



# National Trails Office (NTIR) OCTA Mapping Workshop Survey123

OCTA Mapping Workshop

September 9-11, 2021

National Park Service – National Trails

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# Survey123

- Form-Centric Mobile Data Gathering Application(similar to a fillable PDF)
- User-Friendly
- Dynamic-Displayed Questions Change Depending on the User Input
- Automatically Collects User Location Using Built In Tablet/Smart phone Global Positioning System (GPS)
- No Cellular Coverage/Internet Connectivity Required





# Survey123 and ArcGIS Online

- Survey123 is Integrated into ArcGIS Online.
- Survey123 Data can be viewed and edited within ArcGIS Online

The screenshot shows the ArcGIS Online interface for the item 'NTIR Survey123 MET Mapping'. The top navigation bar includes 'Home', 'Gallery', 'Map', 'Scene', 'Groups', 'Content', and 'Organization'. The item page has tabs for 'Overview', 'Data', 'Visualization', 'Usage', and 'Settings'. The 'Overview' tab is active, showing the item title, a feature layer hosted by 'ntirres\_nps', and creation/update dates. A right-hand sidebar contains buttons for 'Open in Map Viewer Classic', 'Open in Scene Viewer', 'Open in ArcGIS Desktop', 'Publish', 'Create View Layer', 'Export Data', 'Update Data', 'Share', and 'Metadata'. Below these is the 'Item Information' section with a progress bar and a 'Details' section showing the source as 'Feature Service'.

The screenshot shows the ArcGIS Online map viewer for the 'NTIR OCTA Example CALI NHT' item. The map displays the United States with a purple line representing the California National Historic Trail. A pop-up window for the 'Fort Hall Road' segment is visible, showing the following details:

COUNTY	ELKO
LAND_PLAN	NST/NHT - COMPREHENSIVE MANAGEMENT PLAN
NAT_TR_DES	NHT - CALIFORNIA
STATE	NV
TR_LENGTH	1.57
TR_NAME	CALIFORNIA NATIONAL HISTORIC TRAIL
ROUTE_NAME	Fort Hall Road
ROUTE_NA_1	
QUAD_250K	WELLS

The map includes a scale bar (0 to 300 miles) and a legend on the left side.

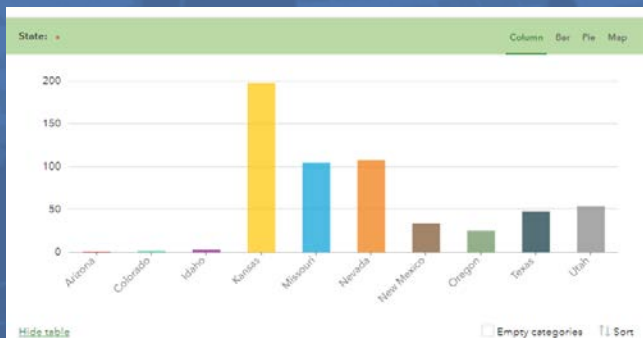
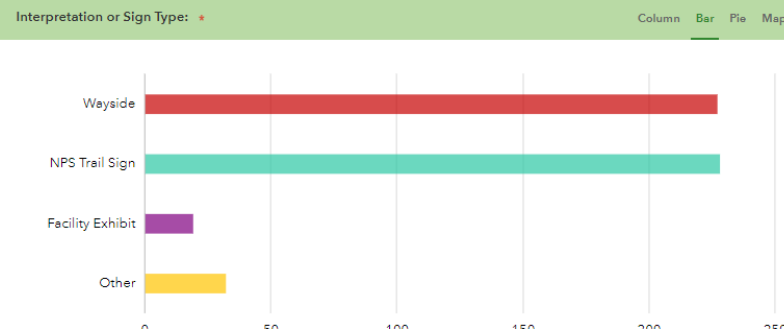
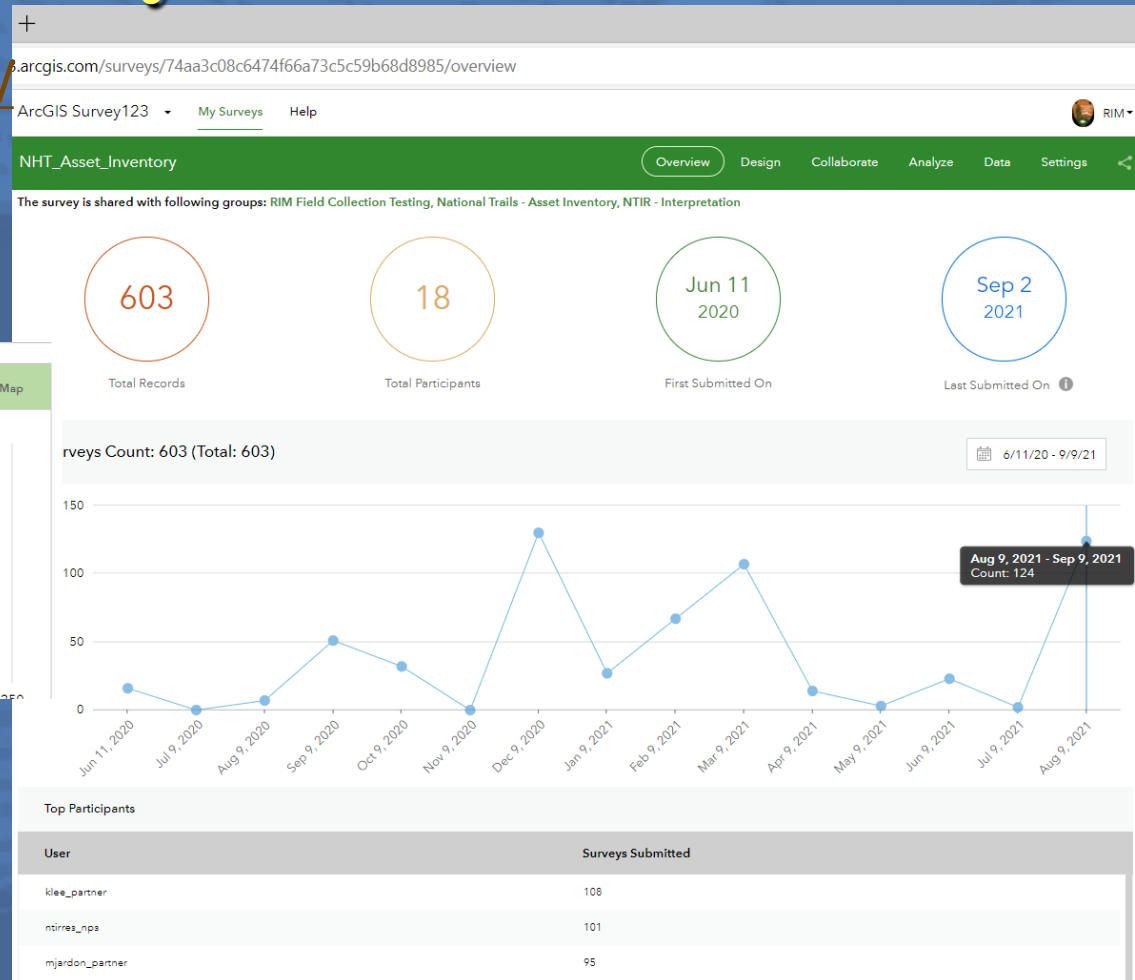




# Survey123 Data Analysis

<https://survey123.arcgis.com/>

- Query and Filter by Form Question





# Survey123 Data Analysis

<https://survey123.arcgis.com/>

- Query and Filter by Form Question
- Display in Web Map

ArcGIS Survey123 My Surveys Help

NHT\_Asset\_Inventory Overview Design Collaborate Analyze Data Settings

Report Export Open in Map Viewer Form view

NHT\_Asset\_Inventory

Interpretation or Sign Type:	Topic, Title or Description:	Wayside Type:	Other Asset Type:	Sign Category:	Sign Type:	Sign Type Other:	Panel/Marker Material:
NPS Road or Pedestrian Sign				Road			
NPS Road or Pedestrian Sign							
NPS Road or Pedestrian Sign				Road			
NPS Road or Pedestrian Sign				Road			
NPS Road or Pedestrian Sign				Road			

0 of 270 selected



# Survey123 Data Types

- Record Field Data
  - Points
  - Lines
  - Polygons
- Attach Photos to your Data



# Application to MET Mapping

- Ability to create standardized data simply using OCTA/NPS/FTGS fields and have the data centralized within one dataset (hosted feature) on ArcGIS Online.

ArcGIS Survey123

NTIR Survey123 MET Mapping

Polyline

National Historic Trail: \*

What trail(s) is the historic trail trace associated with?

☐ California ☐ Mormon Pioneer ☐ Oregon

☐ Pony Express ☐ Santa Fe

QUAD 24K

24K (7.5) Quad Map Name

FEATURE ID

Sequential numbering of features within Quad

Landscape Setting

Trail Alternative Name

Route Name

✓





# Creation of the Form

- Survey123 Form is created by using an existing dataset or creating a new one using a spreadsheet to define the fields for the data.

	A	B	C	D	E	F	G	H
	type	name	label	hint	guidance_hint	appearance	required	required_message
1	geotrace	Survey123_MET_Mapping_polyline	Polyline					
2	select_multiple	UNITCODE_DOM	National Historic Trail:	What trail(s) is the historic trail trace associated with?	horizontal		yes	Required: Nation
3	text	QUAD_24K	QUAD 24K	24K (7.5) Quad Map Name				
4	integer	FEAT_ID	FEATURE ID	Sequential numbering of features within Quad				
5	select_one	LANDSCAPE_SETTING_DOM	LANDSCAPE_SETTING			minimal		
6	hidden	TRNAME	Trail Name					
7	text	TRALNAME	Trail Alternative Name	Route Name				
8	select_one	TRAILSURFACE_NTDS2020	TRRSURFACE	Trail Surface		minimal		
9	select_one	TYPEOFROUTE_NTDS2020	TYPEROUTE	Type of Route		minimal		
10	decimal	TRAIL_WIDTH	Trail Width					
11	decimal	TRAIL_DEPTH	Trail Depth					
12	hidden	NATTRDESIGNATION	National Trail Designation					
13	select_one	NHTCONDITIONCATEGORY	NHTCONDACATEGORY	NHT Condition Category		minimal		
14	select_one	SHAREDSYSTEM_NTDS2020	SHAREDSYSTEM	Shared System		minimal		
15	select_one	ROADSYSTEM_NTDS2020	ROADSYSTEM	Road System		minimal		
16	select_one	ASSET_STATE_DOM	STATE	State		minimal		
17	hidden	MAPMETHOD	Map Method					
18	text	XYACCURACY	XY Accuracy					
19	text	NOTES	Notes					
20	select_one	DOM_PUBLICDISPLAY_NPS20	PUBLICDISPLAY					
21	select_one	DOM_DATAACCESS_NPS2016	DATAACCESS					
22	text	UNITCODE	UNITCODE					
23	text	UNITNAME	UNITNAME					
24	text	GROUPCODE	GROUPCODE					
25	select_one	DOM_REGIONCODE_NPS2016	REGIONCODE					
26	text	MAPSOURCE	Recording Device					
27	date_time	SOURCEDATE	Record Date					





# Publishing the Survey

- The Survey is published to ArcGIS Online:

Home Gallery Map Scene Groups Content Organization



RIM NTIR  
ntirres\_nps

NTIR - Wayside Inventory

Overview

Content

Members

Settings

+ Add items to group

NTIR MET



Grid

Title

Filter

Filters

1 - 4 of 4

Filters

Modified: Yesterday

Clear filters

## Group categories

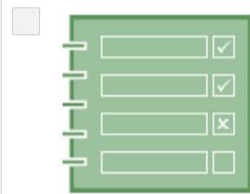
No group categories yet

Categories allow group members to organize items consistently and provide a simple way to browse content in the group.

Set up group categories

## Item type

Maps  
Layers  
Scenes  
Apps  
Tools  
Files



NTIR MET Mapping

by ntirres\_nps

Created: Sep 8, 2021  
Updated: Sep 8, 2021  
View Count: 2



NTIR MET Mapping

by ntirres\_nps

Created: Sep 8, 2021  
Updated: Sep 8, 2021  
View Count: 3



NTIR Survey123 MET Mapping

by ntirres\_nps

Created: Sep 8, 2021  
Updated: Sep 8, 2021  
Number of Downloads: 1



NTIR Survey123 MET Mapping

by ntirres\_nps

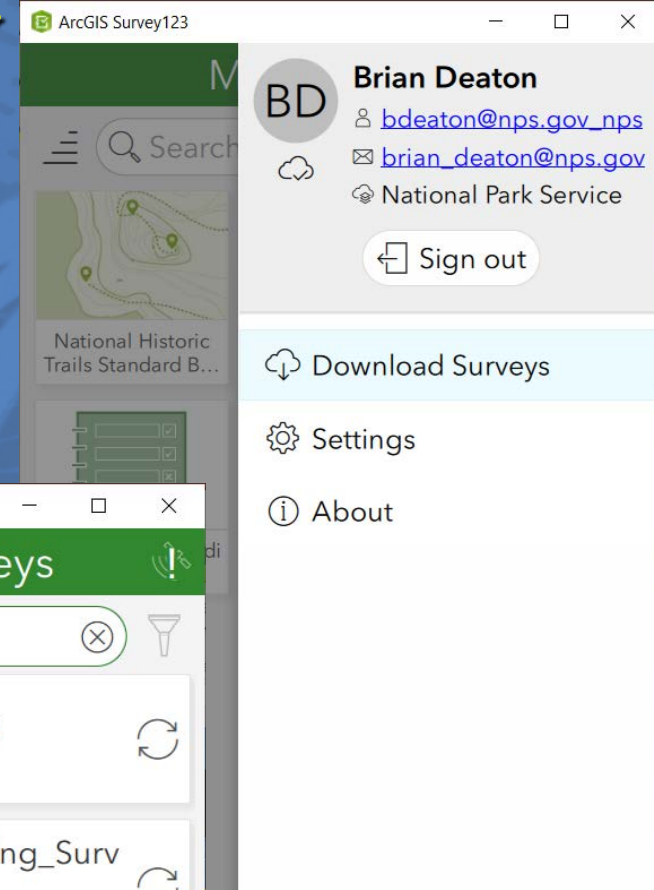
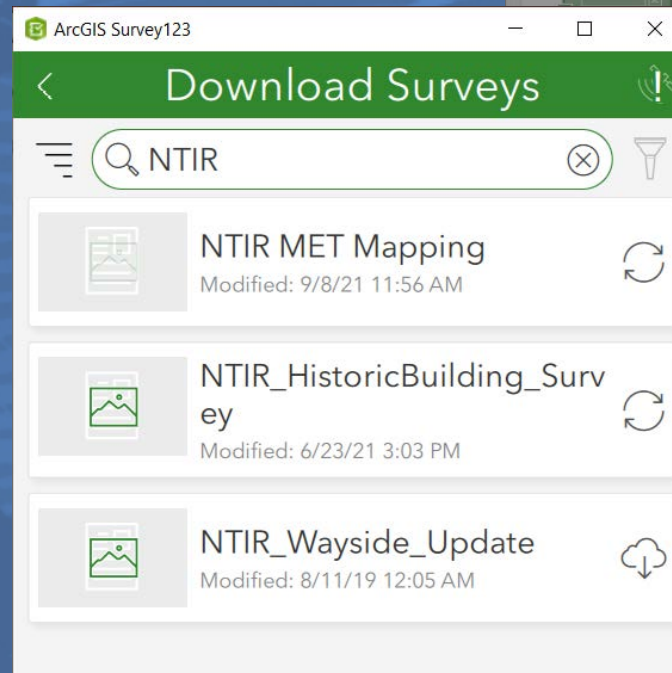
Created: Sep 8, 2021  
Updated: Sep 8, 2021  
View Count: 14





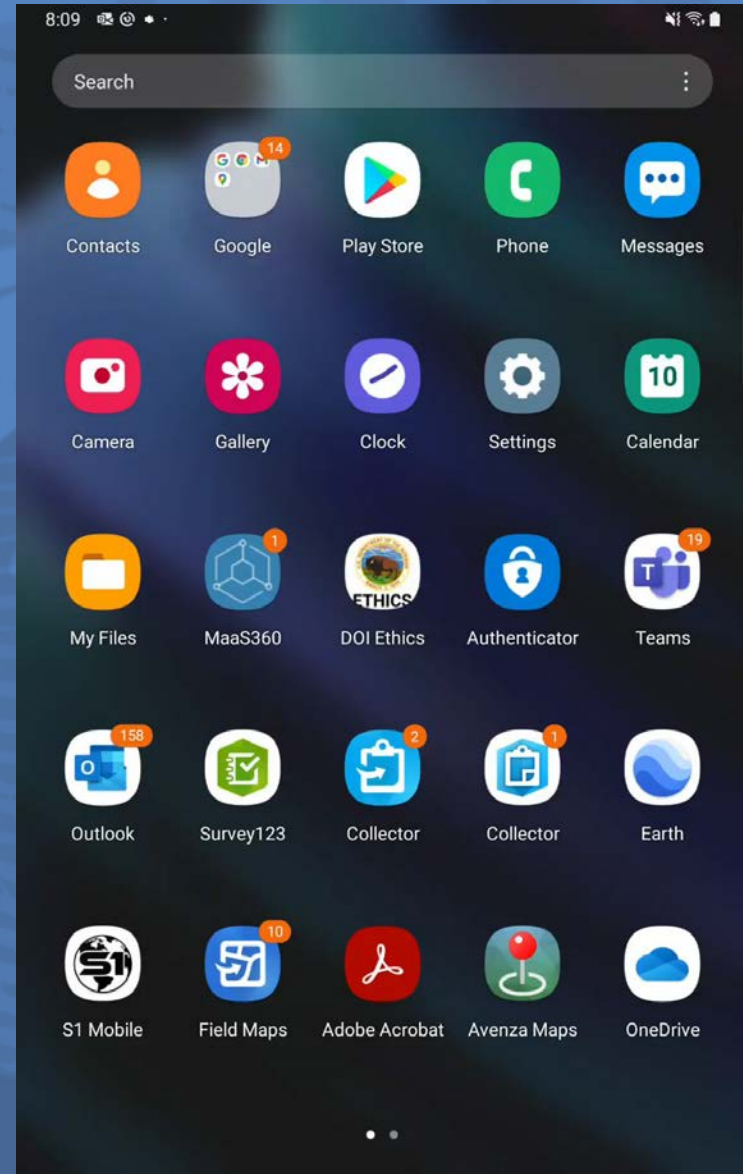
# Downloading the Survey

- ArcGIS Online users access the survey through Survey123 by downloading the survey.
- They must be a member of the group that has access to the survey.





# Using the Survey Demo and Survey Submission

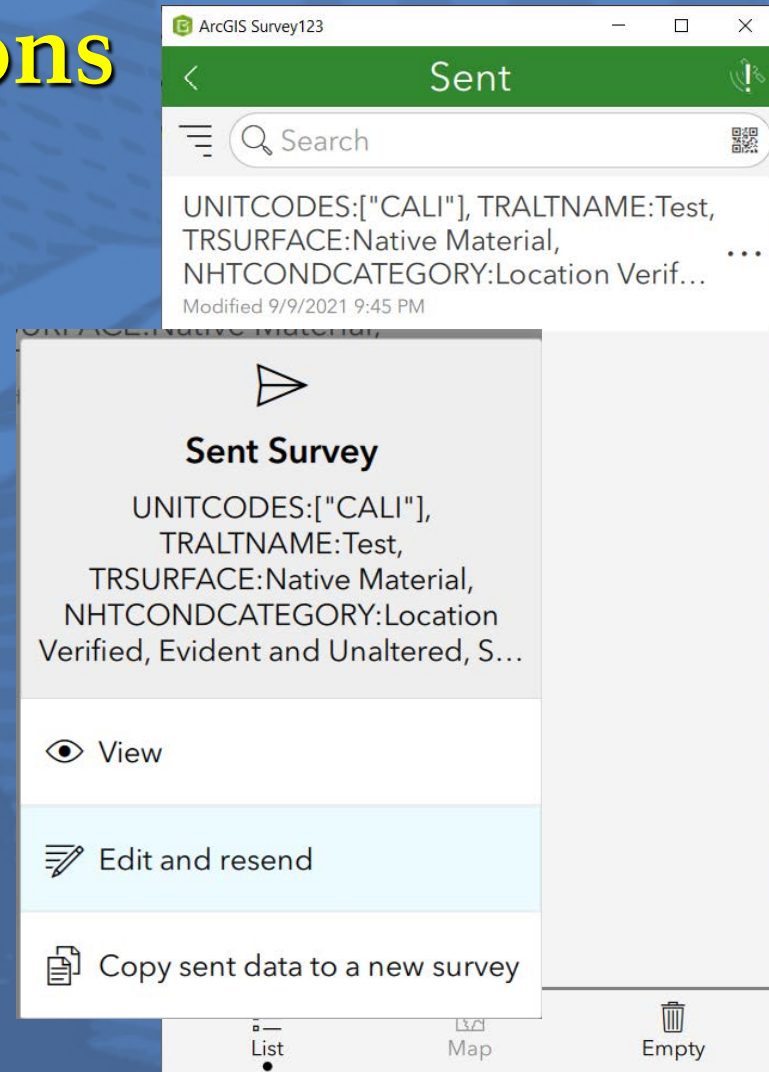






# Editing Submissions

- A user can edit their survey submissions through the Survey123 app, but only on the device they submitted them on.
- Submissions can also be edited directly from within ArcGIS Online. This includes the line, point, or polygon and the attributes (field) data.





# Viewing on ArcGIS Online

Home ▾ NTIR MET Mapping

Open in new Map Viewer New Map ▾ Create Presentation

[Details](#) [Add ▾](#) [Edit](#) [Basemap](#) [Analysis](#) [Save ▾](#) [Share](#) [Print ▾](#) [Directions](#) [Measure](#) [Bookmarks](#)

[About](#) [Content](#) [Legend](#)

Contents

☒ NTIR MET Mapping

Imagery Hybrid

NTIR MET Mapping (Features: 4, Selected: 1)

Edit Date	CREATEDATE	CREATEUSER	EDITUSER	GlobalID	Shape__Length	OBJECTID	Photos and Files
9/9/2021, 9:45 PM	9/9/2021, 9:45 PM	bdeaton@nps.gov_nps	bdeaton@nps.gov_nps	979a-f8439c447da9 7577e908-030a-49f3-9810-e69035024cd6	521 0.0140690507977793	3	(0) Add
9/10/2021, 8:15 AM	9/10/2021, 8:15 AM	bdeaton@nps.gov_nps	bdeaton@nps.gov_nps	95264fbb-d40f-4173-90a6-8bee4172c658	0.0004993648135361 89	4	(1) Show

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# Editing Data on ArcGIS Online

NTIR MET Mapping

https://nps.maps.arcgis.com/home/webmap/viewer.html?webmap=ae7edf54a60b4531bbfa71d805849271

Home ▾ NTIR MET Mapping

Open in new Map Viewer New Map ▾ Create Presentation RIM ▾

Details Add ▾ Edit Basemap Analysis Save ▾ Share Print ▾ Directions Measure Bookmarks Find address or place

Add Features

NTIR MET Mapping

Survey123\_  
MET\_Mapping

NTIR MET Mapping

Name test

Trail Surface Asphalt

Type of Route Trail

Trail Width

Trail Depth

National Trail Designation

NHT Condition Category Location Verified, Evident and Unaltered

Shared System Location Verified, Evident and Unaltered

Road System Location Verified and Evident with Minor Alteration

State Location Verified with Little Remaining Evidence

Map Method Location Verified and Permanently Altered

XY Accuracy Location Approximate or Not Verified

Notes Location Verified with Historic Reconstruction

PUBLICDISPLAY

0 20 40 ft

National Park Service, US Forest Service, US Geological Survey, (BLM, USFS???) | MRCOG-NM, Atlantic Group, MR... esri





# Pros/Cons of the App

## Pros

- Easy to Use
- PDF Fillable Format
- Simple to Collect Data
- Centralized Data Collection for Users
- Analysis through the Survey123 Site is very Useful

## Cons

- Need to have cellular data to see a map or create an offline map
- Does not have all the capabilities of other field data collection apps
- Cannot Access All Data through App



# What is needed to set this up?

- ArcGIS Online
- Individual Accounts
- Group for Data Collection
- Create the Survey Form (utilizing fields decided upon by OCTA)
- Publish the Survey and let users collect data



# Can the National Trails Office Host This?

- The NPS ArcGIS Online Organizational Account does not allow for sensitive cultural resource data to be stored on ArcGIS Online.
- We have a separate ArcGIS Online Portal that is more secure and used for sensitive data, but only NPS employees can access.





# Questions/Demos



References to non-U.S. Department of the Interior (DOI) products do not constitute an endorsement by the DOI.