

The NAI
Approach to
Emergency
Services

Emergency
Services &
Floodplain
Management

NAI
Emergency
Services Tools

Emergency
Services Case
Studies

NAI How-to Guide for Emergency Services





Emergency Services

This park in Aroma Park, IL, illustrates the NAI approach. Waterfront properties serve the community with open, green space, but damage is limited during a flood. Photo credits: “Dry” photo by French & Associates, “Wet” photo by Kankakee County Planning Department.

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ON THE COVER:

One objective of an NAI emergency services program is to get people to safety before their homes are flooded. This *Guide* reviews ways to use advance warning of an impending flood to protect people and property.

PHOTO: Texas National Guardsman lifts child to a first responder in a Light Medium Tactical Vehicles (LMTV) during an evacuation in South Central Texas, June 2, 2016. Texas Guardsmen supported local first responders during search and rescue operations following severe weather and flash flooding. (Photo Courtesy of TEEX, photo by Will Welch)



This playground equipment was built using natural materials while providing fun features for kids to explore. Cedar River at the Charles City Riverfront Park, IA. Photo courtesy of the city of Charles City, IA.

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Tool 1: Flood Threat Recognition

The primary difference between floods and other emergencies is there's usually advance notice a flood is coming, unlike explosions and earthquakes.

An impending flood can be recognized in several ways, such as a rising river upstream, heavy rain in the watershed, or an incoming tropical storm. Establishing a system to do this, i.e. a "flood threat recognition system," is the foundation of a flood warning and response program.

The concept of a "flood threat recognition system" is simple: collect information about the impending flood and get it to the emergency manager. This can be done manually, using automated or remote sensing equipment, or relying on a state or federal agency already providing the information.

This system can provide valuable information about the hazard, such as: When will the flood arrive? Where will it go? How high will it rise?

Developing this system for the community can be a key role for floodplain management staff.

This tool reviews the community's needs, looks at types of systems available, and helps select the one that works best. Tool 3 covers advising the public about the flood and taking appropriate flood response steps.

Tool 1. Flood Threat Recognition

Tool 1 has five steps to prepare a system that provides early notification of an impending flood.

- Step 1. Determine notification needs** - *Decide where you want early notification*
- Step 2. Review existing systems** - *See what may already be available.*
- Step 3. Investigate locally** - *run systems to fill the gaps - Check out what you can do to prepare a system that meets your needs*
- Step 4. Use it and improve it** - *Make sure it gives you the results you need*
- Step 5. Expand access to the system** - *Give the public access to the early notifications*



NOAA - NWS



-Ventura County WPD

Most "flood threat recognition systems" rely on precipitation gauges (left) that measure rain and snowfall in the upstream watershed, and stream gauges (right) that measure river levels.