Instructors

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About NAPSG Foundation

• National Alliance for Public Safety GIS (NAPSG) Foundation
  • 501(c)(3) Non-profit organization established in 2005
  • +7,000 members: both GIS and Operations Staff (non-GIS)
  • Board of Directors comprised of public safety & emergency management industry leaders

• Our vision is to provide the resources and support necessary to equip emergency responders and leaders with the knowledge and skills to apply technology and data to change the outcome for survivors.
Our Purpose & Objectives Today

Purpose:

Gain the technical knowledge to build effective USNG-enabled decision support tools that support your organization’s mission.

Objectives:

• Create USNG paper maps in ArcGIS for Desktop that adhere to USNG guidelines.
• Add USNG to your web maps in ArcGIS Online, as well as adding USNG locators to your ArcGIS Online organization.
• Add and configure USNG within common web applications found in ArcGIS Online.
• Find additional resources from NAPSG Foundation to support your work.
Agenda

• Building USNG Maps with ArcGIS for Desktop (20 Minutes)
• Adding USNG to Web Maps in ArcGIS Online (10 Minutes)
• Configuring USNG in Web App Builder (10 Minutes)
• Setting up USNG Locator in ArcGIS Online as an Administrator (10 Minutes)
• Additional Resources (5 Minutes)
Building USNG Maps with ArcGIS for Desktop

Steven Pollackov
USNG-UTM Coordinates & Zones

Data frame properties

Based on UTM Zones

Grid Zone Designation (GZD)
USNG Reference Scales

Setting reference scales – Not any scale will do
USNG Reference Scales

Needed USNG Layout Elements

U.S. National Grid

100,000 - m Square ID

UJ

Grid Zone Designation 18S

TO CONVERT A GRID AZIMUTH TO A MAGNETIC AZIMUTH ADD G-M ANGLE

TO CONVERT A MAGNETIC AZIMUTH TO A GRID AZIMUTH SUBTRACT G-M ANGLE

USNG - Washington DC Area

Scale: 1:6000 - 1 inch = 500 feet (print size 8” x 11”)

This map was created using the FGDC Standard for the U.S. National Grid - FGDC-STD-011-2001

For additional information see http://www.fgdc.gov/usng

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USNG Reference Scales

USNG Grid Labeling
Adding USNG to Web Maps in ArcGIS Online

Peter Hanna
FDGC USNG Layer – US Grids
FDGC USNG Layer – Maryland Divided
FDGC USNG Layer – Grid Intersection
FDGC USNG Layer – 1,000 m Grids UTM 17
FDGC USNG Layer – 100 m Grids
FDGC USNG Layer – 100 m Coverage
Layer: USNG 100m Baltimore MD (ID: 32)

Parent Layer: Eastern
Display Field: USNGCoord
Type: Feature Layer
Geometry Type: esriGeometryPolygon

Description: USNG is standard that established a nationally consistent grid reference system. It provides a seamless plane coordinate system across jurisdictional boundaries and map scales; it enables precise position referencing with GPS, web map portals, and hardcopy maps. USNG enables a practical system of geocodes and a universal map index. This data resides in the GCS 1983 coordinate system and is most suitable for viewing over North America. This layer shows 100 meter grid squares for the Baltimore MD metropolitan area.

Definition Expression:
Copyright Text: National Geospatial-Intelligence Agency (NGA); Delta State University; Esri
Min. Scale: 10000
Max. Scale: 0
Default Visibility: True
Extent:
    XMin: -8608729.01981953
    YMin: 4098268.36360712
    XMax: -8429521.90679448
    YMax: 4829930.44697900
    Spatial Reference: 2857
Has Attachments: False
HTML Popup Type: esriServerHTMLPopupTypeAsHTMLText
USNG State Specific
USNG State Specific

Add Layer from Web

What type of data are you referencing?

An ArcGIS Server Web Service

URL: http://<MyServerName>/ArcGIS/rest/services/<MyServiceName>

Use as Basemap

ADD LAYER  CANCEL
USNG State Specific

Contents
- MD USNGZone185 - US National Grid Zone 185 6x9 Zones
- MD USNGZone185 - US National Grid Zone 185 10000m
- MD USNGZone185 - US National Grid Zone 185 100000m
- MD USNGZone175 - US National Grid Zone 175 6x6 Zones
- MD USNGZone175 - US National Grid Zone 175 10000m
- MD USNGZone175 - US National Grid Zone 175 100000m
- MD USNGZone175 - US National Grid Zone 175 1000000m
- Topographic
Configuring USNG in Web App Builder

Ryan Lanclos
Setting up USNG Locator in ArcGIS Online as an Administrator

Ryan Lanclos
SAMPLE SERVICE:
http://serverapps101.esri.com/arcgis/rest/services/MGRS/GeocodeServer
Administrator Tips

• Move Your USNG Locator to the top position
  • Helps avoid errors with USNG coordinates being geocoded to an address, etc. in the default locator
  • Ensures that USNG coordinates will hit this geocoder first

• Use “Geocoder Name” and “Place Text” to help users find the locator if needed
NAPSG Foundation Resources

US NATIONAL GRID RESOURCES

The US National Grid (USNG) is a point and area reference system that provides for actionable location information in a uniform format. Its use helps achieve consistent situational awareness across all levels of government, disciplines, and threats & hazards - regardless of your role in an incident. NAPSG makes several resources available to help public safety agencies get started using the USNG.

Why Use the USNG? Background Resources

1. Applying the USNG for Enhanced Situational Awareness
2. Applying the USNG for Pre-Scripted Missions

How to Get Started? Basic Implementation Guidance

1. Implementation Guide to the USNG
2. Video on Introduction to the USNG for Public Safety
3. How to Read the USNG
4. USNG Grid Card Reader Template

What tools are available? Technical Resources

1. Map Template for Creating 1:24k USNG Maps
2. Guideline for Building USNG Polygons

For additional USNG-related resources and tools, also take a look at the following resources:

- USNG Center
- ESOC USNG Resources
- FEMA Directive on the Use of the US National Grid
- USNG Map Book Templates

Still have questions or need assistance? NAPSG also offers fee-for-service USNG Technical Assistance for public safety agencies interested in using the USNG in operations. For more information contact services@publicsafetygs.org or by phone at 202-895-1711.
Additional USNG Virtual Training

• Applying US National Grid for Decision Support in Search & Rescue
  http://bit.ly/1WBvKdz

• Implementing a Common Location Reference for Daily and Disaster Operations
Geospatial Subject Matter Expertise
Our GIS Subject Matter Experts can augment your capabilities by providing technical assistance, solution development and implementation. We craft geospatial solutions that support your workflows, and the mission-critical decisions that must be made.

Business Planning & Documentation
Just as success in public safety starts with planning, so does successfully implementing GIS capabilities. Whether it is assessing needs, documenting procedures, or strategic planning, we’ll provide you a roadmap for success and help keep you on track.

Training & Education
Training and education focused on your workflows and solutions helps ensure adoption and use of your GIS. We develop and conduct training where you need it most, and can help train staff to your standards and guidelines across the organization.
Upcoming Events

- Upcoming Virtual Training
  - July - Accessing and Using National Data for Preparedness Efforts (aka HIFLD)
  - August - Using the Integrated Public Alert & Warning System
  - September - Self-Assessing Your Agency’s Geospatial Capabilities
  - October - Unifying Mutual Aid through Location Information and Decision Support
  - November - Increase Community Resilience for Climate Change Using Decision Support

- National Geospatial Preparedness Summit
  - September 13-14, 2016 in Washington, DC
    http://conta.cc/1SYZZZP
Thank you!

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