Texas Water Development Board
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Local/Regional Maps for First Response

Strategic Flood Maps

- Used at Emergency Operations Center
- Overview map of entire area
- Identifies scope/magnitude of overall problem
- Used to keep track of several area commands, groups of units
Local/Regional Maps for First Response

Operation Flood Maps

• Incident/Area Command

• Flood info at an area command level

• Laminated for recording situational awareness

• Able to log where units are assigned, where people have been rescued, what is remaining/what needs to be focused on

Individual Addresses

“Quick Math” of impact

Water levels

Access Issues
Local/Regional Maps for First Response

Pre-planning Flood Maps

- Used “on a blue sky sunny day” for fire unit planning (first response)

- Detailed information about flood area (primarily from local floodplain mgers)

- Ability to drive the streets, review what the flood could do to the neighborhood, where to stage during an event, etc

- Format where flood plain managers could transfer detailed engineering info to the fire units

- Format where Fire Units can log information specific to a response in this area (ex: Staging area, shelters/rec centers, target hazards)
Building Local/Regional Flood Maps

Workflow for Local Map Development

• Where are the creeks/streams/rivers at high risk for flooding?
  Conduct threat and risk analysis
  Identify vulnerable neighborhoods, critical infrastructure, flood prone roadways

• Develop “strategic” view of entire creek/stream/river
  Provides overview of entire scope of flood threat
  Identify evacuation corridors
  Conduct tabletop exercises to verify map accuracy at each level of development

• Divide strategic maps into “operational” areas
  Typical methodology for dividing an emergency incident
  Determine possible staging areas, access and egress points
  Obtain floodplain data (where available)
  Provide relevant gauge data and stage heights

• Divide “operational” maps into task level planning maps
  Local knowledge and experience on flood characteristics
  Predetermine on-scene task level actions
Map Characteristics

Is It Useful?

• Does it answer the questions asked by TDEM?
  ✓ What is the water level now?
  ✓ What is the predicted final water level?
  ✓ When do we expect it to get to that level?

• Does it use universally understood symbols?
  ✓ Is the information understood with a quick glance?

• Does it require technical expertise to use?

• Can TDEM create a plan from the information or map?
  ✓ Do we protect in place or evacuate?
  ✓ How will we evacuate citizens from the risk zone?
  ✓ How much time do we have?
  ✓ Where will the citizens be sheltered?
Map Characteristics

Is It Useable?

• Is it always available?
  ✓ Where is it?
  ✓ Can the link be found easily?

• Does it take constant review to stay proficient?
  ✓ Has it changed from the last time it was reviewed?

• Can anyone gain access?
  ✓ Do I need to log in to view?
  ✓ If electronic, is a logon required?? Password??

• Can it be easily modified to add changing information?
Conclusions

• Any system developed for this purpose would not be very useful…. Unless it were part of a system TDEM, first responders and emergency managers use every day.

• If there is unfamiliarity with a system, even a good one, no one will feel the luxury to use it and explore it when a disaster unfolds and chaos descends.

• Only an operational, helpful, daily system will be one that TDEM, first responders and emergency managers use in a disaster environment.