

# *Overview: Implementing NAPSG's Incident Symbology*

SARGIS7



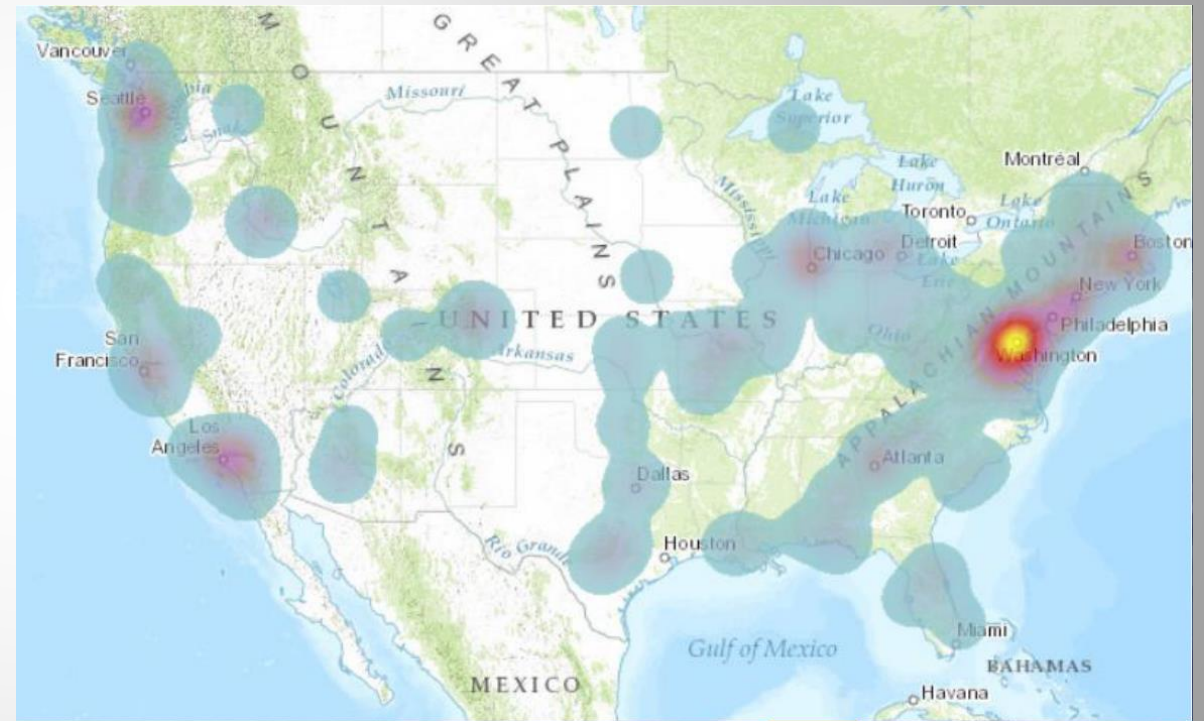
- ❖ Provide awareness level training why and how to implement NAPSG's standardized Incident Symbolology Guideline and Symbol Set.

# Training Objectives

- ❖ **Learn what** the Incident Symbolology Guideline and Symbol Set is
- ❖ **Learn why and how** to implement it in your agency to support a consistent language for communicating incident information
- ❖ Learn about **recent additions and enhancements** to the Incident Symbolology Guideline and Symbol Set
- ❖ Gain access to **valuable implementation tools and guidance**
- ❖ **See how** the symbology guideline and symbol set is applied in ArcGIS Desktop, ArcGIS Online, and other mapping tools

# National Engagement

- ❖ Over 400 stakeholders participated in a survey to inform incident symbol needs and requirements
- ❖ 30 different local, state, and Federal agencies are represented on and participated in NAPSG's Symbology Working Group



# What is it?

NAPSG's Incident Symbology Guideline is...

- ❖ A flexible and scalable framework for use in developing and applying map symbols

NAPSG's Incident Symbol Sets are...

- ❖ Sets of specific symbols that apply the guideline and achieve symbol standardization for emergency response and management functions

- Initiated 5 years ago with focus on filling gaps for symbols used in pre-incident planning
  - Not a continuous effort due to resource constraints
- Iterative and grassroots process developed by and for local emergency responders
- Expanded to address harmonization of other incident symbology efforts and formal Standards
  - Hazard Symbols, Incident Symbols, and Pre-Incident Symbols
- Latest version of Incident Symbology Guideline and Symbol Sets will be available at [www.napsgfoundation.org](http://www.napsgfoundation.org) in the coming weeks



## **Consistently communicate incident information on maps**

- ❖ Gain efficiencies in mutual aid planning and response
- ❖ Enhance operational coordination across organizations and jurisdictions

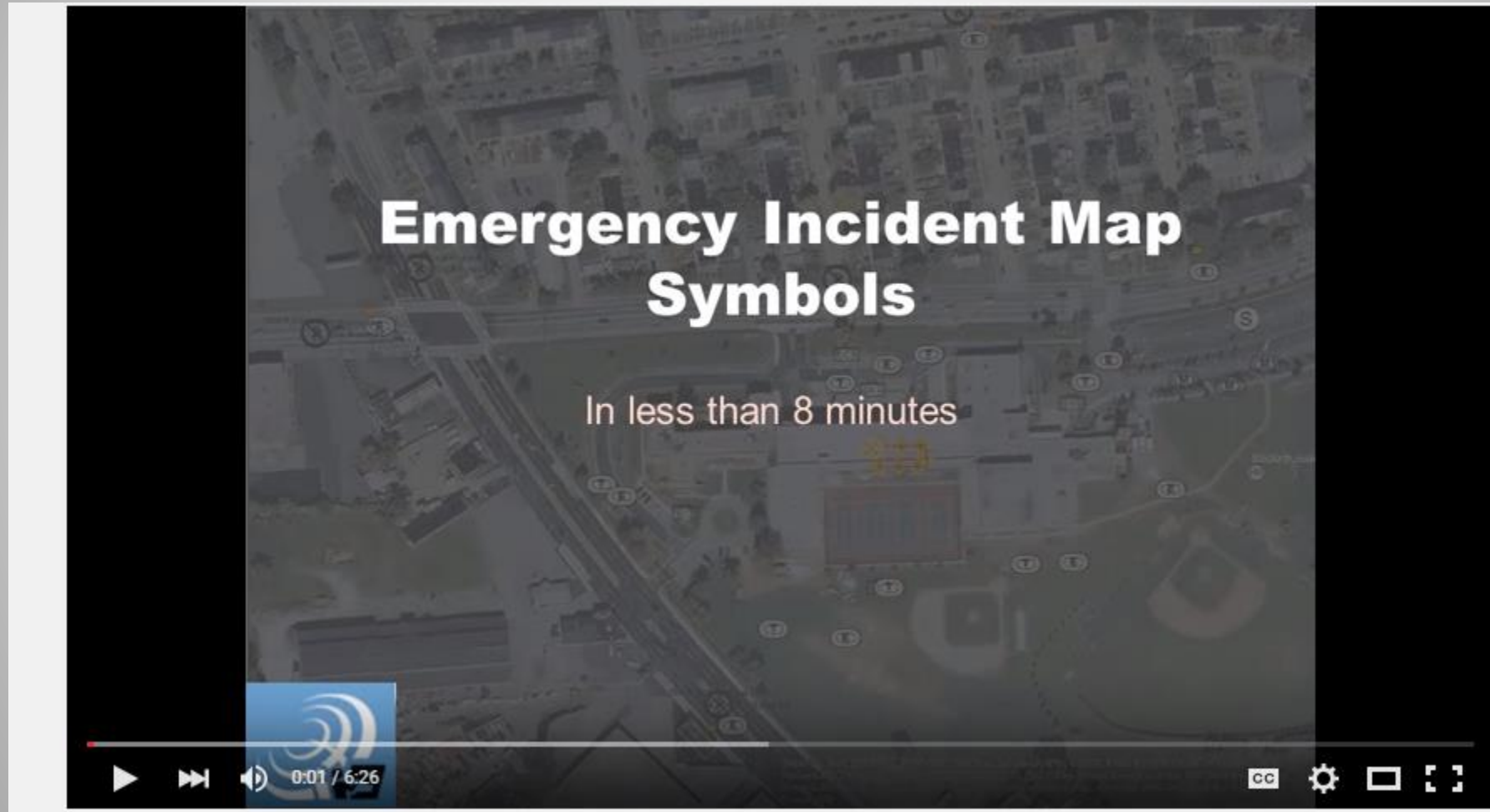
**Common Language through Common Symbols**

# What inputs were used?

Symbol Sets Reviewed
ANSI 415 and the FGDC HSWG Symbol Set
United Nations Office for the Coordination of Humanitarian Affairs Symbol Set
Canadian Emergency Mapping Symbolology
Australasian All Hazards Map Symbolology
National Wildfire Coordinating Group Symbol Set
Other Public Safety Symbol Offered by Esri
Noun Project
NFPA Standards
DOT Hazardous Materials Placard Standards



# Emergency Incident Map Symbols



[https://youtu.be/b\\_W5nElal-Y](https://youtu.be/b_W5nElal-Y)

# **What is New in 2015?**

# Natural and Human Caused

## Standardized Treatment:

- ❖ Diamond shape with black border
- ❖ Black icons
- ❖ Denotes specific hazards that occurred or that present a risk



### Natural Hazards

Natural Event that is predicted of happening, is occurring, or is still impacting

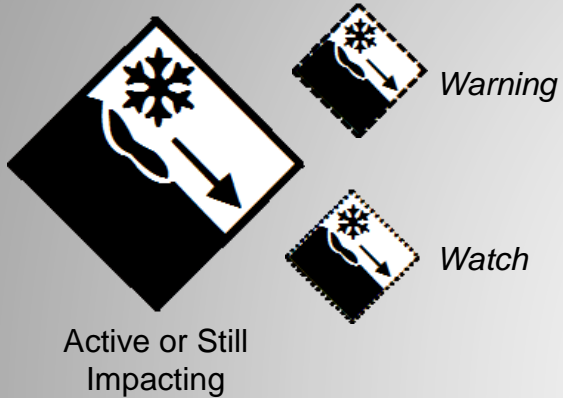


### Human Caused Threats/Hazards

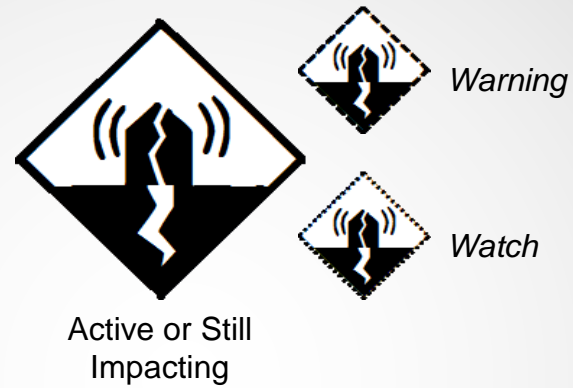
An event that has some human related interaction that is either accidental or intentional

# Natural Hazards

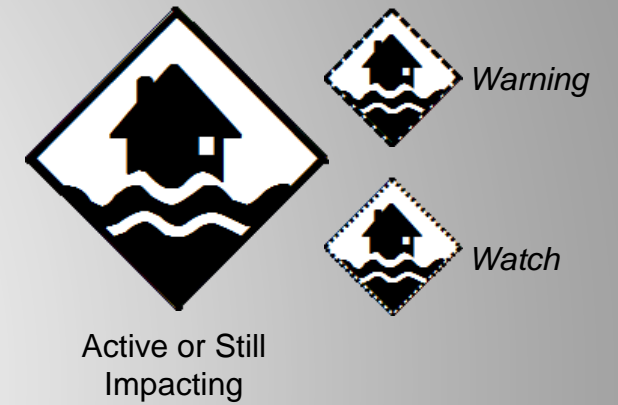
## Avalanche



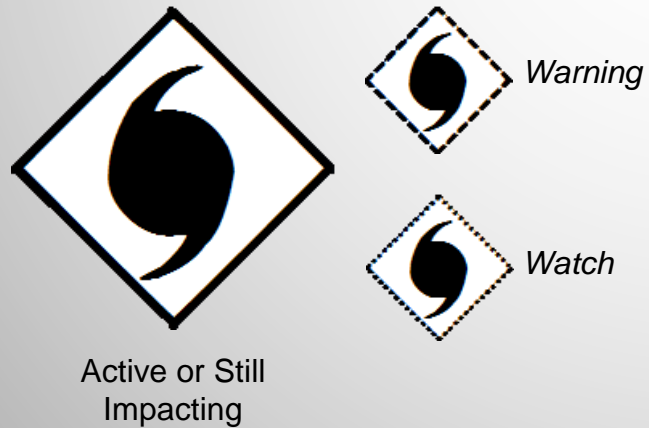
## Earthquake



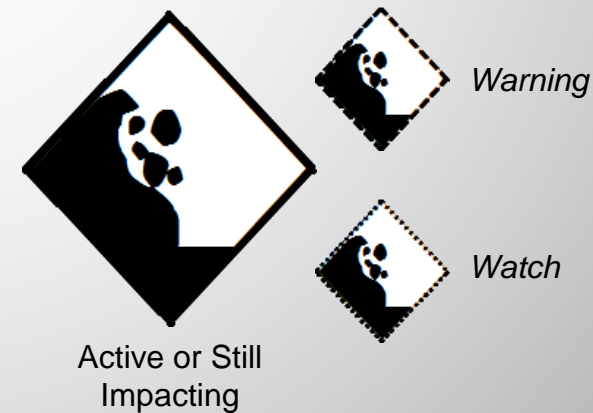
## Flood



## Hurricane



## Landslide



# Natural Hazards (cont.)

## Volcano



Active or Still  
Impacting



*Warning*



*Watch*

Snow Event  
(Blizzard)



## Tornado



Active or Still  
Impacting



*Warning*



*Watch*

## Wind Storm



Active or Still  
Impacting



**D**

*Dust*



**S**

*Sand*

# Human Caused Threats / Hazards



Explosion



Structural  
Collapse



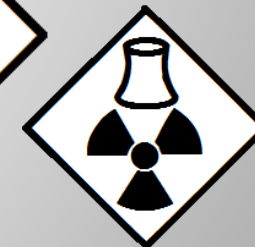
HazMat  
Release



Child Abduction



Radiological



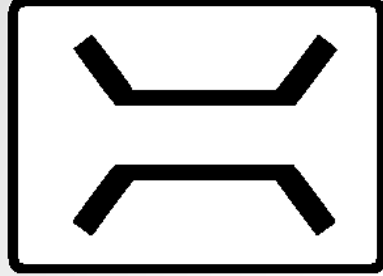
Nuclear Power Plant



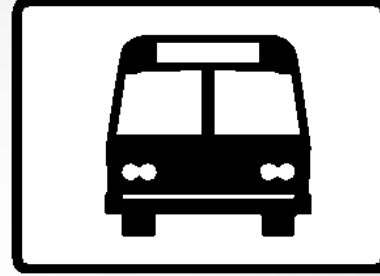
# Infrastructure



Airport



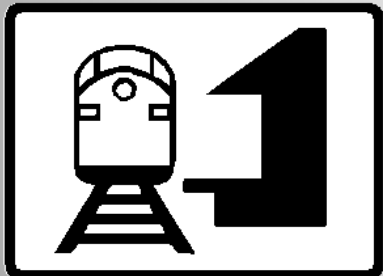
Bridge



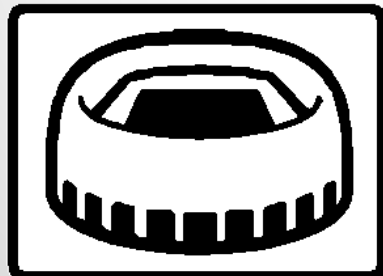
Bus Station



Ferry



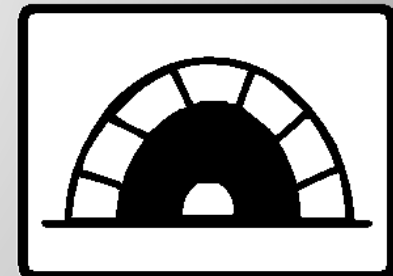
Rail Station



Stadium/  
Arena



Transportation  
Hub



Tunnel

# Public Safety Infrastructure



Fire Station



Hospital



Police Station



EMS Station

# Public Alerts and Warnings



Avalanche  
Warning



Blizzard  
Warning



Child  
Abduction  
Emergency



Civil Emergency  
Message



Dust Storm  
Warning



Earthquake  
Warning



Fire  
Warning

# Public Alerts and Warnings (cont.)



Hurricane  
Warning



Law  
Enforcement  
Warning



Nuclear  
Power Plant  
Warning



Presidential  
Emergency  
Alert  
Notification



Shelter in  
Place Warning



Radiological  
Hazard  
Warning



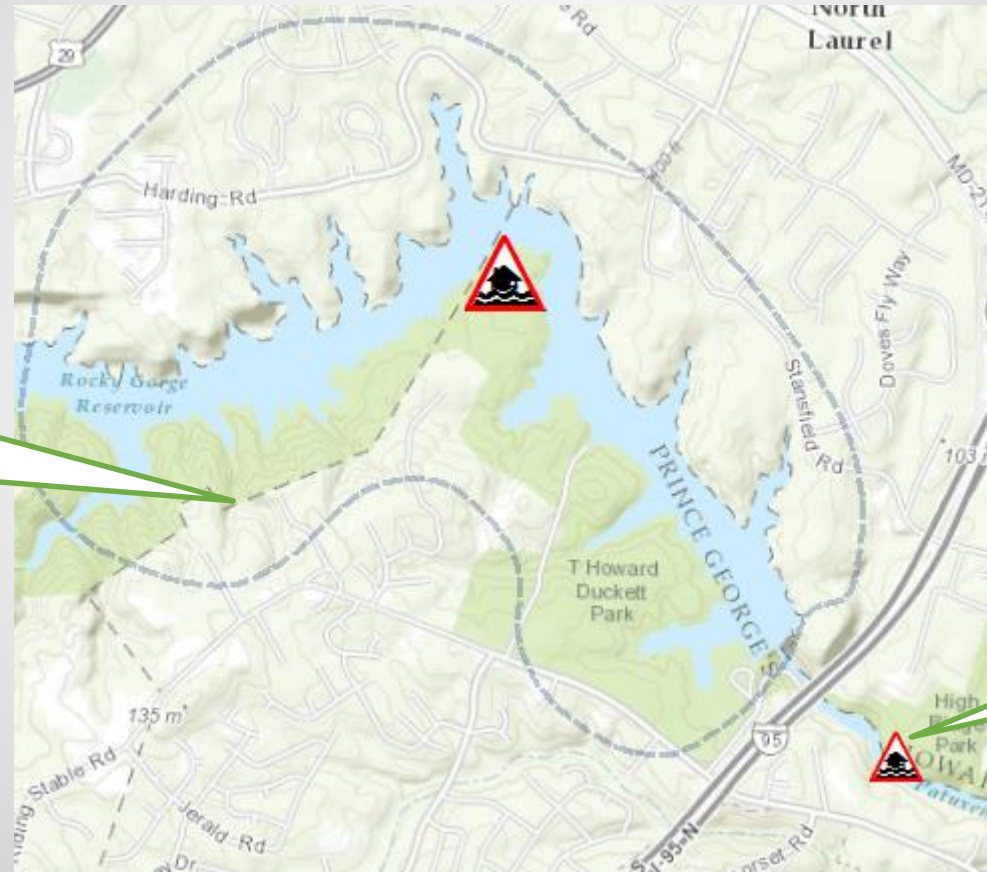
Tornado Warning



Flash Flood  
Warning /  
Flood Warning

# Public Alert Area

- Area Feature showing the impact area
- Feature label with the point symbol for flood



Point Only

# How do Alerts and Warnings Relate?



## Public Alerts and Warning

- ❖ May or may not have a specific location
- ❖ May be used to alert or warn the public
- ❖ May be used on public information maps
- ❖ May be used on situational awareness maps to track where alerts and warnings were issued.



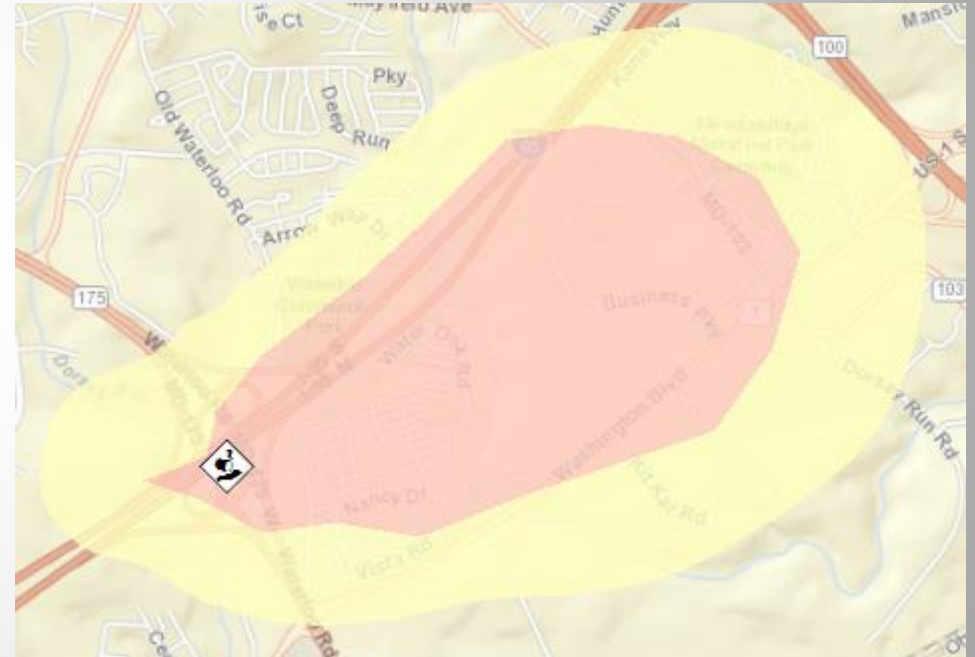
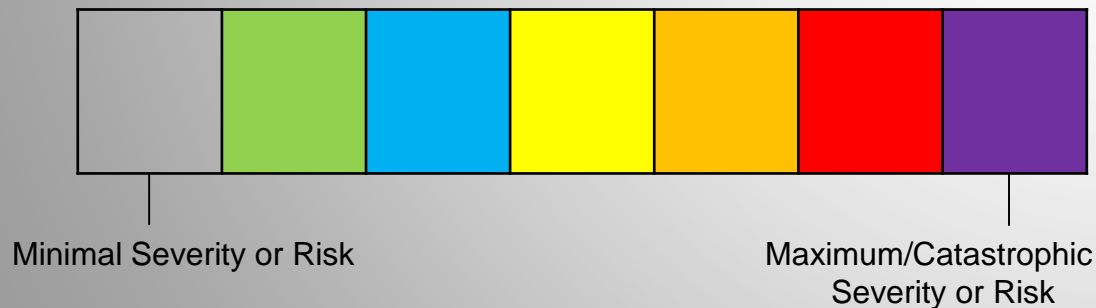
## Hazards

- ❖ Most often has a specific location
- ❖ Depicts a hazard or threat with either near term measurable risk of occurring or recently occurred with the impact still present
- ❖ May be used on a broad spectrum of public safety maps









# Modifier: Color Ramp

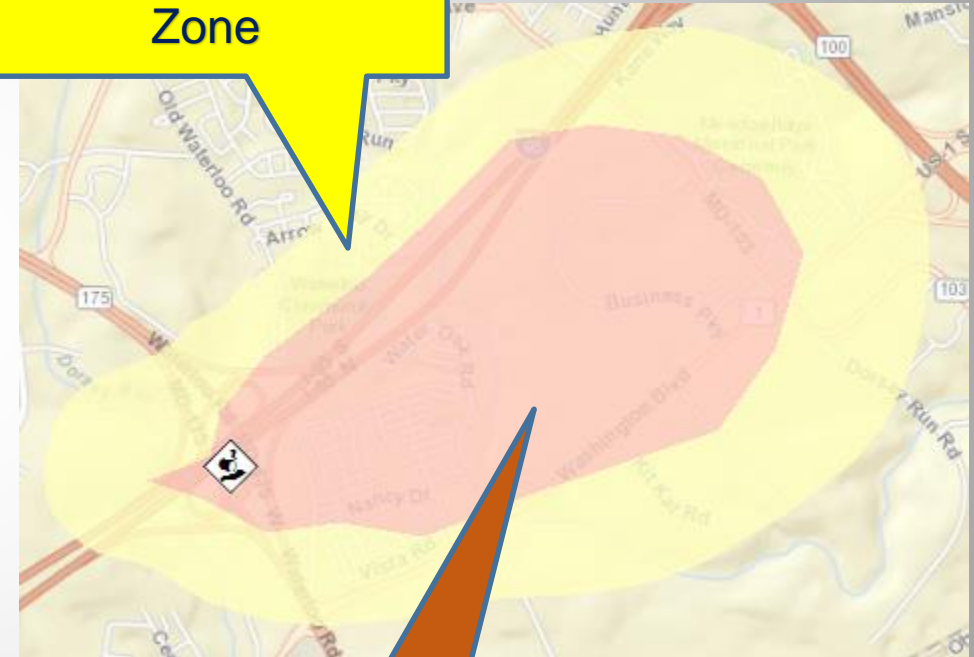
- ❖ Used to indicate:
  - Severity of an event
  - Risk level predicted
- ❖ Can apply to both points and polygons
- ❖ Apply consistently to hazard-specific standard



# Color Ramp Example

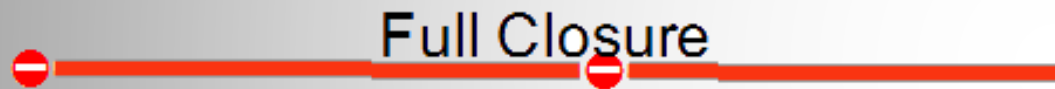
Image	Scale	Wind Speed	Damage
	EF0	65 to 80	Minor Damage
	EF1	86 to 110	Moderate Damage
	EF2	110 to 135	Considerable Damage
	EF3	135 to 165	Severe Damage
	EF4	166 to 200	Extreme Damage
	EF5	>200	Total Destruction

Warm Zone, Outer Perimeter, Transition Zone



Hot Zone, Inner Perimeter, Fire Perimeter

# Road Closure



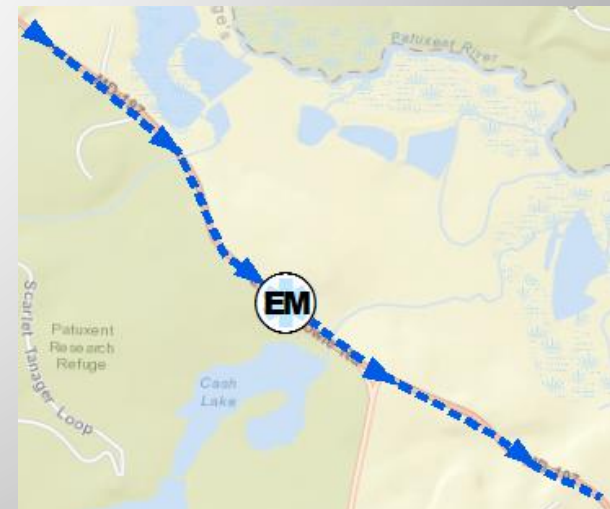
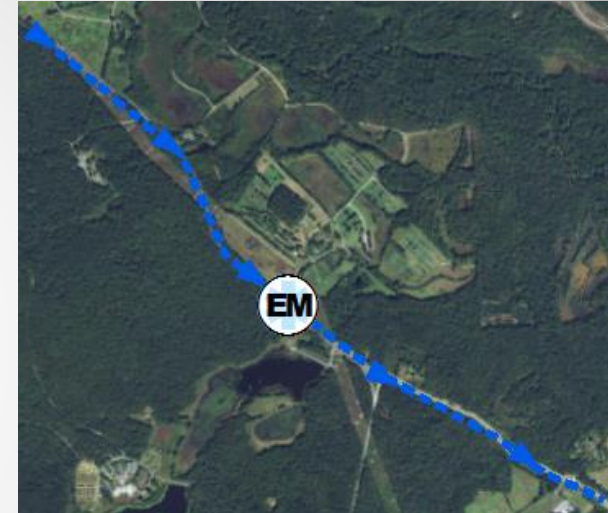
# Roads: Restricted Access/Routes



Emergency Route (Ingress/Egress)  
(color/web)



Emergency Vehicle Access Only  
(color/web)





# Evacuation



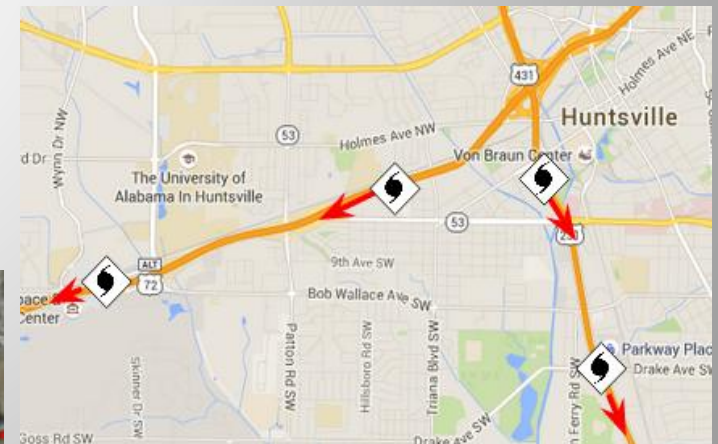
Evacuation Routes - Symbol denotes type of incident (color/web)

Steady-state: line style green and symbols have operational treatment



Evacuation Routes - Symbol denotes type of incident (color/web)

Active state: line style red and symbols have “incident” treatment (diamond shape)



- ❖ PNG - for use on web maps
- ❖ True Type Fonts - for use with GIS software
- ❖ ESRI
  - Style sheets
  - Map Packages
  - Layer Files
- ❖ Sample Map Templates



## Emergency Map- Hazardous Materials Release-Map Viewer

Web Mapping Application

Release of Hazardous Materials using the NAPSG Symbols Guideline



## Emergency Map- Hazardous Materials Release Public Information

Web Mapping Application

Release of Hazardous Materials using the NAPSG Symbols Guideline



## Emergency Map- Hazardous Materials Release Story Map

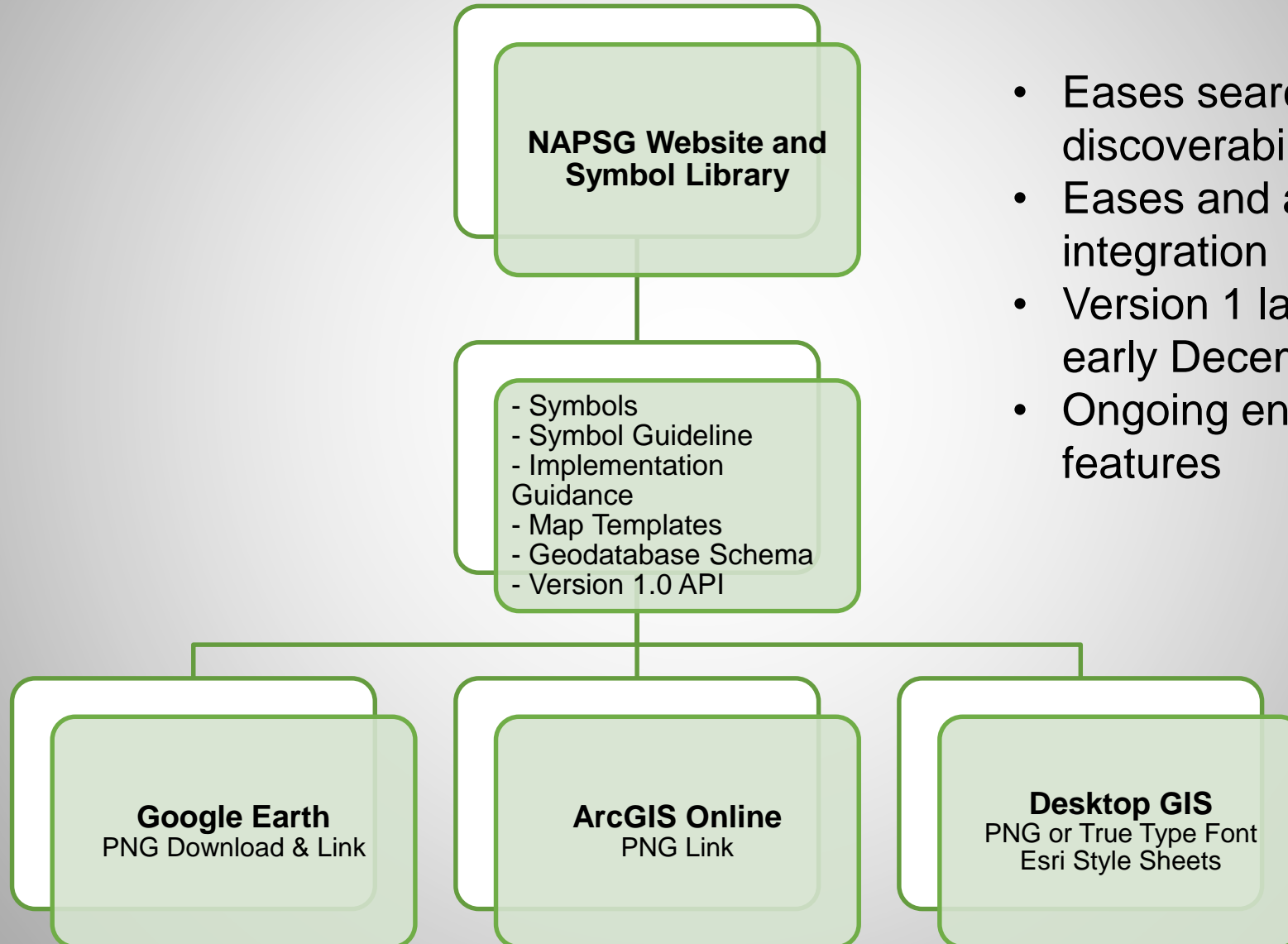
Web Mapping Application

Release of Hazardous Materials using the NAPSG Symbols Guideline



- ❖ Technical Implementation Guidance (version 1.0)
- ❖ Implementation Guidance for Operators (beta version)
- ❖ Map Templates and Example Workflows (version 1.0)
- ❖ Geodatabase Schema (version 1.0)

# Coming Soon: Symbol Library & Tools



- Eases search and discoverability
- Eases and automates use and integration
- Version 1 launch planned for early December
- Ongoing enhancements and features

# Coming Soon: Symbol Library & Tools





MY ICONS ( 0 )





Home





Sneak Preview!

Search Icons Here





Hazard























Incident























NIMS























Preplan























Public\_Alert



















Units

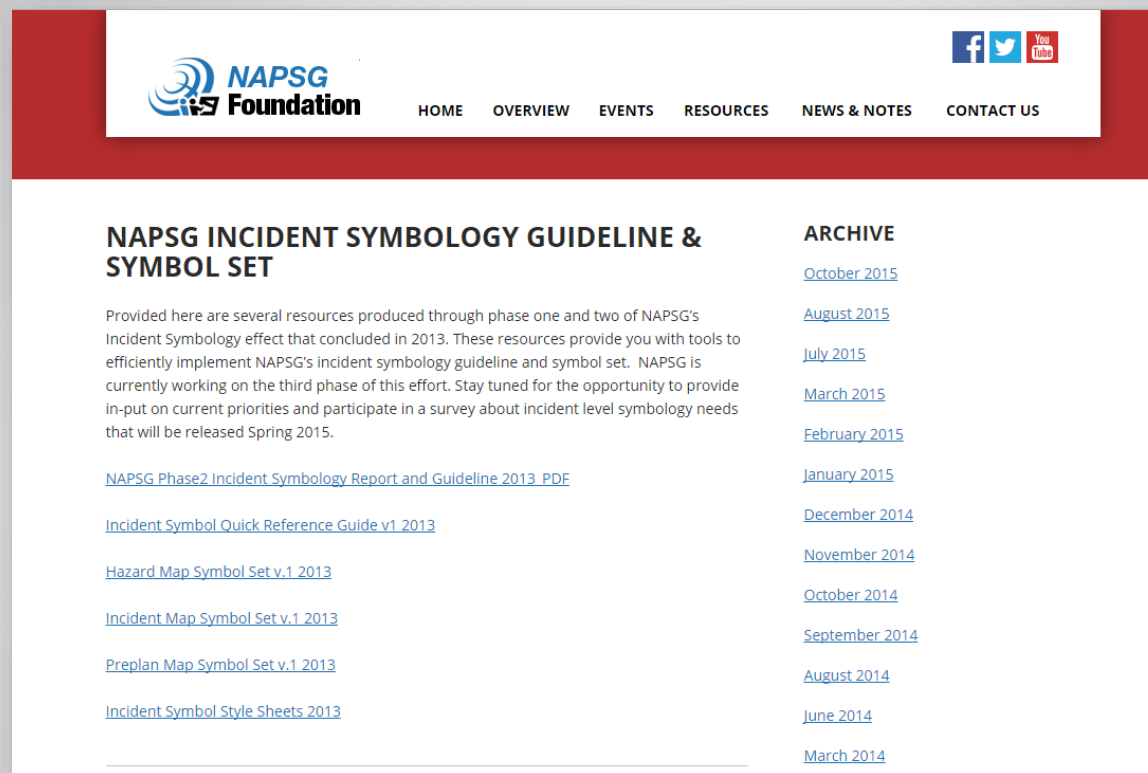





# Your Ideas?

- ❖ We want to know....What other priority symbol needs do you have?
- ❖ Send an email to: [rharned@publicsafetygis.org](mailto:rharned@publicsafetygis.org) with your needs and/or if you would like to get involved with NAPSG's Symbolology Working Group

# Thank You to the SWG

Name	Agency	State
Brian Crumpler	Virginia Information Technologies Agency	VA
Xenophon (Yo) Gikas	LA City Fire Department	CA
Eric Fisher	Fairfax County Fire Rescue	VA
Soheila Ajabshi	Miami-Dade Emergency Management	FL
Bill Burgess	NSGIC, Washington Liaison	MD
Tommy Presley	Huntsville Police Department	AL
Paul Morgan	Alameda County Fire Department	CA
Rusti Liner	St. Tammany Parish Government	LA
Vanessa Glynn-Linaris	National Parks Service	AZ
Mike Domingue	New Hampshire National Guard	NH
John McKenna	New York City Police Department	NY
Rusty Russell	Huntsville Madison County Emergency Management	AL
Larry Fox	Mount Laurel Fire Department	NJ
Pablo Lee	Seattle Police Department	WA
Robert Bingham	FBI Joint Terrorism Task Force	AL
Lori Peltz Lewis	US Forest Service (NWCG Liaison)	CA
Chris Renshaw	University of Connecticut Fire Department	CT



New Tools Coming Soon!

❖ <http://www.napsgfoundation.org/napsg-incident-symbology-guideline-symbol-set/>



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# Thank You!