NH GEODATA PORTAL
PARTICIPATION GUIDE AND STANDARDS
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TABLE OF CONTENTS

OVERVIEW

The NH Geodata Portal (NHGP), (https://www.nhgeodata.unh.edu/), is a cloud-based environment that supports the discovery and sharing of geospatial assets. It offers access to a broad range of geospatial items, including data, applications, dashboards, and tools, that describe physical, natural, and cultural resources in the state of New Hampshire. The items have been developed for use and analysis at the local, regional, or state level. They have been provided to the portal for sharing and distribution to our partner organizations as well as the general public. The NHGP is managed by NH GRANIT (https://granit.unh.edu/), the NH state GIS clearinghouse housed at the University of New Hampshire.

The NHGP is based on the ArcGIS Online (AGOL) Hub technology and is thoroughly integrated within the comprehensive AGOL framework of applications. AGOL requires minimal user maintenance and at a basic level, is easy to implement and use. It provides the following benefits:

- Complete cloud solution (e.g. online maps, dashboards, surveys, etc.)
- No need for internal infrastructure (e.g. a server and IT staff) to support web mapping
- Ease of use and maintenance for organization staff (even non-GIS users)
- Ease of use for non-technical GIS users (i.e. simple and easy to create and maintain items)
- Access to a large community for support and extensive documentation

The benefits noted above can provide great value, utility and visibility to an organization's data and applications and for these reasons, developers, managers, and users of geospatial items in New Hampshire are strongly encouraged to share their geospatial items via the NHGP.

Developers of geospatial items who wish to participate in the NHGP are asked to adhere to the set of guidelines and standards described below. This will help achieve the broadest utility of their contributed resources. The standards and guidance in this document are considered "dynamic" and as such, are expected to evolve over time. Users are encouraged to periodically refer to this document for modified and/or new participation guidance as well as publishing and tag standards as the NHGP matures and usage widens.

For further information:

- About the NHGP – please visit: https://www.nhgeodata.unh.edu/
- About GRANIT – please visit: https://granit.unh.edu/
- About AGOL and portal technology – please visit: https://hub.arcgis.com/

Questions about the NHGP and/or GRANIT may be directed to granit@unh.edu

NHGP PARTICIPATION GUIDE

The NHGP hosts an extensive collection of geospatial data, applications, dashboards, and other resources. It is designed to accommodate geospatial assets from organizations in the state who wish to expose and make available their resources to the public. While many organizations contributing to the NHGP are active users of AGOL, that is not a requirement to participate. Below please find an overview of the options for participating in the NHGP.

How to Participate in the NHGP

I. Organizations who have an existing AGOL account and want to participate in the NHGP can use the following steps to become active in the portal:
   A. Contact the NH GRANIT Database Manager at granit@unh.edu and request to participate in the NHGP.
   B. Provide a Point of Contact (POC) who will be responsible for communicating with and responding to NH GRANIT.
   C. NH GRANIT will create an AGOL Group which can be used to stage the organization's content and will invite the organization's POC to join.
   D. Data items can then be published directly to the AGOL Group (as hosted feature layers, etc.), or can be published with ArcGIS Server and then added to the AGOL Group as an item.

II. Organizations who do not have an existing AGOL account and want to participate in the NHGP can use the following procedure to become active in the portal:
   A. Contact the NH GRANIT Database Manager at granit@unh.edu and request to participate in the NHGP AGOL Community organization (The NHGP AGOL Community is a specialized organization where members can create and publish AGOL items.).
   B. Provide a Point of Contact (POC) who will be responsible for communicating with and responding to NH GRANIT.
   C. NH GRANIT will create an AGOL Group which can be used to stage the organization's content and invite the organization's POC to join.

How to Add AGOL Items to the NHGP

I. The organization publishes an item to AGOL.

II. After publication, there are two methods to include content in the NHGP.

    A. For agencies who contribute many items to the NHGP, it may be most efficient to contain items in a staging group for ease of management. Item inclusion using the staging group proceeds as follows:

        i. The contributing organization POC shares the item to the organization's staging group and contacts NH GRANIT to request that the item is included in the NHGP.

        ii. NH GRANIT vets the item to ensure that it complies with the standards listed below and upon approval, shares the item to a public-facing, Open Data group which makes the item visible to and discoverable by users of the NHGP.

    B. Direct item inclusion is as follows:

        i. The contributing organization POC contacts NH GRANIT and, referring to the AGOL item ID, requests that the AGOL item be included in the NHGP.

        ii. NH GRANIT vets the item to ensure that it complies with the standards listed below and upon approval, shares the item to a public-facing, Open Data group which makes the item visible to and discoverable by users of the NHGP.

How to Submit Data to NH GRANIT for Publishing

I. In some cases, organizations may wish to publish data, but do not have access to AGOL or ArcGIS Server. In these situations, the data can be delivered to NH GRANIT and it will be published using ArcGIS server. In addition, the data item will be added to the NH GRANIT AGOL organization and made accessible and discoverable through the usual AGOL mechanisms, which includes the NHGP. The following provides steps necessary to use this workflow:

    A. Data can be submitted to NH GRANIT as an email attachment (less than 10 MBs) along with a request to publish the data. The following items are necessary for publication:

        i. The data in a zipped file.

        ii. Metadata that describes the data.

        iii. Any associated documents such as project descriptions, .lyr files that control symbolization, etc.

        iv. The organization who developed the data and to whom credit should be attributed.

    B. For data items greater than 10 MBs, organizations can upload files to the NH GRANIT FTP server. In these cases, please contact NH GRANIT for specific details. Requirements for these submissions are the same as those described in section I.A (above).

NHGP PUBLISHING STANDARDS

II.   **Purpose**

This section describes publishing standards and methods by which organizations can include data and applications in the NHGP. The NHGP serves as a centralized hub to host, share and distribute geographic data for the state of New Hampshire. The standards below define the requirements necessary to ensure a standardized structure that will maintain and support the consistent delivery of geographic items through the portal.

III.   **Applicability**

The conditions described by these standards apply to organizations who want to expose and share their geospatial items (data, apps, services, tools) to the public through the NHGP environment. Participating organizations include, but are not limited to New Hampshire state agencies, regional planning commissions, municipalities, other quasi-state agencies, federal agencies, and nonprofit concerns.

IV.   **Sharing Agreement**

Participating organizations must agree to make a best-faith effort to adhere to the standards listed in this document. NH GRANIT reserves the right to refuse or remove items that do not meet the standard requirements listed below.

V.   **Item Standards**

To include content in the NHGP, contributors must make their items available using ArcGIS Online (AGOL). Those items must include the following descriptive properties:

A.   **Title:** A title that is descriptive of the item. As an example, the title should observe a similar format as those found in the AGOL Living Atlas (e.g. do not include underscores and the like).

B.   **Summary:** A brief description of the item that informs users of the purpose.

C.   **Description:** A more detailed narrative of the data or application including its purpose, contents, data sources, and other informative material. For Web Applications, consider including this information as a Splash Screen or About/Info box in the app. This will allow users to read the full description of the App. Note that the Description as shown in the Item Details in AGOL may not be viewable to all users.

D.   **Tags:** All items that are shared for inclusion in the NHGP must include meaningful tags (e.g. short descriptors) in accordance with the NHGP Tagging Standard (described below). The purpose of tagging is to help define items and to make them consistently discoverable within the portal. While standard tags are required, it is acceptable to include additional item-specific tags to describe unique situations.

E. **Thumbnail:** For apps, the item thumbnail should be an attractive and relevant image that engages and informs potential users. As a starting point, Esri recommends freely available images from unsplash.com and pexels.com. For data, use a standard icon specific to the organization's "branding" that represents the item data category. For example, the NH GRANIT icon for Feature Layer is:

F. **Metadata:** For data layers, the metadata must comply with the NH GRANIT standards described at the NH GRANIT Metadata page. As a start, import ArcGIS xml metadata into the AGOL item's metadata editor (for instructions, see https://doc.arcgis.com/en/arcgis-online/manage-data/metadata.htm). For apps, formal metadata is not required.

NHGP TAG STANDARDS

I. **Purpose**

The purpose of the tagging standard is to provide a reliable, structured mechanism that will guide NH Geodata Portal contributors on the use of applicable tags while also providing an applicable tag domain.

II. **Applicability**

The standards in this document apply to organizations who want to share and expose their geospatial information (data, apps, services, tools) to the public through the NH Geodata Portal environment.

III. **Principal Concepts**

The following presents the fundamental ideas that guide the tagging standard development:

A. **Consistency:** Tags are applied to items in a consistent and expected manner. For example, any LiDAR-derived product (e.g. hypsographic contours, digital elevation models, digital terrain models, etc.) would be described with a tag named "elevation", etc.

B. **Item Discovery:** Item tags are critical to making apps and data layers discoverable from within the NHGP. The standardized list of tags helps deliver consistent, organized, and expected item search results.

C. **Flexibility:** It is recognized that outside organizations and state agencies will have their own tagging needs and for this reason, the standard provides a flexible framework that allows the addition of unique, item-specific tags.

IV. **Tagging Standards**

To include items in the NHGP, contributors must tag their items using the tagging standards described below. The tagging standard is flexible such that organizations can include their own item-specific keywords, add these tags as necessary. NH GRANIT has developed a dictionary of potential tags based on those used by NH state agencies, RPCs, and NH GRANIT. The list ranges from general to specific keywords and is designed so that there are potential tags for most items. The dictionary can be found [here](). While limited exceptions are acceptable, items should include the following tags:

A. **Contributing Organization:** This refers to the organization who developed the item; include organization keywords such as NH DOT, NHDOT, NH DES, NHDES, NH OPD, NHOPD, etc.

B. **General Theme:** This refers to the subject theme or category to which the item belongs; include theme keywords such as Biology & Ecology (BE), Elevation & Derived Products (EDP), Inland Water Resources (IWR), etc.

C. **Specific Item Details:** This refers to specific keywords that describe the item; include item details such as Elevation, Land Cover, Transportation, etc.