



REPI

UNITED STATES DEPARTMENT OF DEFENSE
READINESS AND ENVIRONMENTAL PROTECTION INTEGRATION PROGRAM

Readiness and Environmental Protection Integration (REPI) Program

Interactive Web Mapping Application (WMA)

User's Guide

December 2020

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ABOUT THE REPI INTERACTIVE WEB MAPPING APPLICATION

The purpose of the REPI Interactive Web Mapping Application (WMA) is to provide partners with geographic information system (GIS) locations of all military installations with completed REPI transactions, along with relevant information and resources for these projects. The REPI WMA is an interactive map that provides open access to REPI data. It allows the user to view and query GIS data on REPI project locations, along with pertinent program data, policies, and fact sheets. The WMA is designed for users of all levels and provides the ability to tap into the REPI database to explore the data. Users have the ability to:

- View military installations with REPI projects and query them based on set criteria;
- Access REPI-specific funding and acreage information;
- Link to REPI buffer project fact sheets;
- Navigate to state policy options for supporting military installations and ranges;
- Visualize Sentinel Landscape natural and working lands;
- Research and customize REPI data for multiple installations at the local-, state-, and regional-level;
- Visualize and analyze other REPI partnership environmental and conservation-based data, such as USGS Protected Areas of the U.S. (PAD-U.S.), State Wildlife Action Plan Priority Areas, Fish and Wildlife Critical Habitat, Landscape Conservation Cooperatives (LCC) data;
- Research and customize REPI data for multiple installations at the local-, state-, and national-level; and
- Zoom in to view boundaries of REPI installations and other DoD (non-REPI) installations.

Users can also customize the tools (widgets) to search and select REPI data, display charts of select projects, bookmark map extents, and print maps. The base data in the WMA is from three sources: the Environmental Systems Research Institute (ESRI), DoD Installation Spatial Data Infrastructure (DISDI) Program¹, and the REPI Program.² Other layers are dynamically linked from other authoritative resources, such as: Environmental Protection Agency (EPA), National Fish and Wildlife Foundation (NFWF), U.S. Fish and Wildlife (USFWS), and U.S. Geologic Survey (USGS), as some examples.

Visit the REPI Interactive Map is located at: <http://www.repimap.org>. This application is provided free of charge and registration is not required. As such, the user may immediately begin to search for data and display, create, and customize a map.

To run the REPI WMA, the user must have an internet connection on a personal computer (PC) (Macs are not supported at this time) and a web browser with Adobe Flash enabled. A large portion of user questions are solved by using a different web browser. Chrome is the preferred browser to view the REPI Interactive Map. We encourage users to try using different web browsers (e.g. Edge, Firefox, IE), if applicable, and to try clearing the browser cache, before contacting the site administrators.

¹ DISDI is within the Office of the Deputy Under Secretary of Defense for Energy, Installations, and Environment, Business Enterprise Integration Directorate.

² Although the DoD Components provided the data, DoD neither makes any expressed or implied warranty regarding the utility of the data on any system, in derived products, or data alterations, nor shall the act of distribution constitute a warranty.

OVERVIEW OF REPI INTERACTIVE MAP FUNCTIONS

MAP NAVIGATION

This group of buttons allow you to navigate the map:
The **Zoom** buttons allow you to zoom in or out.
The **Home** button allows you to zoom to the default mapping area.
My Location button allows you to zoom to your current location.

ADDRESS SEARCH

The **Search** tool allows you to search an address or location.

MAP OVERVIEW

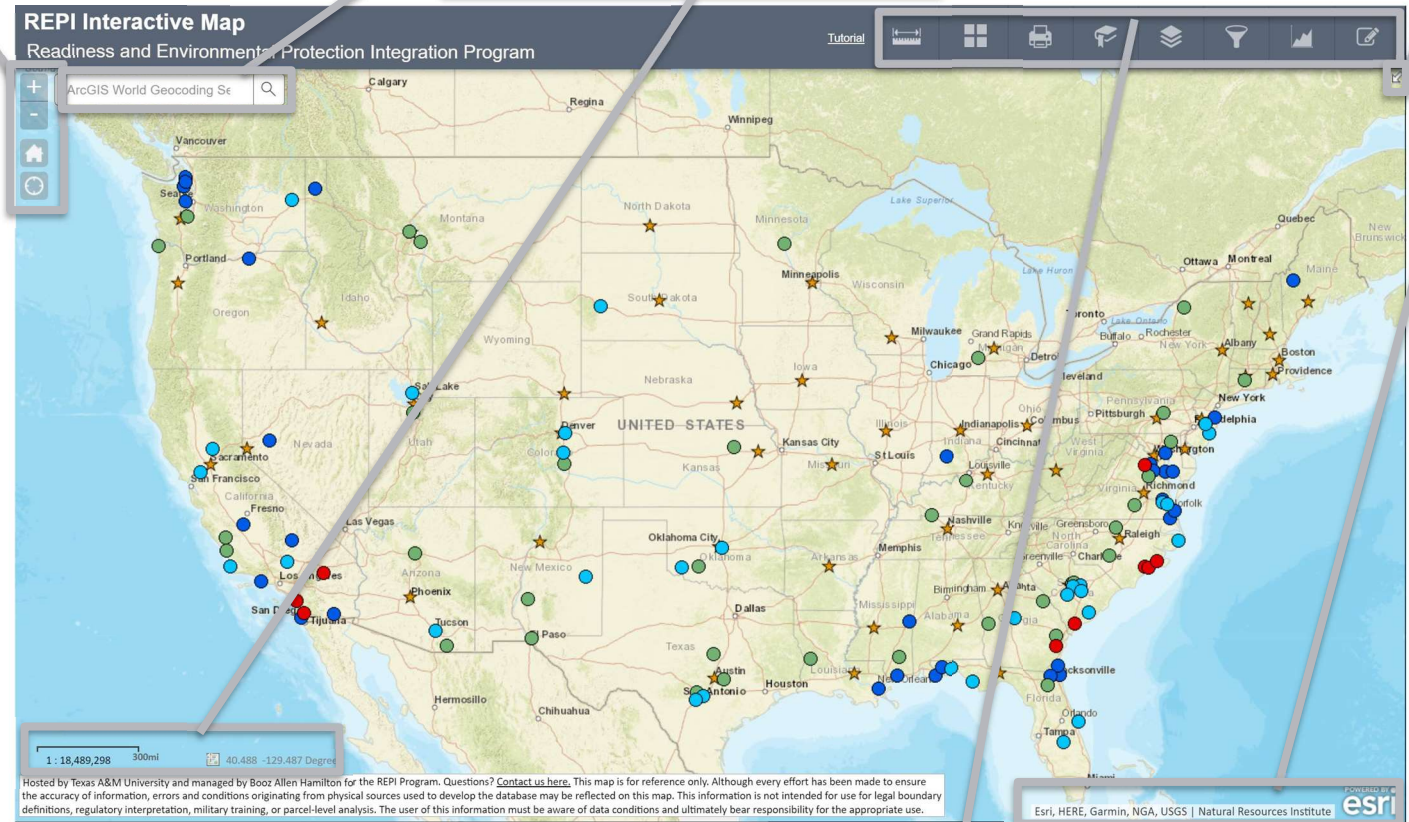
Opens an overview map (the same map but zoomed out) to provide context for the original map and its surrounding area.

DATA SOURCE

Changes as the map zooms in and out to show the applicable data sources for the chosen map extent.

MAP SCALE

Shows the distance on the map that is equivalent to the real world distance in kilometers and miles.



WIDGETS (from left-right)

MEASURE: The Measure Widget allows the user to measure areas, linear distances and coordinates.

BASEMAP: The Basemap Gallery widget allows users to select a variety of maps to display as background, such as Topographic, Street, and Canvas views. By default, the Terrain with Labels base map is selected.

PRINT: The Print widget allows users to export the map to PDF or another graphic format such as JPG.

BOOKMARK: The Bookmark widget allows the user to save the current mapping area to a bookmark, so the user can access it later.

LAYER LIST: The Layer List widget allows the user to turn individual map layers on and off, view layer legends, and change layer transparency. External mapping services relevant to the REPI Program are included. By default, installations with REPI projects and state summaries of REPI accomplishments are shown.

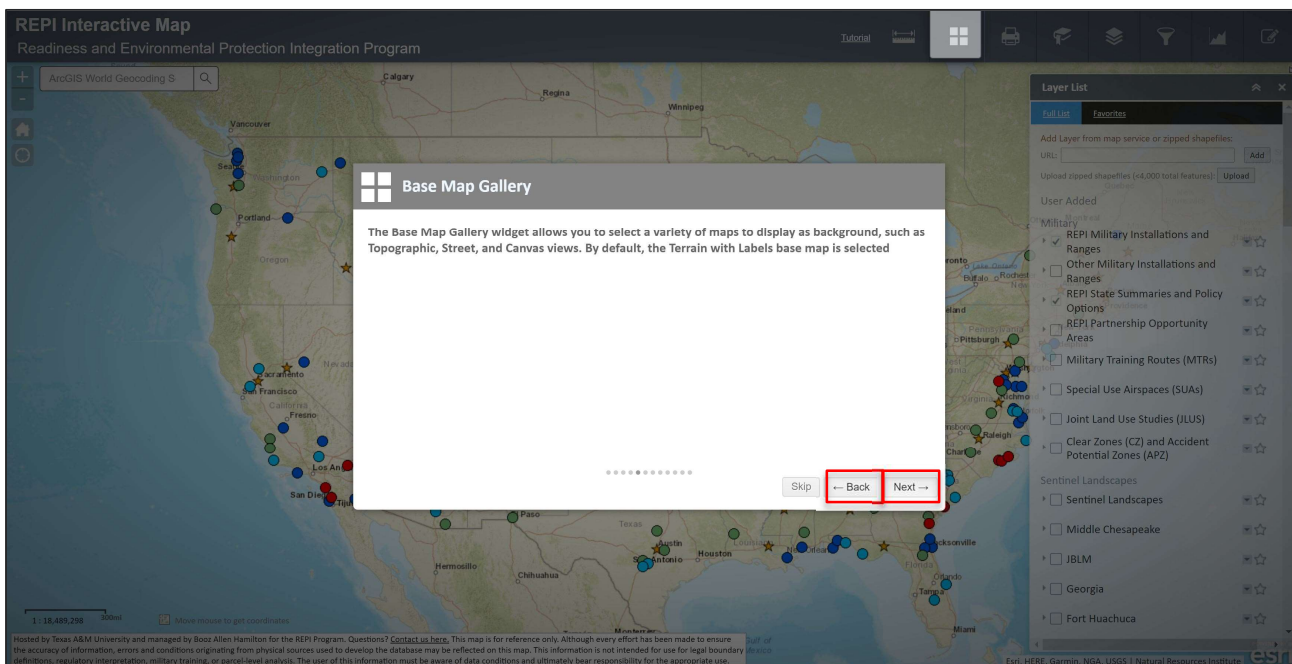
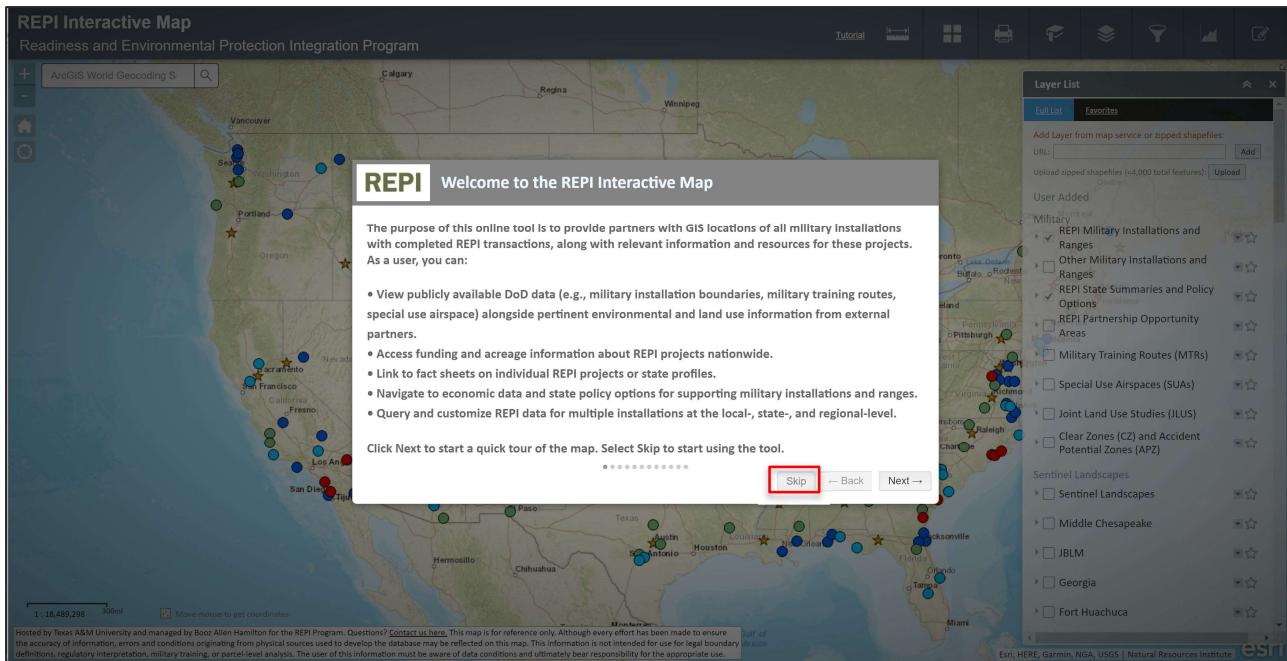
QUERY: The Query widget filters REPI installations based on acreage or funding attributes that are input.

CHART: The Chart widget allows the users to create graphs comparing acreage and funding information for multiple REPI projects that you select.

DRAW: The Draw widget allows the user to draw and save points, lines, or polygons (areas) and provide annotation (text) to delineate locations or points of interest.

SPLASH SCREEN

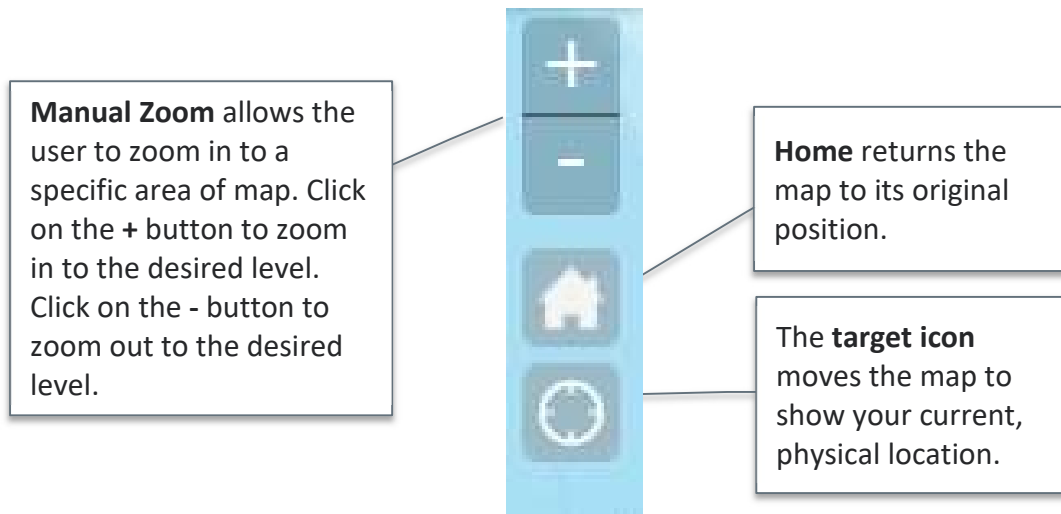
Upon opening the WMA, the user views the splash screen, which is a self-guiding tool to walk them through the application widgets and functionality. The splash screen will show everytime a user opens the REPI Interactive Map; click on the ‘skip’ button to dismiss it and get into the map itself. The splash screen is meant to provide a high-level overview of the functionality of the REPI Interactive Map. The opening screen below details the purpose of the map, and the image below that shows a subsequent screenshot using the ‘next’ or ‘back’ button to walk through the functionality of the site. The splash screen will highlight the widget and provide further explanation on how to use that functionality in the map.



MAP NAVIGATION

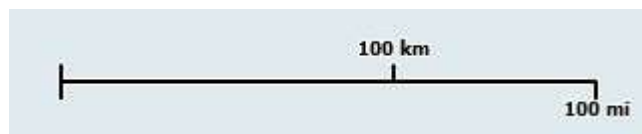


The zoom toolbar is on the top left side of the map, under the name, REPI Interactive Map: Readiness and Environmental Protection Integration Program. The user can select the size of the map using the navigation tool.

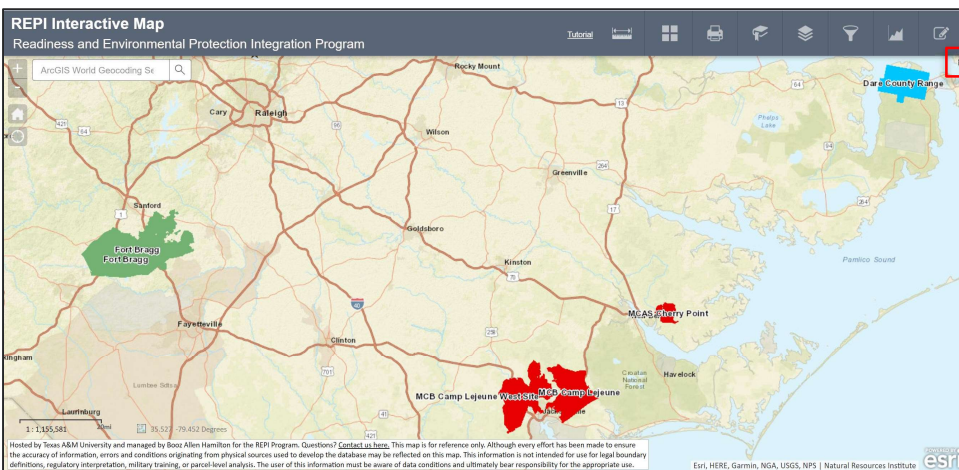


Manual pan is automatically enabled. This feature allows the user to drag the map in the desired direction. Click anywhere on the map surface and drag in the desired direction: the map will automatically move and display data in the new area.

The **scale bar** in the lower left corner of the map shows the distance on the map that is equivalent to the real world distance in kilometers and miles. As the user zooms in and out, the scale bar automatically adjusts to the scale of the map.

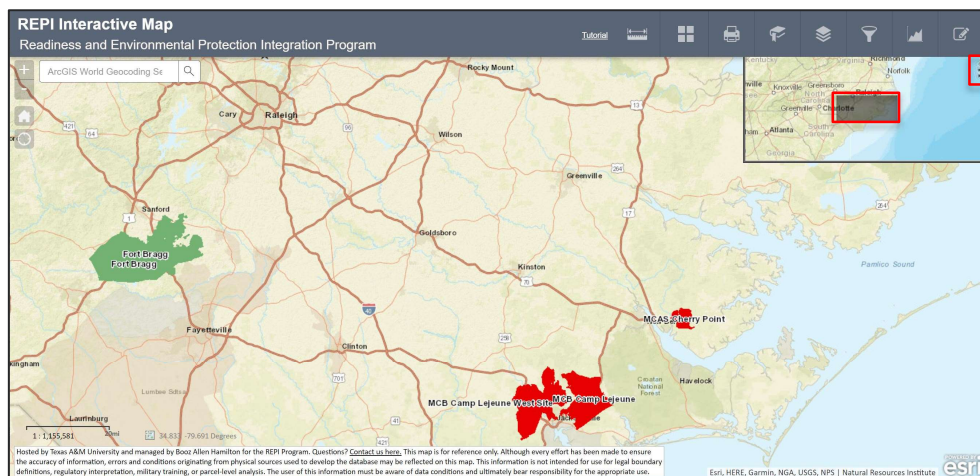


Click on the arrow in the upper right corner to reveal an **overview map**.



The overview map pops out in the upper right corner of the map screen and shows the current map extent as a grey box with transparent grey fill.

Click on the same arrow, now pointed up, in the upper right to close the overview map.

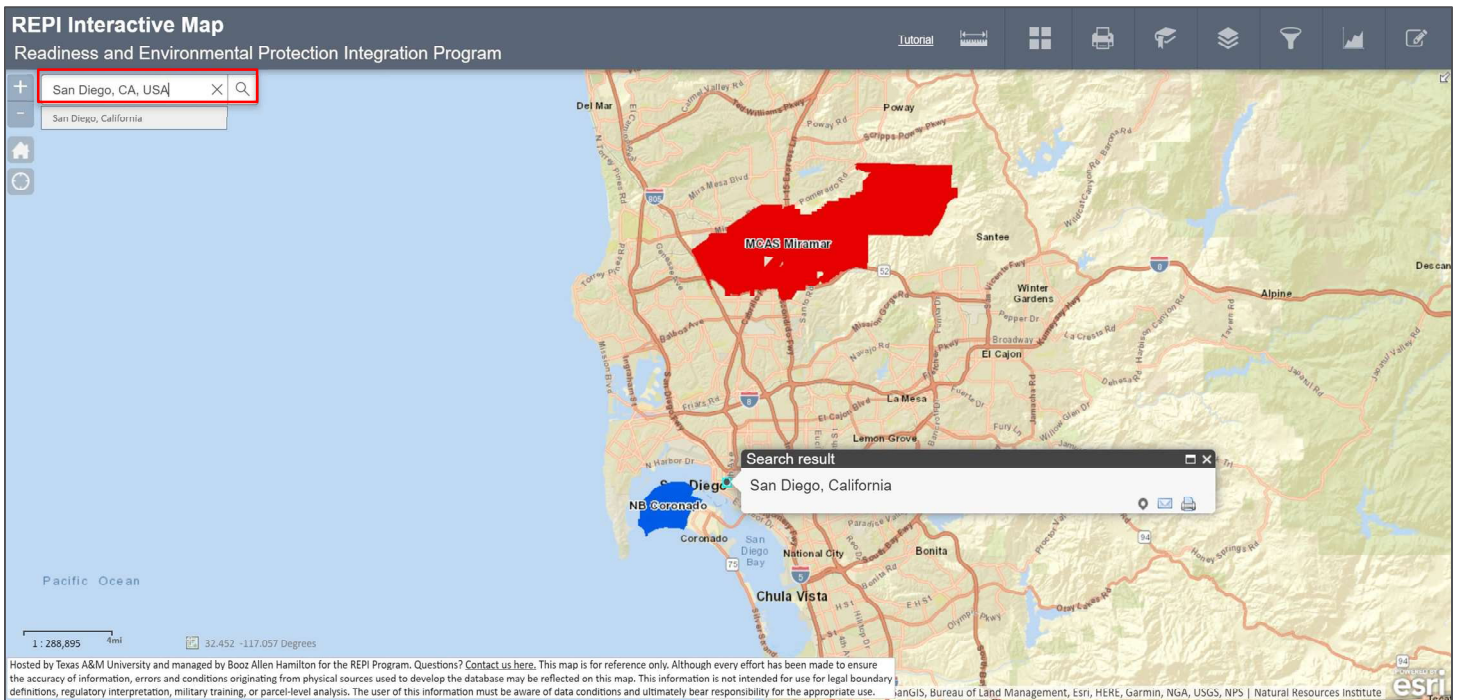


ADDRESS SEARCH

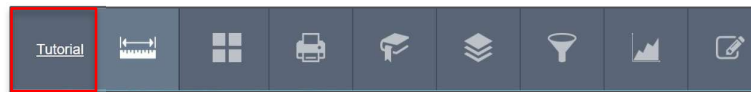
To search for a specific location or address, enter a full or partial address in the **Address bar**. The map will then zoom to that location.

For example, in the following illustration, “San Diego, California” is entered into the address box. After pressing the **Enter** key on the computer, the map will then zoom in to that city. The REPI installation boundaries nearest to the address will be shown in the map.

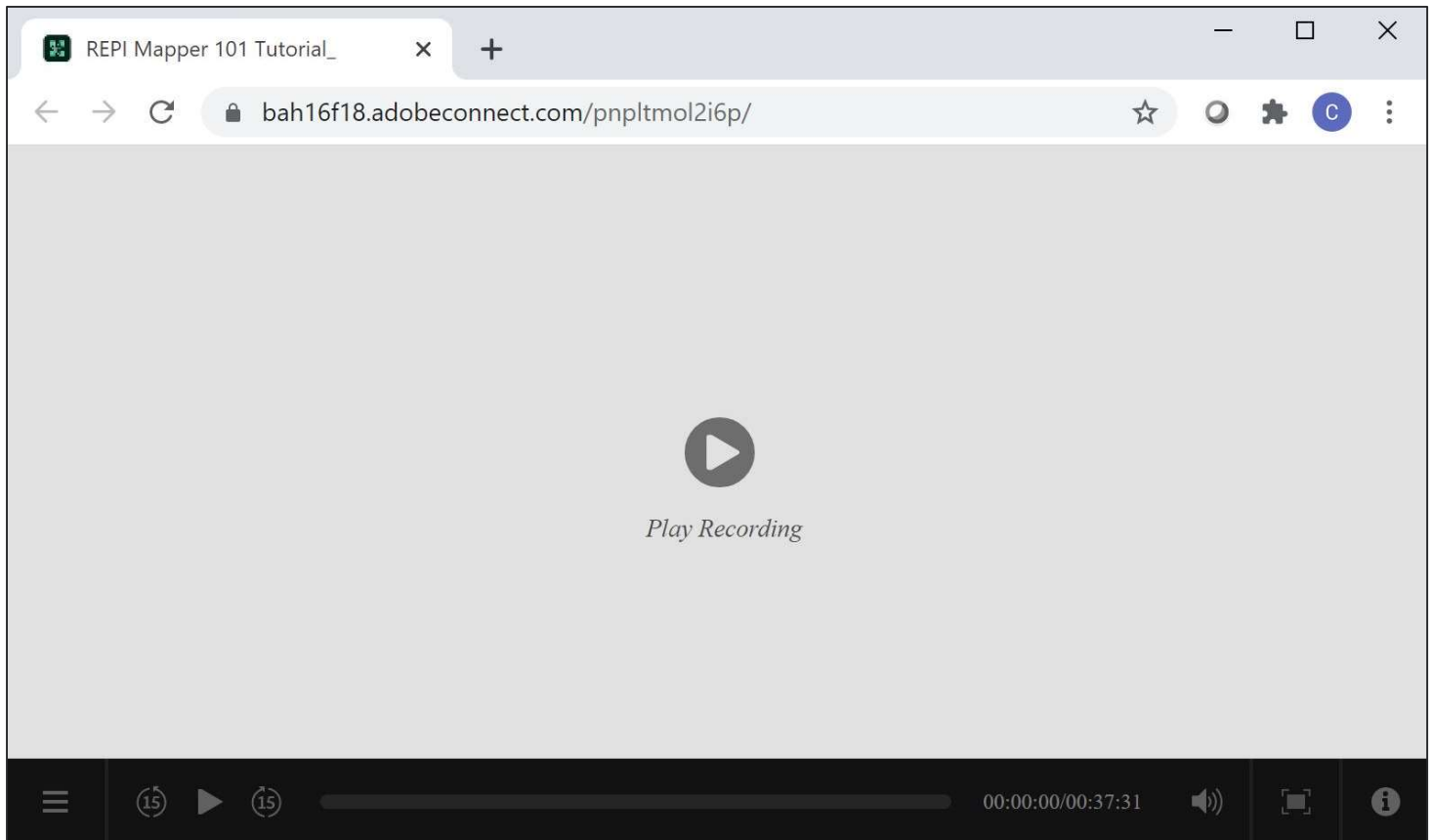
To search for a specific location with a latitude or longitude degree, the data must be in decimal degrees, with the longitude first (e.g. -81.267, 27.648). Providing that data into the search box will zoom to that location.



TUTORIAL



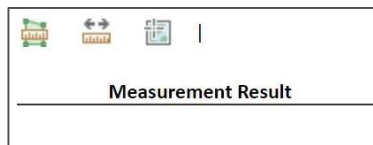
The tutorial link is the first item in the widget tool bar. This is a link to a recorded demonstration of how to use the REPI Interactive Map. The link will open a new browser window and take users to an adobe connect, recorded video to watch and learn best practices when using the REPI Interactive Map. The recording is approximately 37 minutes long.



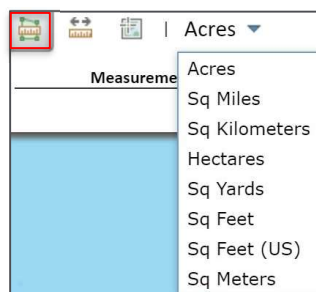
MEASURE TOOL



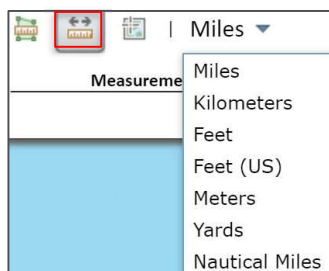
To measure the distance between locations, use the measure tool, the first widget on the tool bar. There are three options to use to measure area, distance, and determine coordinates.



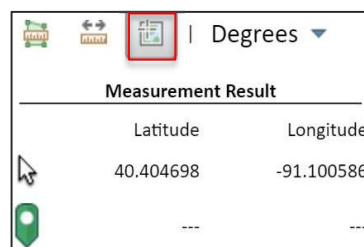
The first option in the widget measures area. Click on it and choose the measurement unit from the drop-down (e.g. acres, sq miles, sq meters, etc). Then, using the cursor in the map, create an area (e.g. square, triangle, abstract area) to measure. Click on the specific measurement icon again to end the calculation. The tool will automatically calculate the measurement of that area in the units chosen.



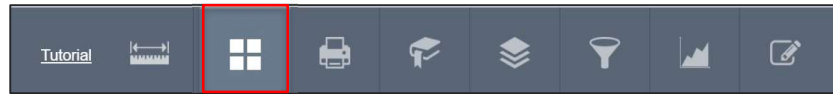
The next option measures linear distance. Click on the middle icon to enable the linear measurement functionality. Use the drop-down to choose the unit of measurement (e.g. miles, meters, etc). Then, use the cursor in the map to draw a line from one location to another location. Click again at the end destination to end the measurement. The measurement distance will show in the widget box.



The final option measures the latitude and longitude, in decimal degrees or degree minutes seconds, of a point location. Use the drop-down to choose the option. Then, click in the map to obtain the coordinates of that location. They will show in the widget box.

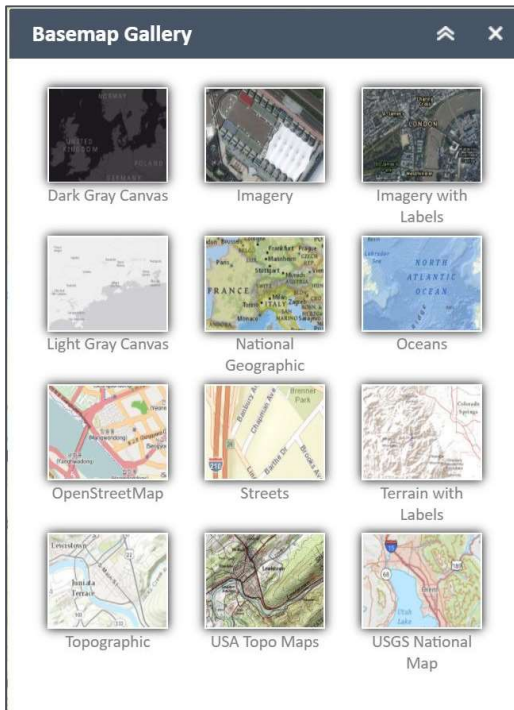


BASEMAP GALLERY



Basemaps are the background behind the selected data layers. Different basemaps may prove to be more helpful than others when determining spatial relationships amongst data points.

To change the basemap, click on **Basemap Gallery** in the top menu bar. Then select one of the following basemap choices:



Dark Gray Canvas

Displays all features in dark grey; includes waterways, as well as boundaries, cities, and towns.

Imagery

Displays a satellite view similar to Google Earth. The user may zoom in to view buildings and other real-world infrastructure.

Imagery with Labels

Displays a satellite view similar to Google Earth and the Imagery basemap, above. Includes labels for state, regional, and local jurisdictions.

Light Gray Canvas

Displays all features in light grey; includes waterways, as well as boundaries, cities, and towns.

National Geographic

Displays topographic features, waterways, boundaries, cities, and towns.

Oceans

Displays the topographic features of the oceans only.

Open Street Map

Displays streets, as well as boundaries and features similar to Google maps, including states, counties, cities, and towns. Shaded areas show federal public lands and military installations.

Streets

Displays streets, as well as boundaries and features similar to Google maps, including states, counties, cities, and towns. Shaded relief is shown to display terrain features.

Terrain with Labels

Displays a map of basic terrain, height contours, boundaries, cities, towns, and roads. Includes named deserts, mountains, and basins.

Topographic

Displays a map of basic terrain, height contours, boundaries, cities, towns, and roads. Includes named boundaries for national and state parks, as well as deserts, mountains, and basins.

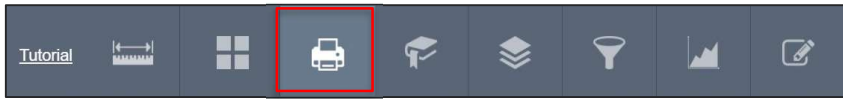
USA Topo Maps

Displays an extremely detailed map of terrain, height contours, boundaries, cities, towns, and roads.

USGS National Map

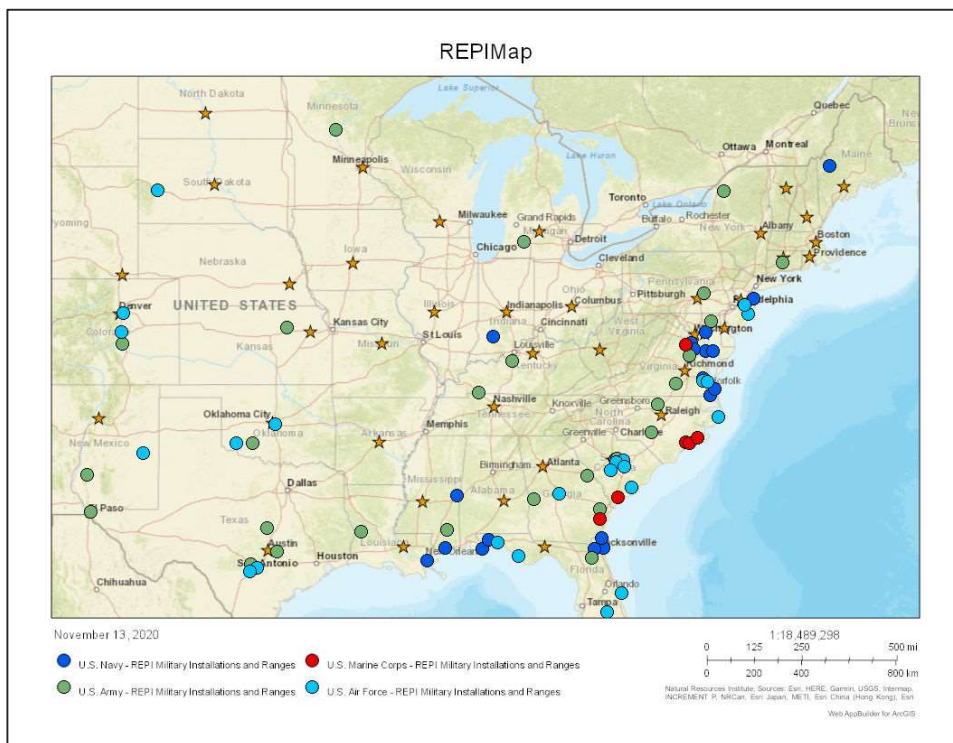
Displays a map of basic terrain, height contours, boundaries, cities, towns, and roads. Includes named boundaries for national and state parks, as well as deserts, mountains, and basins.

PRINT

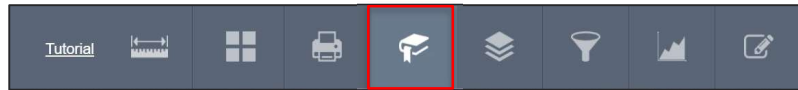


To print the current map view:

1. Select **Print** from the top menu bar.
2. Write the Map Title in the space provided.
3. Select the appropriate **Layout** (size and landscape or portrait orientation) and print **Format** (e.g. gif, jpg, pdf) in the two dropdown menus.
4. Select any advanced printing options that may be necessary (e.g. changing the dots per inch (dpi) to a higher print quality).
5. Select **Print** to print a copy of the map.
6. The printed map will show as an icon in the print widget, when completed. Click on it to open a new window to view the printed map, as shown below.

A print dialog box titled "Print". It contains fields for "Map Title" (set to "ArcGIS Web Map"), a "Layout" dropdown menu (set to "Letter ANSI A Landscape"), and a "Format" dropdown menu (set to "PDF"). At the bottom right, there are two buttons: "Advanced" and "Print".The "Print" dialog box with the "Advanced" options expanded. It shows "Map scale/extent" with "Preserve" set to "map scale" and "Force scale" set to "current". Under "Layout metadata", "Author" is "Web AppBuilder for ArcGIS" and "Copyright" is empty. "Include legend" is checked. "MAP_ONLY size" shows "Width (px): 670" and "Height (px): 500". "Print quality" shows "DPI: 96".The "Print" dialog box showing a list of printed maps. It contains a single entry: "1. ArcGIS Web Map" with a small map icon. Below the list is a button labeled "Clear Prints".

BOOKMARK



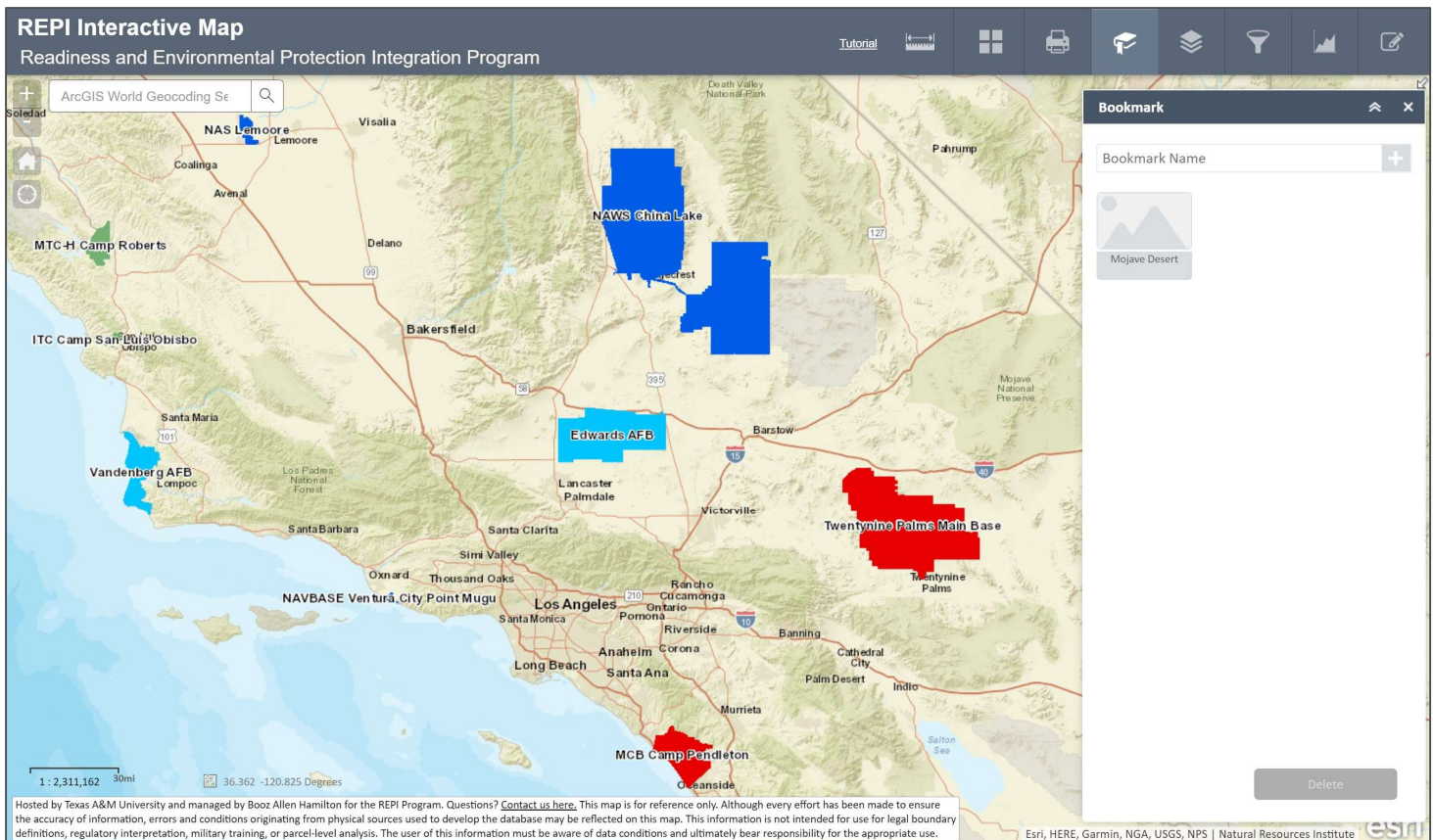
The Bookmark tool allows the user to go to a saved map to view data or perform further analysis at another time.

To create a bookmark:

1. Select **Bookmark** in the top menu bar.
2. Orient the map to the desired extent.
3. Write in a name for the bookmark in the Bookmark name box in the Bookmark window.
4. Click the + to create a bookmark.
5. The new bookmark will appear as an icon below the Bookmark name box (e.g. Mojave Desert).



To go back to that bookmark, click **Bookmark** in the top menu bar and then click on one of the saved extents. The application automatically zooms and pans to the appropriate area. See the example in the map below.



LAYER LIST



The layer list is a wealth of information related to pertinent data for the REPI Program and it's partnerships. It is structured to highlight categories of data to better organize this information. When visualizing information or creating a map, there are several categories to choose from: ***Military Layers, Sentinel Landscapes, SERPPAS, Resilience Layers, WRP, Census, Public Lands, Other Protected Lands, and Environmental.*** All of the data layers are captured in Appendix D. Within each of these categories is a range of data that pertains to the category name (e.g. military training routes and special use airspace under 'Military Layers'). There is a wealth of functionality within the layer list to help inform and navigate the user to these layers as well. Some of these items are: adding a published dataset to the map and list, uploading a zipped geospatial file to the map and the list, and favoring specific layers for ease of use. All of the enhanced functionalities are outlined in more detail below.

To select the data layers for the map:

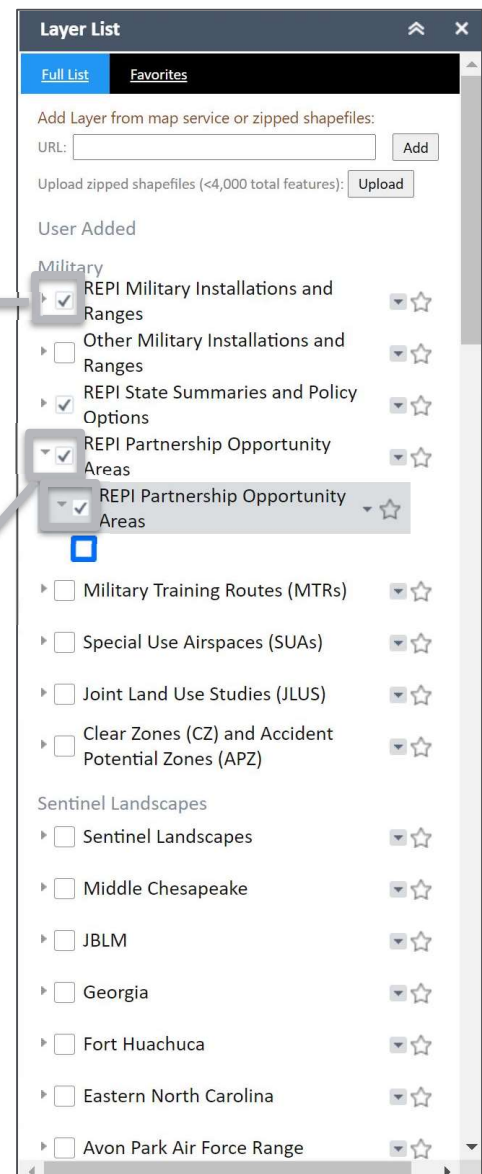
1. Select Layer List in the top menu bar. By default, the layer list is open when the REPI Interactive Map opens.

2. Select the data layer(s) for the map by clicking the checkboxes on or off for that layer.

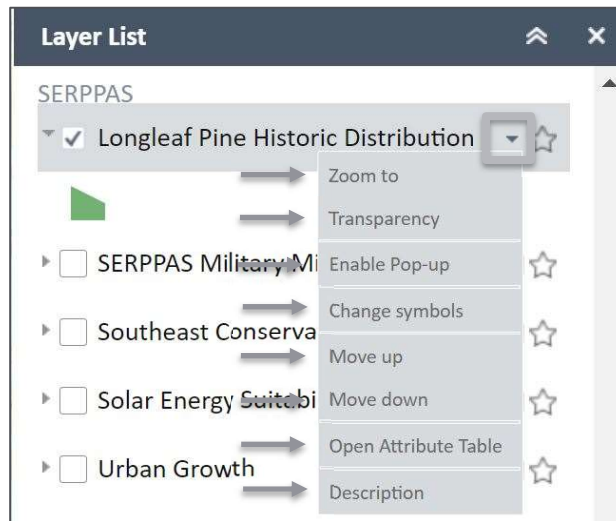
3. Click on the > to expand or collapse the list of data sources.

By default, the REPI Military Installations and Ranges are displayed on the map as circles and the non-REPI Military Installations and Ranges are displayed on the map as squares. The state capitals are displayed on the map as stars, by default.

To see the installation and range boundaries, zoom in to the map at a scale of 1:4,000,000, or roughly at the State level. At that level, the installation boundaries layer will automatically change from points to the boundaries layer. REPI installations are solid color symbols and non-REPI installations are hash/cross-checked color symbols.

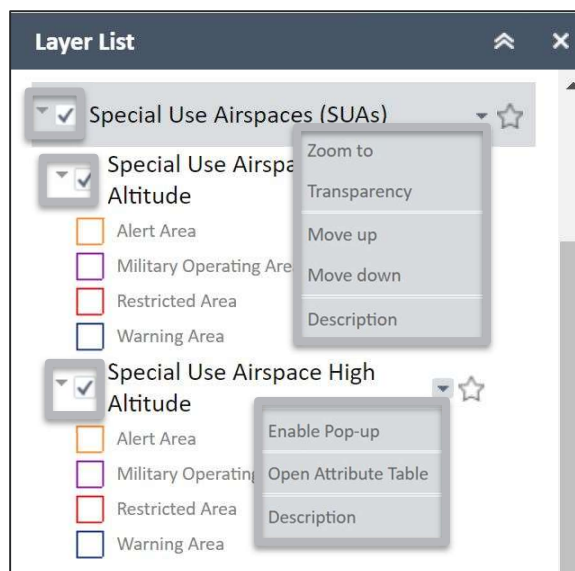


The drop-down arrow on the right-hand side of the layer group provides additional functionalities, like: zooming to the layer, changing the transparency, enabling the pop-up (note: by default, many layers' pop-ups are disabled and need to be enabled to view the pop-up information), changing the symbol, moving the data layer up or down within the layer list, opening the attribute table, and viewing the data description, or published metadata.



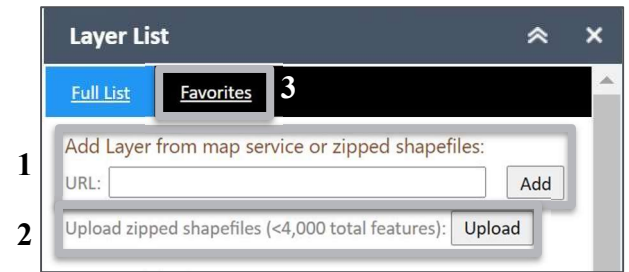
Within certain layers, there are sublayers, separated or additional layers grouped under the top layer header. Several examples of this under the Military Layers category are the REPI Military Installations and Ranges, Military Training Routes (MTRs), Special Use Airspace (SUAs).

To view the sublayers, listed under the grouped header name, like Special Use Airspace (SUAs) for example, expand the left-hand arrow beside the check-box, next to the header name. In this case, Special Use Airspace Low Altitude and Special Use Airspace High Altitude are displayed and the symbology is shown as individual points and area layers under the top layer header SUA. At the header level, the available right-hand drop-down items are: zoom to, transparency, and move up/down. At the sublayer level, enable pop-up and attribute information is available.



The layer list contains additional functionality as well, such as:

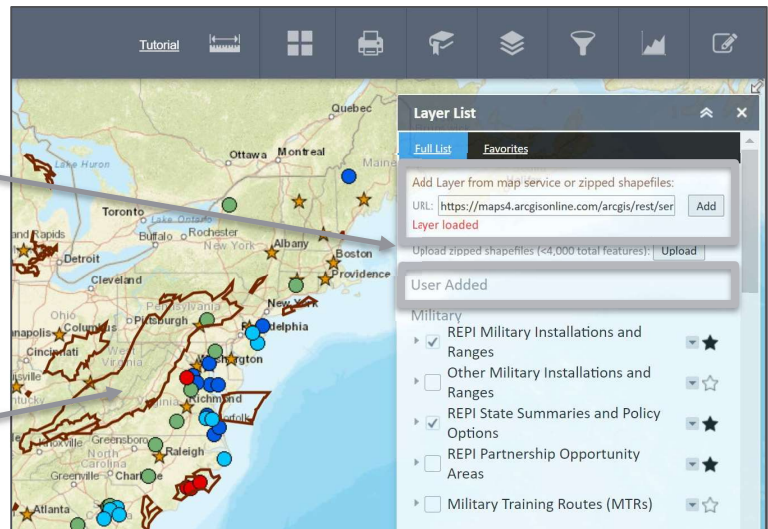
1. Adding a published dataset to the map and list,
2. Uploading a zipped geospatial shapefile to the map and list, and;
3. Favoring specific layers.



1. To add a published dataset to the map and layer list, first choose the published dataset's URL.
 - a. For example, to add a TNC Conservation Projects layer into the REPI Interactive Map and to the layer list, first find the correct layer online. This published data is available at:
https://maps4.arcgisonline.com/arcgis/rest/services/DOI/TNC_Conservation_Projects/MapServer/0. Enter this URL into the top box in the layer list and click 'Add' to view it in the map and under the 'User Added' section.

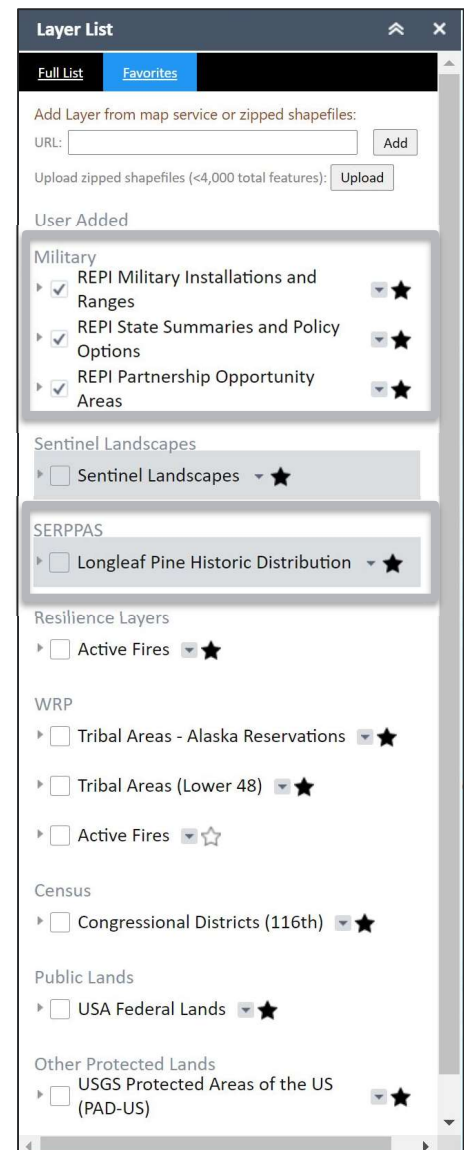
b. Once the layer are loaded, it will show as "layer loaded" and the symbology will be shown in the layer list.

c. Once the layers are loaded, they will render in the map.



2. To upload a zipped geospatial shapefile to the map and layer list, there are several steps to follow:
 - a. First, ensure all shapefile extensions are included in a zipped shapefile. These extensions are: '.cpg,' '.dbf,' '.prj,' '.sbn,' '.sbx,' '.shp,' '.shx'.
 - b. Next, in the layer list, click the 'upload' button to navigate to the location of the zipped shapefile to upload.
3. Users can click on a star on the right-side of the dataset to 'favor' it. This will specify those layers to be shown on the favorites tab. The favorites tab only shows those favored layers and focuses to just those layers identified by the user. The layers in the favorit tab will stay and be available to view each time the user accesses the REPI Interactive Map with the same computer and web browser. The REPI Interactive Map will save this information based on your IP address.

The favorites tab will show only those layers that are favored from the full list. It will continue to categorize the data, like in the full list tab. For example, all datasets favored under the ‘Military’ category, will be shown in the same manner in the favorites tab. All layers will continue to be listed under their category in the favorites tab, like shown under the SERPPAS category. If the layer is not favored, then that category won’t show in the favorites tab.



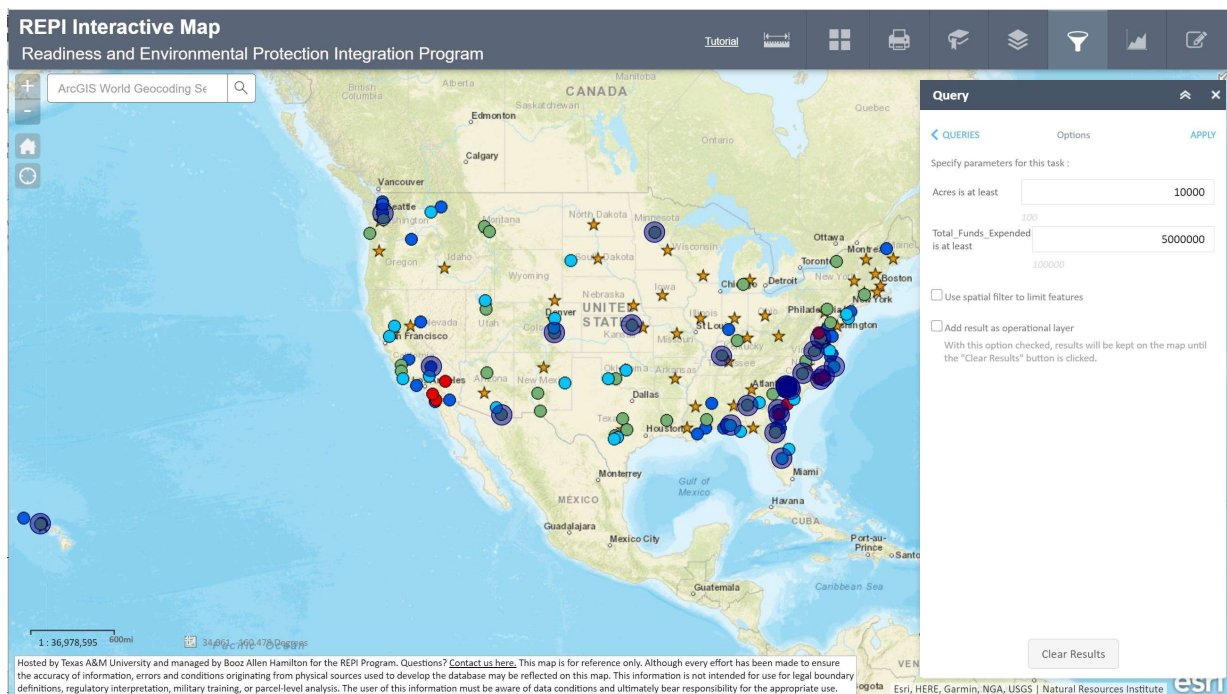
QUERY



The Query tool allows the user to search for installations with specific characteristics.

To run a query:

1. Select **Query** from the top menu bar.
2. Complete the form with the desired query parameters:
 - a. Acres is at least [insert number];
 - b. Total funds expended is at least [insert number];
 - c. Check the box to use the spatial filter to limit features; and/or
 - d. Check the box to add the result as an operational layer.
3. Click **Apply** in the upper right corner of the Query window to run the query.
4. A list of installations that fit the query will pop up in the Query window. Click on an installation name to zoom in to that installation.
5. At any point, to clear the query results shown thus far, click **Clear Results** in the bottom of the Query window.



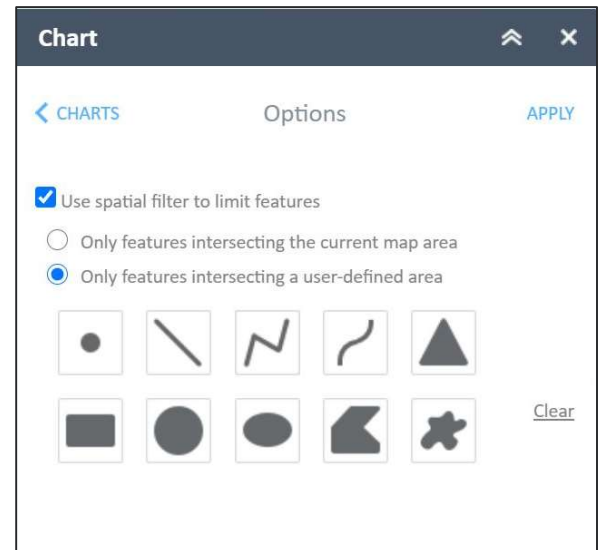
CHART



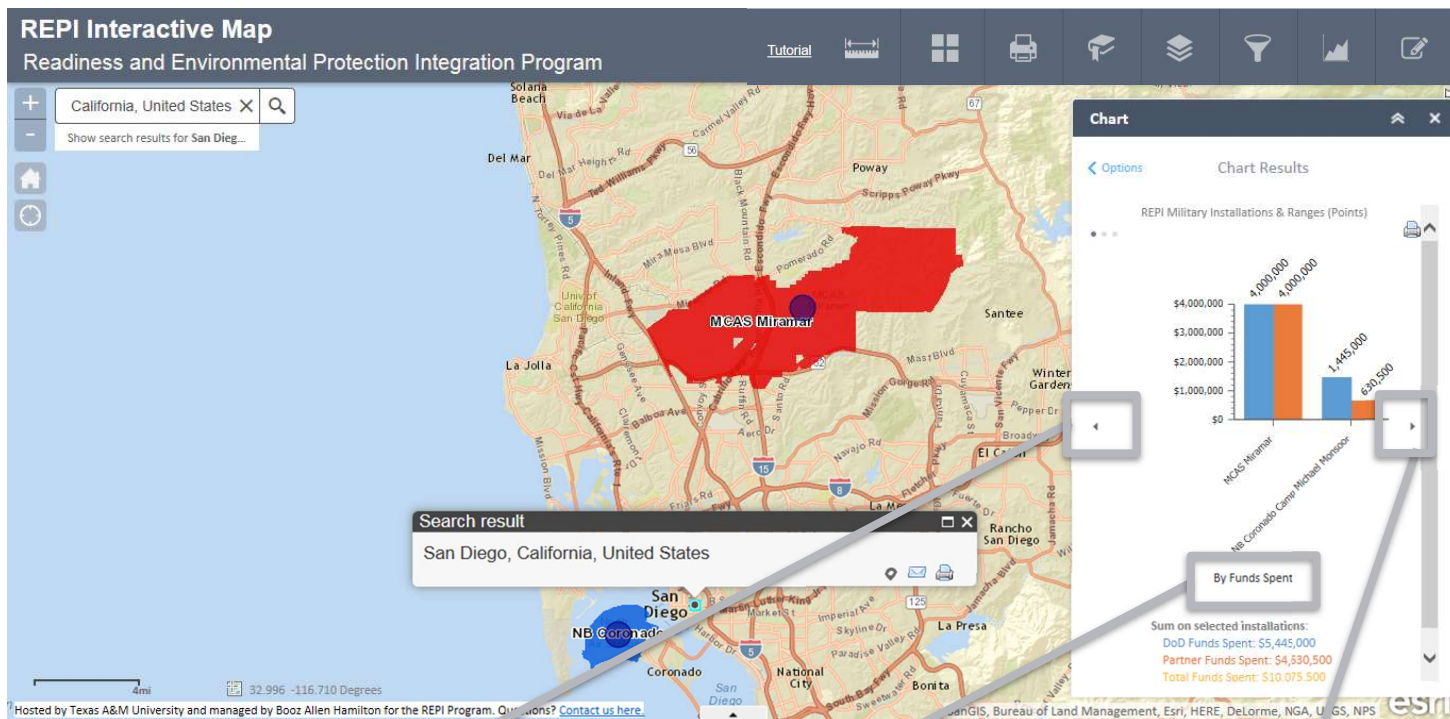
The Chart tool allows the user to see the total expended REPI funds and total acreages for a selected group of installations and ranges, and states.

To create a chart:

1. Select **Chart** from the top menu bar.
2. Check the box to use spatial filter to limit features.
3. Select one of the following two options:
 - a. **Only features intersecting the current map area** to create a chart for those installations currently visible on the map.
 - b. **Only features intersecting a user-defined area** to create a chart by drawing boundaries on the map.



4. For the **Only features intersecting a user-defined area**:
 - a. Select one of the ten draw tools.
 - b. Draw a boundary on the map using the selected shape. The newly created chart will pull the REPI data for the selected installations. Note: only data for REPI installations will appear in this chart.
5. Click **Apply** in the upper right corner of the Chart window.
 - a. If the selected installation(s) do not have available data, then the chart will show the message, "No chart data to display." The selected installation(s) will be highlighted with a yellow halo.
6. The chart displays the REPI funds and acres by installation as graphs for comparison. Clicking the side arrows back and forth will provide the user with the REPI installation funding and acreages.



By clicking on the side arrows, the third chart will show the total acres protected for the selected installations.

The first chart displays a breakdown of funds expended by DoD and partner funds.

By clicking on the side arrows, the second chart will show the total funds spent.

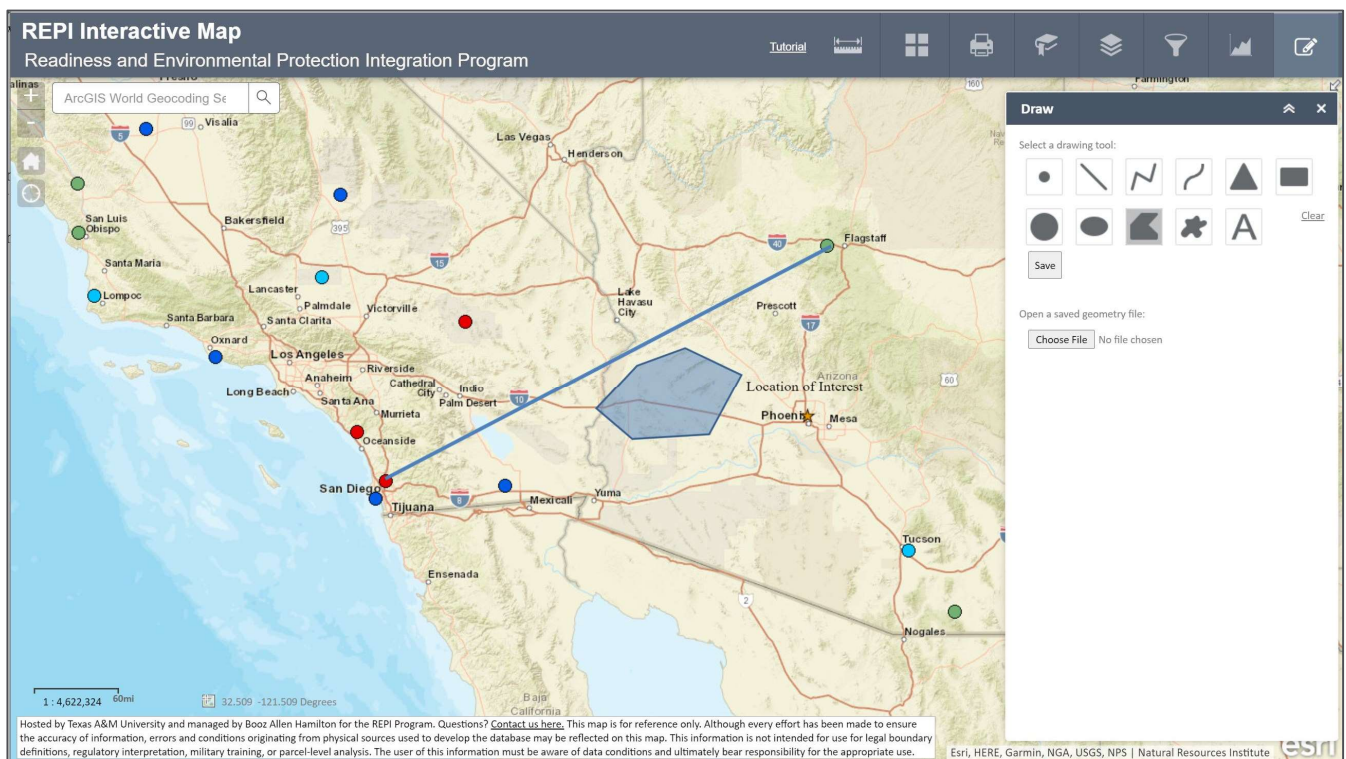
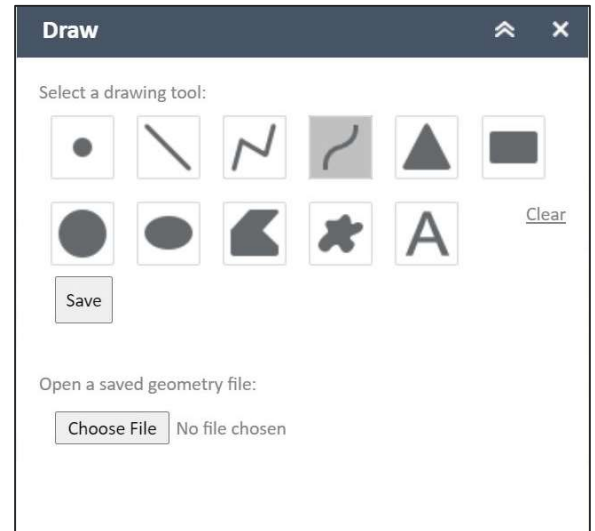
DRAW



The Draw tool allows users to input a point, area, line, or text as a drawing.

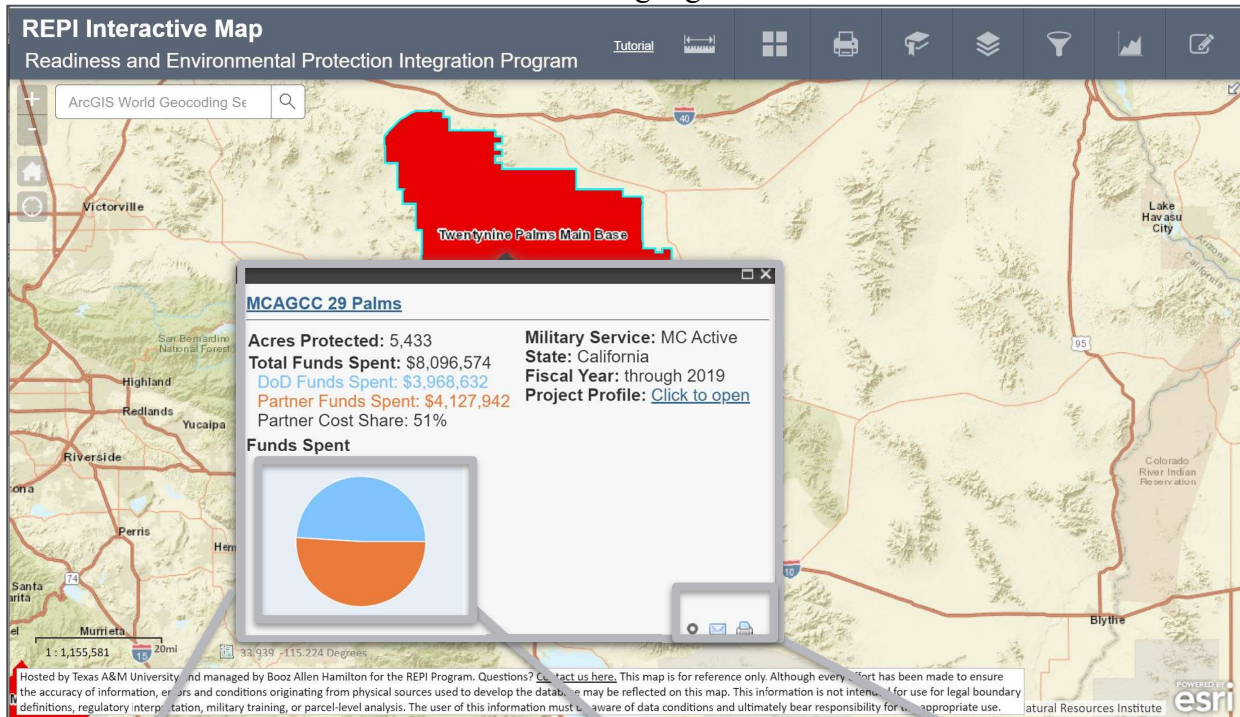
To draw in the map:

1. Select **Draw** from the top
2. Select the drawing tool from within the widget
3. Click in the map to initiate the drawing function. Use the mouse to place a point, draw a line (click to start the line and draw to the end point), or click to start drawing an area (triangle, circle, square, or irregular shape).
4. Choose the “A” to add annotation or text to the map.
5. Click the ‘save’ option to save the drawing and text in the map for another time. Navigate to a location on the computer to save the text file.
6. Upload and open a saved geometry file by choosing ‘choose file’ to search for that file and upload it into the map.



VIEWING REPI INSTALLATION FEATURES

Each data set for a REPI installation contains information on funding and the number of acres protected. Click on either the symbol for or within the boundary of a REPI installation to see a display box with this specific information. The selected installation will be highlighted in blue.



The pop-up box displays the:

- REPI installation name hyperlinked to that installation's website
- Acres protected
- Total funds spent, plus a breakdown of the DoD funds spent, partner funds spent, and the partner cost share
- A pie graph showing the visual breakdown of the funding expended for that installation
- Military Service
- State
- Fiscal year
- A link to that installation's REPI fact sheet

By hovering over each section of the pie chart, a pop-up displays the expenditures from each funding source.

At the bottom of the installation's pop-up box are three additional features:

The **Zoom** button allows the user to zoom directly in to the installation.

The **E-mail this** button allows the user to e-mail the content of the installation's pop-up box.

The **Print this** button allows the user to print the content of the installation's pop-up box.

APPENDIX A: ABOUT THE READINESS AND ENVIRONMENTAL PROTECTION INTEGRATION (REPI) PROGRAM

The Department of Defense (DoD)'s REPI Program is a key tool for combating encroachment that can limit or restrict military training, testing, and operations. The REPI Program protects these military missions by helping remove or avoid land-use conflicts near installations and addressing regulatory restrictions that inhibit military activities. The REPI Program is administered by the Office of the Secretary of Defense (OSD).



A key component of the REPI Program is the use of buffer partnerships among the military services, private conservation groups, and state and local governments, authorized by Congress at 10 U.S.C. § 2684a. These win-win partnerships share the cost of acquisition of easements or other interests in land from willing sellers to preserve compatible land uses and natural habitats near installations and ranges that helps sustain critical, at-risk military mission capabilities. For more information on REPI buffer partnerships, review the primer at: https://www.repi.mil/Portals/44/Documents/Primers/Primer_REPI_Buffer_Partnerships.pdf

REPI also supports large landscape partnerships that advance cross-boundary solutions and link military readiness, conservation, and communities with federal and state partners through a common, collaborative framework. Such partnerships include the Southeast Regional Partnership for Planning and Sustainability (SERPPAS) and the Western Regional Partnership (WRP), and REPI also participates in the Sentinel Landscapes Partnership among DoD and the Departments of Agriculture and the Interior.

Since its first partnerships in 2003, REPI has grown and fostered a sea-change in how DoD responds to conservation and military training issues and engages in outside-the-fence land use planning. Engaging with all stakeholders at the federal, state, and local level, REPI continues to explore policy and regulatory solutions to incompatible development, off-installation species habitat, and other mission sustainability issues.



For more information about REPI, please visit the REPI website at <http://www.repi.mil>.

APPENDIX B: DEFINITIONS

Basemap: A map depicting background reference information such as landforms, roads, landmarks, and political boundaries, onto which other thematic information is placed. A basemap is used for locational reference and often includes a geodetic control network as part of its structure.

Data layer: The visual representation of a geographic dataset in any digital map environment. Conceptually, a layer is a slice or stratum of the geographic reality in a particular area, and is more or less equivalent to a legend item on a paper map. On a road map, for example, roads, national parks, political boundaries, and rivers might be considered different layers.

Geographic Information System (GIS): An integrated collection of computer software and data used to view and manage information about geographic places, analyze spatial relationships, and model spatial processes. A GIS provides a framework for gathering and organizing spatial data and related information so that it can be displayed and analyzed.

Non-REPI military installation and ranges: Department of Defense (DoD) military installations and ranges that haven't completed a REPI transaction.

Partner: A private or governmental entity that provides financial, technical real estate, legal, or other significant support to a Service in the pursuit or conduct of a buffer project or transaction. Examples include federal agencies, state and local authorities, national nonprofit conservation organizations, and local land trusts. Eligible entities under section 2684a are a defined subset of partners.

Partner funds/acres: The amount contributed by a partner to the acquisition costs of a real property interest, including in-kind costs for good and services related to the buffer project; acres are the total area in which the real property interest are located. In-kind examples include, but are not limited to: appraisals, title searches, easement or other document drafting, other real estate transaction services, baseline resource assessments, real property interests, legal services, or other natural resource-related services.

REPI military installations and ranges: Department of Defense (DoD) military installations and ranges that have completed at least one REPI transaction.

Service: Military Service, including Air Force, Air National Guard, Army, Army National Guard, Marine Corps, and Navy.

Spatial extent: The geographic bounding area. The bounding area is set by defining the x, y coordinates of opposite corners, usually the bottom-left and top-right corners of results.

Service funds: The amount of money contributed to the acquisition costs of a real property interest by a Service or installation.

State summaries and policy options: Data and links to information on state legislation and land grant programs that help manage development and other incompatible land uses near military bases, points of contact in the state governments, and other state-specific resources.

Structured Query Language (SQL) command: SQL is a computer programming language used to manipulate data in a relational database management system. Originally based upon relational algebra and calculus, SQL comprises a data definition language, data manipulation language, and a data control language. The scope of SQL includes data insert, query, update and delete, schema creation and modification, and data access control.

Tools: An element of the interface that provides a way to interact with the application.

APPENDIX C: CONTACT AND COPYRIGHT INFORMATION

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APPENDIX D: DATA LAYERS

Category	Name of Layer/Sublayer
Military	REPI Military Installations and Ranges
	Other Military Installations and Ranges
	REPI State Summaries and Policy Options
	REPI Partnership Opportunity Areas
	Military Training Routes (MTRs)
	Special Use Airspaces (SUAs)
	Joint Land Use Studies (JLUS)
	Clear Zones (CZ) and Accident Potential Zones (APZ)
Sentinel Landscapes	Sentinel Landscapes
	Middle Chesapeake
	JBLM
	Georgia
	Fort Huachuca
	Eastern North Carolina
	Avon Park Air Force Range
	Camp Ripley
SERPPAS	Longleaf Pine Historic Distribution
	SERPPAS Military Mission Footprint
	Southeast Conservation Blueprint
	Solar Energy Suitability
	Urban Growth
	Sea Level Rise – 6 ft
	2020 Longleaf Implementation Team Priorities
	Species Suitability Habitat
Resilience Layers	FEMA Flood Hazards
	Historic Fire Parameters
	Active Fires
	Public NIFS Wildfire Perimeters
	Storm Surge (CREST)
	Critical Infrastructure (CREST)
	Critical Facilities (CREST)
	Sea Level Rise – 6ft
	Sea Level Rise – 3ft
	Sea Level Rise – 1ft
	Wildfire Hazard Potential
WRP	Tribal Areas – Alaska Native Villages
	Tribal Areas – Alaska Reservations
	Tribal Areas (Lower 48)
	NWS Climate Outlook – Monthly Drought
	NWS Climate Outlook – Monthly Temperature
	NWS Climate Outlook – Monthly Precipitation
	Electric Substations
	Electric Transmission Lines

	Geothermal Resources
	Power Plants
	Wind Turbines
	Historic Fire Parameters
	Active Fires
	Public NFIS Wildfire Perimeters
	Section 368 Corridors
	Wildfire Hazard Potential
Census	Counties
	Congressional Districts (116 th)
	Population Density (2020)
	Population Density (2040)
Public Lands	DOI Land by Conservation Status
	USA Federal Lands
Other Protected Lands	PADUS Land Manager
	USGS Protected Areas of the U.S. (PAD-U.S.)
	National Conservation Easement Database (NCED)
Environmental	FWS Wetlands (spatial extent specific)
	State Wildlife Action Plan Priority Areas
	TNC Ecoregional Priorities – Conservation Projects
	TNC Ecoregional Priorities – Protection Mechanism
	FWS Critical Habitat – Linear Final
	FWS Critical Habitat – Polygon Final
	FWS Critical Habitat – Linear Proposed
	FWS Critical Habitat – Polygon Proposed
	Landscape Conservation Cooperatives (LCC)
	NatureServe Endangered Ecological Systems
	NatureServe Endangered Species

APPENDIX E: REPI STORYMAP

The REPI storymap presents the history of the REPI program's major accomplishments and innovative case studies with custom maps that create an interactive narrative that's easy to share with REPI stakeholders.

Building off of the REPI Interactive map, this online story can help replace briefings

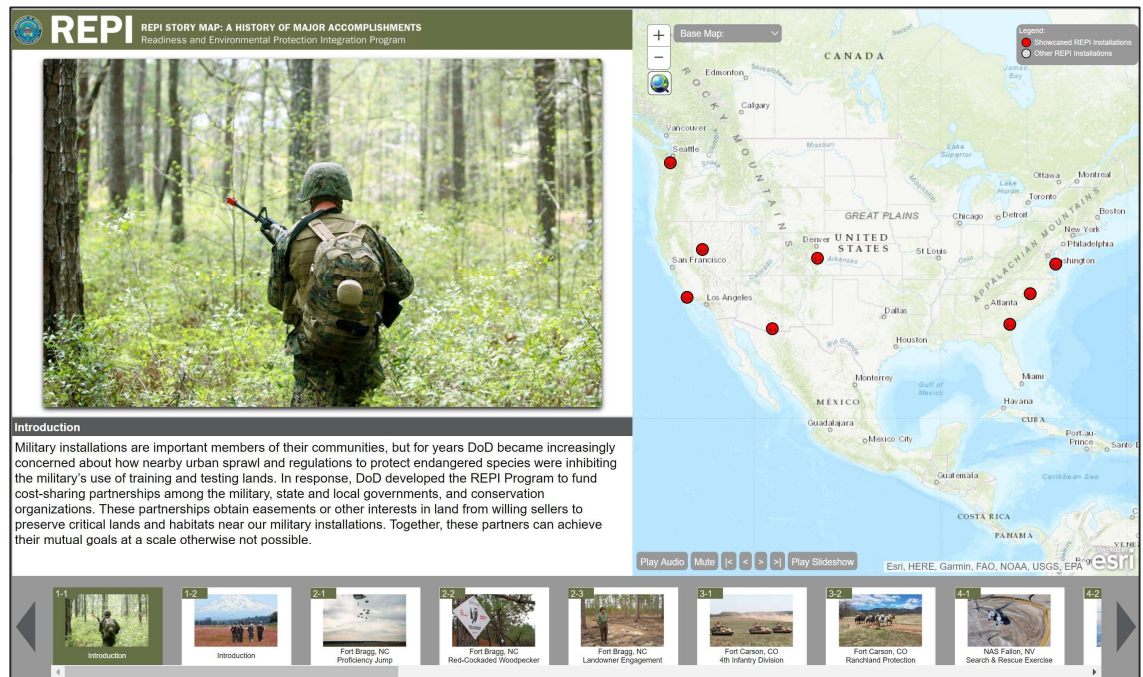
and fact sheets as well as tell the story through photos and geolocations, not just text. The storymap is linked to the REPI Interactive Map, illustrating spatial relationships of the REPI installations and is accessible online publicly. The REPI storymap highlights eight installations which present some of the Program's most significant accomplishments protecting important military training and testing sites, rich agricultural lands, and rare habitats across the Nation. As the story continues, the site in the map changes to highlight each of the eight installations on the right-hand side of the screen; additionally, the image and text on the left-hand side of the screen update to highlight about the specific story at that location. In many instances, the installation's story will contain more than one image and paragraph of text. Each installation is numbered like a chapter with the second number indicating how many pages within that chapter pertain to the installation (i.e. 2-1, 2-2, 2-3, 2-4). The user can use the images at the bottom of the storymap to progress the story forward and/or skip ahead to a specific installation's chapter.

The REPI Installations highlighted in the storymap are the following:

- Fort Bragg, North Carolina
- Fort Carson, Colorado
- Naval Air Station Fallon, Nevada
- Fort Stewart, Georgia
- Joint Base Lewis-McChord, Washington
- Vandenberg Air Force Base, California
- Fort Huachuca, Arizona
- Naval Air Station Patuxent River, Maryland

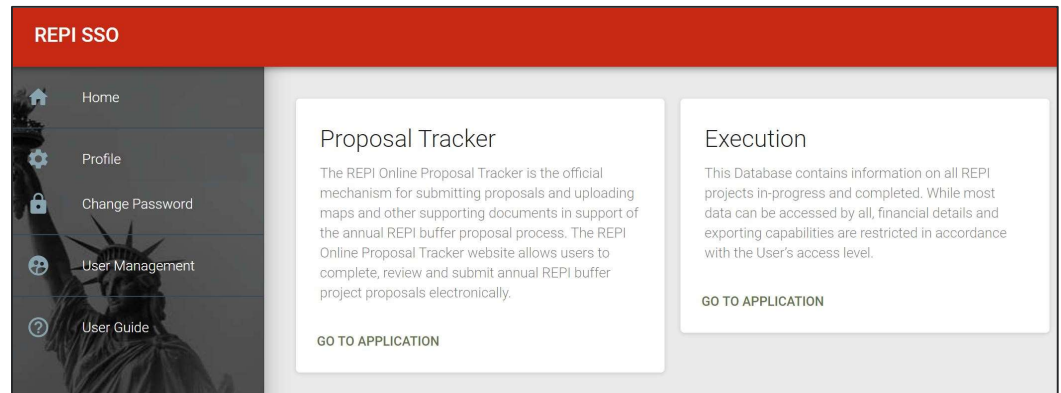
The storymap is unique, in that it contains audio narration as well as the ability to have it advance through the content automatically. However, the user can mute the narration and turn off the autoplay at anytime to walk through the storymap at their own pace.

The REPI Storymap is accessible at: <https://www.repimap.org/storymap/>.



APPENDIX F: SECURE REPI INTERACTIVE MAP

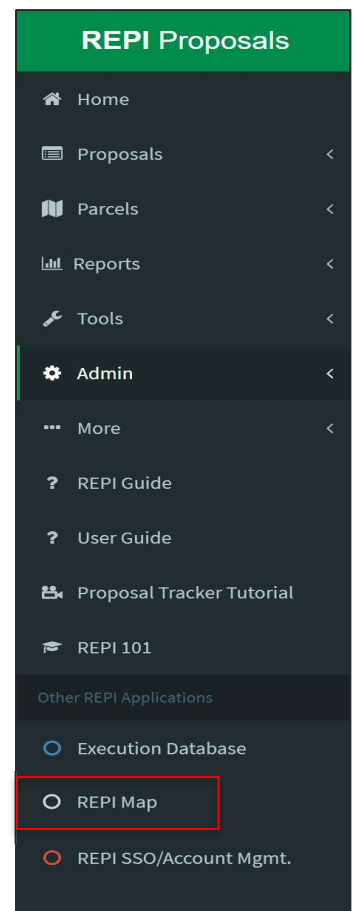
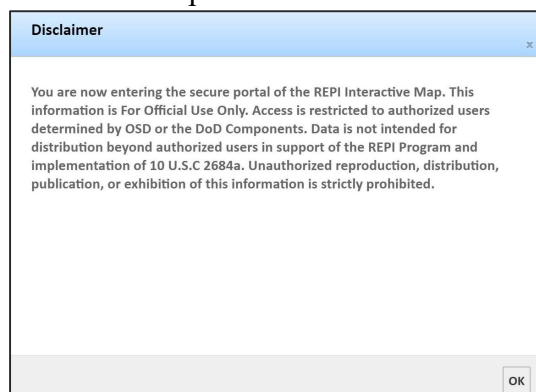
The REPI Interactive Map is also available through the REPI Single Sign On for the Proposal Tracker and Execution Database (<https://repi.tamu.edu/>). With the correct credentials and permissions, users can access the secure side of the REPI Interactive Map, which contains additional secure datasets.



The secure side of the REPI Interactive Map looks and functions exactly like the public side of the REPI Interactive Map. In this vain, it is the same map; the differences are the user permissions to access specific protected datasets, such as the REPI Priority Areas, REPI Agreement Areas, REPI parcels, and a national parcel dataset. These data are direct results of user-uploaded data when fulfilling the Proposal Tracker or Execution Database requirements. Within the Proposal Tracker, it is required to upload the following layers: “Agreement Areas”, “Priority Areas”, and “Parcels”. Per the directions in the [REPI Proposal Tracker User Guide \(FY 2020\)](#), upload the Agreement and Priority Areas in the “Desired End State” section (pages 24-26) and upload parcels in the “Create Parcels” section (pages 32-39). Once uploaded, or parcels selected using the national parcel dataset, this data can be visualized in the secure side of the REPI Interactive Map.

The other data and functionality of the site, noted earlier in this User Guide, remains the same. The only change on this site is access and visualization of the secure data.

Upon clicking the REPI Map option in the Proposal Tracker, a new window will open and the user will see a warning disclaimer that they are entering a secure portal of the REPI Interactive Map.



Below is an example of the REPI Interactive Map shown on the secure side. The user now has access to ‘secure’ data under this same heading in the layer list. They are able to turn these layers on or off and zoom into a location to visualize this data and information relative to their REPI installation.

Please note: users will only be able to visualize installation data for those that they have been given permissions. For example, installation-level users will only be able to view agreement areas, priority areas, and parcels for the installations that they have permissions in the Proposal Tracker and/or Execution Database. This is done so that Service and installation-level data is restricted to permissible individuals.

