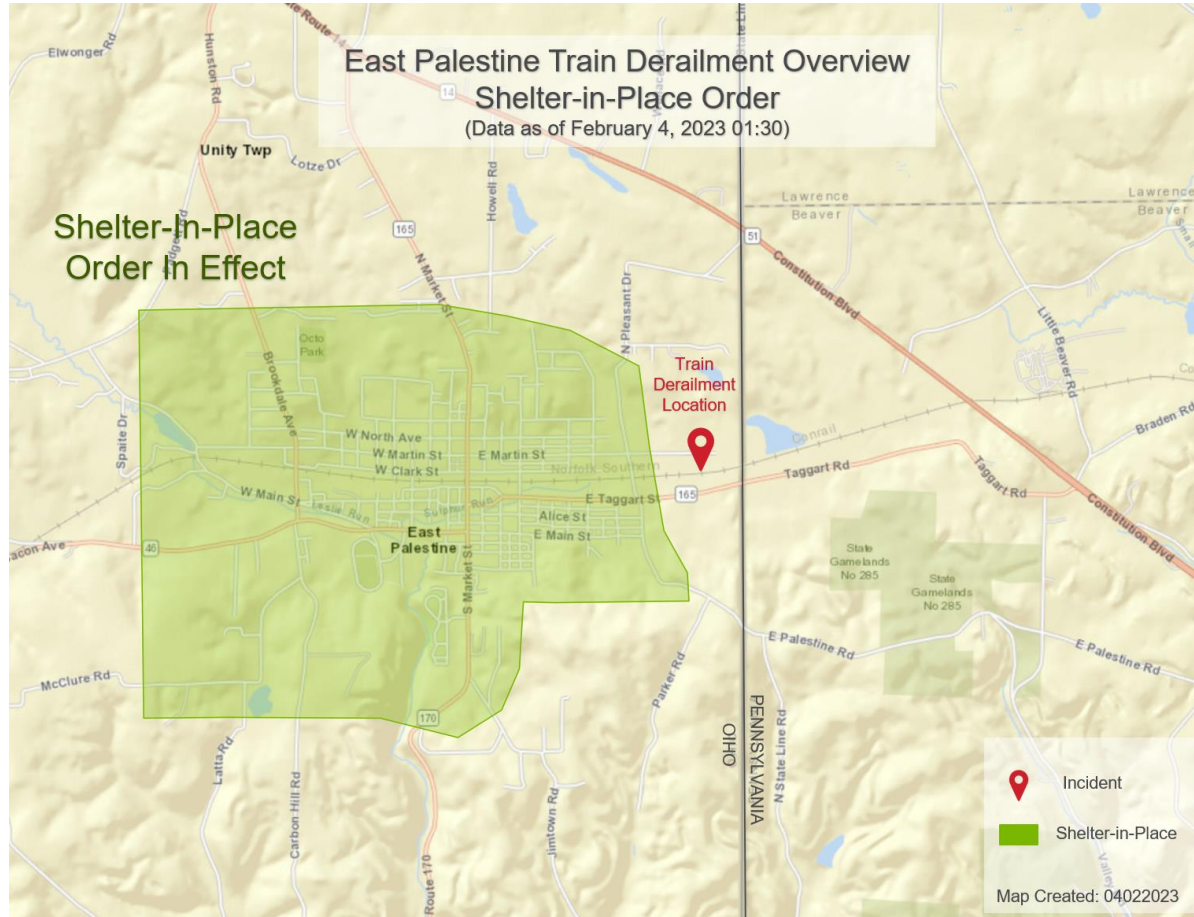
# LET'S WORK THROUGH AN EXERCISE

## SAMPLE SCENARIO

A hazardous materials accident has just occurred, shutting a major roadway. Evacuations are being ordered for the homes within a 1-mile radius of Highway 1. A shelter at the high school is opening that allows pets



# SAMPLE MAP GRAPHIC



- Incident Location
- Evacuation Zone
- Roads are labeled clearly
- Shelter Location
- Date & Time Stamped

# LASTLY, CONSIDER INTERACTIVE MAPS

## STATIC

- Once shared, it cannot be unshared
- Often a delay in the sharing of social media posts
- Some news agencies prefer static images/graphics

## INTERACTIVE

- Update easily – even after sharing
- The URL does not change – but the content can
- Live status updates

# SAMPLE INTERACTIVE MAP

The screenshot displays the NAPSG Public Information Map interface. The map shows a region with various geographical features and infrastructure. A red dashed line traces a path across the map, and a red circle highlights a specific location. Two callout boxes with red arrows point to the search bar and the highlighted location.

**1. Type address here (or use location)**

**2. Find out what to do here**

The interface includes a search bar with the text "401-599 C St, Quinn, South Dak" and a "Near Me" panel. The "Near Me" panel shows a search bar, a distance filter set to "0 Miles", and a "Severe Events" section. The "Severe Events" section displays a "Flash Flood Warning from NOAA" with details: "THE FLASH FLOOD WARNING REMAINS IN EFFECT UNTIL 3:30 PM MDT FOR SOUTHWESTERN HAAKON...NORTHWESTERN JACKSON AND EAST CENTRAL PENNINGTON COUNTIES... A 3 to 4 foot breach in the Guinn Dam continues to slowly spill water into Cottonwood Creek. The dam has not failed yet, but flash flooding could result if it does fail." The "Areas Affected" are listed as Haakon, Jackson, and Pennington, with a start time of 3/26/2019, 11:18 AM and an expiration time of 3/26/2019, 2:30 PM. A legend on the right side of the map shows symbols for Road Blocks, Road Closures, Open Shelters, and Evacuation Notices (Evacuation Lifted Local Only, Mandatory Evacuation, Pre-Evacuation).

Image Source: NAPSG Foundation "PrepTech Talks" *The Innovative PIO: Tools & Best Practices for Technology-Enabling Public Information*, May 27, 2020



# QUESTIONS?

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