Data Portals for Pacific Islands CMSP

Arlene Guest and Tom Murphree

Naval Postgraduate School (NPS)

aguest@nps.edu, murphree@nps.edu

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Outline

1. Data portals:
   a) What is a data portal?
   b) Potential users
   c) Purposes
2. Hierarchy of portal types
3. Examples

1. Data portals

a. What is a data portal?

- a “collection of freely available data and tools” (from DataBank)
- “one-stop shop” for data
- may also be called an “atlas” or “coastal web atlas”, “web mapping interface” or “interactive mapping website”, etc.

Note: the data doesn’t have to physically reside on one server; it can be a link or a web service from the authoritative source. That way, all updates to the data are automatically propagated.

1. Data portals

b. Potential users include:

- Planners
- Agencies, NGOs, etc. involved in PI CMSP
- Commercial enterprises
- Decision-makers
- Stakeholders
- the Public
- All of the above

1. Data Portals

c. Portals may have a variety of purposes:

1) Data discovery
2) Data exploration
3) Data sharing
4) Data visualization
5) Decision support and analysis

1) Data Discovery and 2) Exploration

The user might not be aware of what data is available, and is looking to see what is available.

Methods:

- Browse a list
- Search by keyword(s), area or temporal extent
- View a screenshot of the data
- Explore an interactive map

3) Data Sharing

Data sharing benefits everyone (agencies, stakeholders, etc.) as it helps avoid duplication, reduces cost, and allows agencies to provide potentially better services or products.

A “one-stop shop” makes it easy and convenient for everyone to access the best available data.

Data download – Some users need to be able to download and use in other applications such as a GIS.

May want to provide in choice of formats (KML, shapefile or geodatabase, etc.)

Data upload – either provide site to upload data to share, or have an email link so people can contribute their data.

4) Data Visualization

Data visualization enables the viewer (public, decision-makers, stakeholders, etc.) to see what is where, what else is nearby, and identify possible use conflicts.

5) Decision Support

Types of analysis:

- overlay different uses or activities to identify areas of potential conflict
- suitability analysis – identify locations that satisfy a set of criteria
- cluster or hotspot analysis
- compare or track change in the distributions of various populations or features

3. Examples

The next few slides will show screenshots from the NPS data portal in order to highlight some of the capabilities and features that we've developed.

NPS American Samoa Demo Portal

For each dataset, you can:

View the metadata. Is the data set appropriate for my use? Answers the Who? What? When? Where? Why? questions

- Population and population density

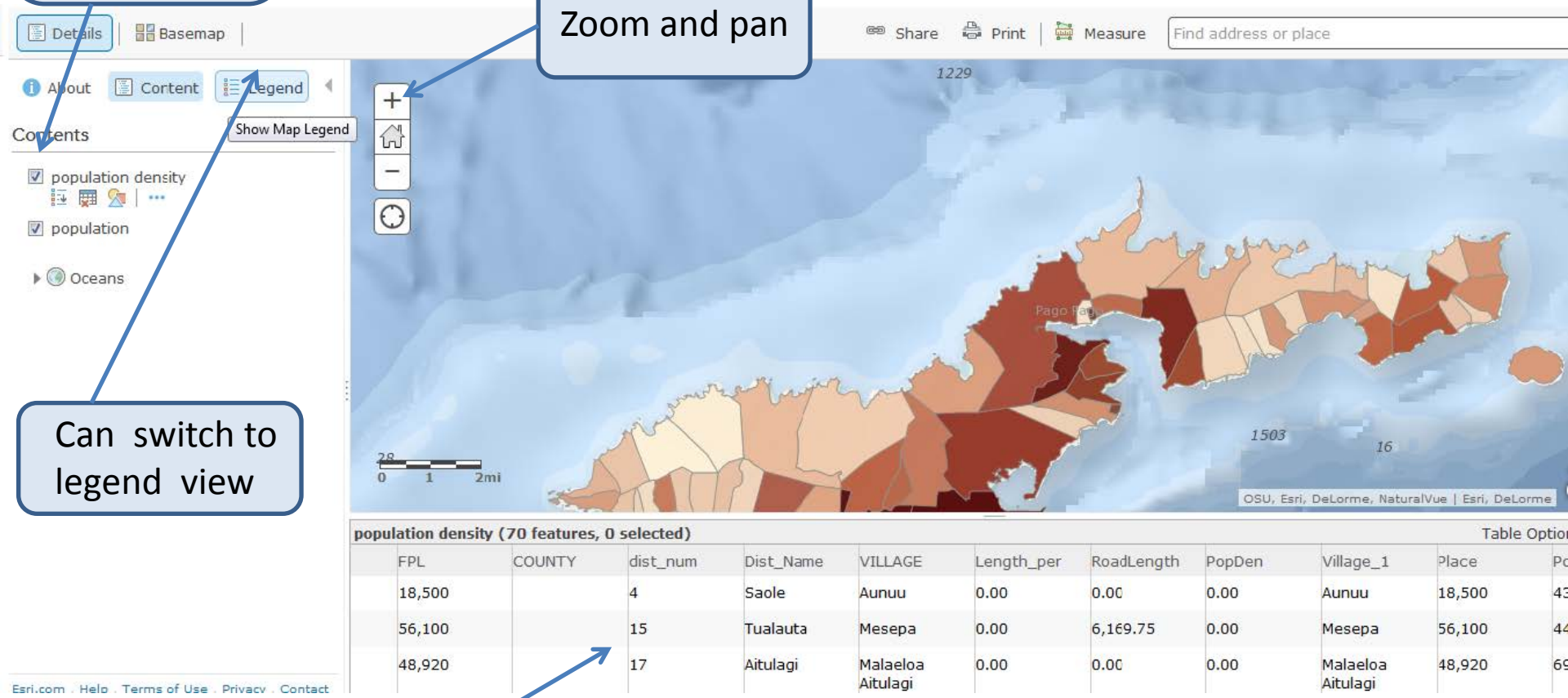
Use the interactive map to view and explore the data, turn layers on and off, zoom and pan. (See next slide!)

Download the data

NPS American Samoa Demo Portal
Example 1: Population

Turn layers on or off to see multiple layers and overlays

Zoom and pan



Can switch to legend view

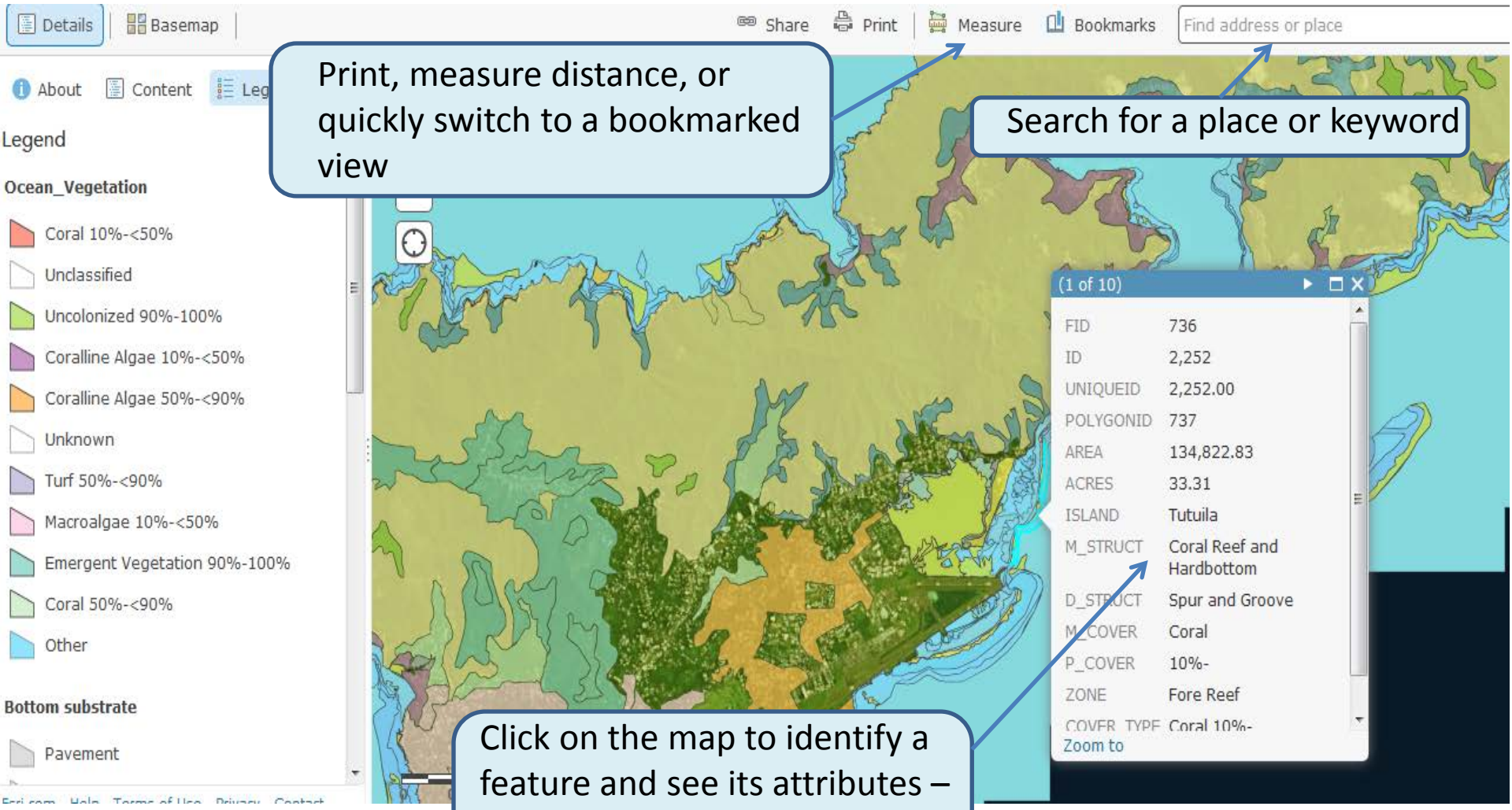
population density (70 features, 0 selected)

Table Optio

FPL	COUNTY	dist_num	Dist_Name	VILLAGE	Length_per	RoadLength	PopDen	Village_1	Place	Po
18,500		4	Saole	Aunuu	0.00	0.00	0.00	Aunuu	18,500	43
56,100		15	Tualauta	Mesepa	0.00	6,169.75	0.00	Mesepa	56,100	44
48,920		17	Aitulagi	Malaeloa Aitulagi	0.00	0.00	0.00	Malaeloa Aitulagi	48,920	69

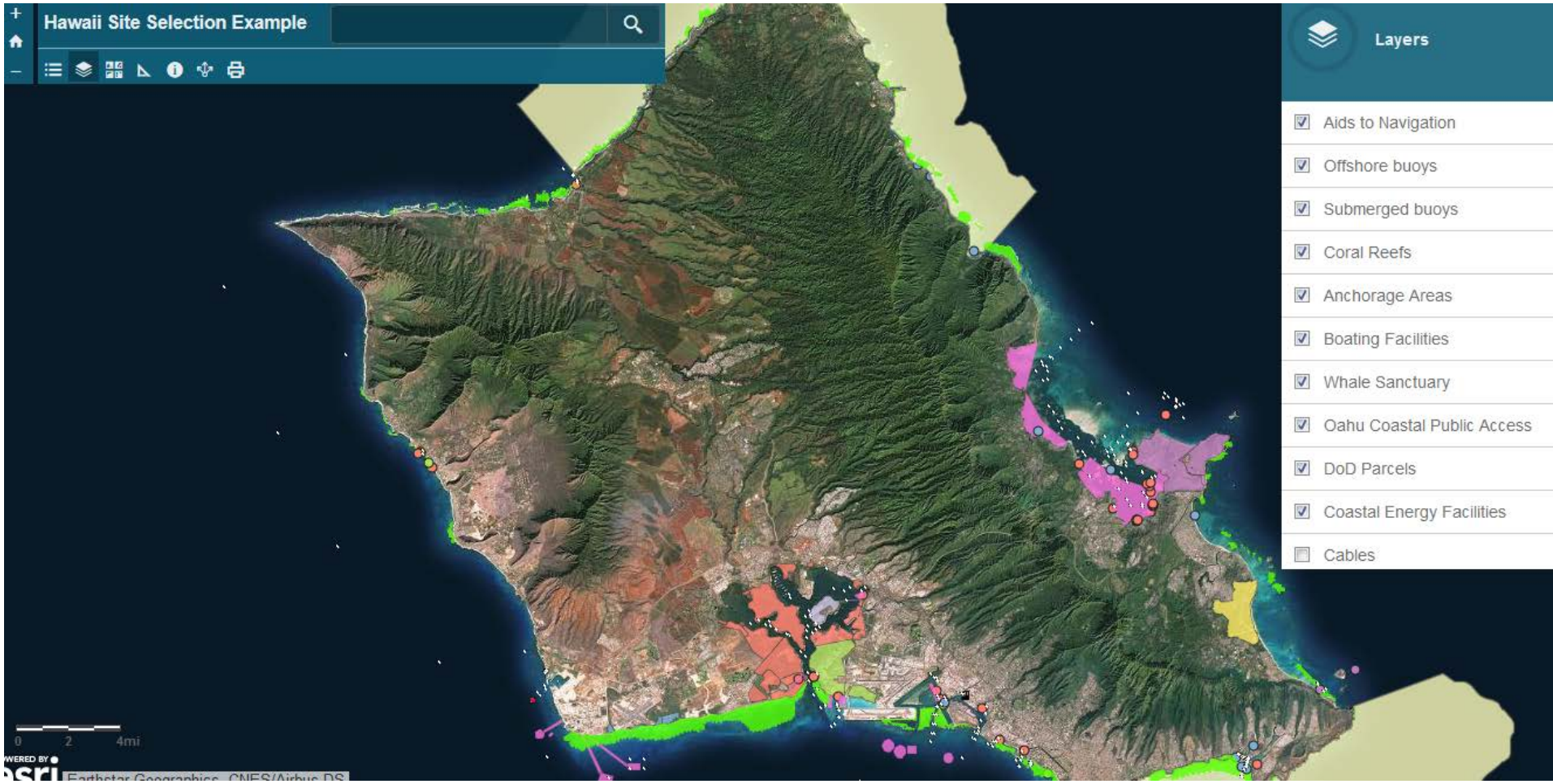
View the data table, i.e. attributes of the data, not just where it is, so for instance, a coral dataset might include the species and health of the coral, etc.

NPS American Samoa Demo Portal
Example 2: Ocean Habitats and Vegetation



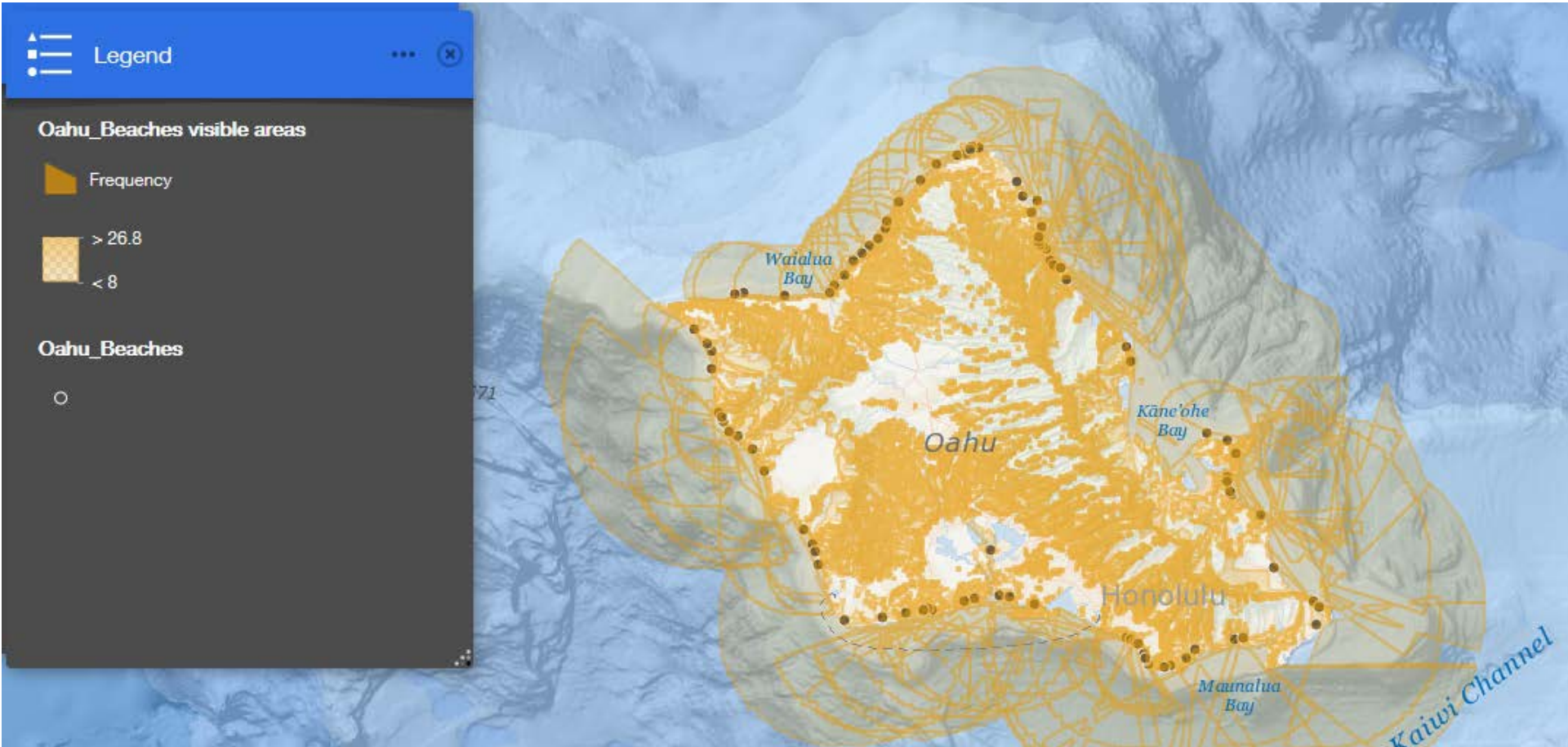
Site Selection Example

Turn a variety of layers on and off to see what's where and avoid potential use conflicts. This example shows public beach access, boating facilities, anchorages, underwater cables, buoys, shipwrecks, coral reefs, whale sanctuary areas, DoD parcels, and more.



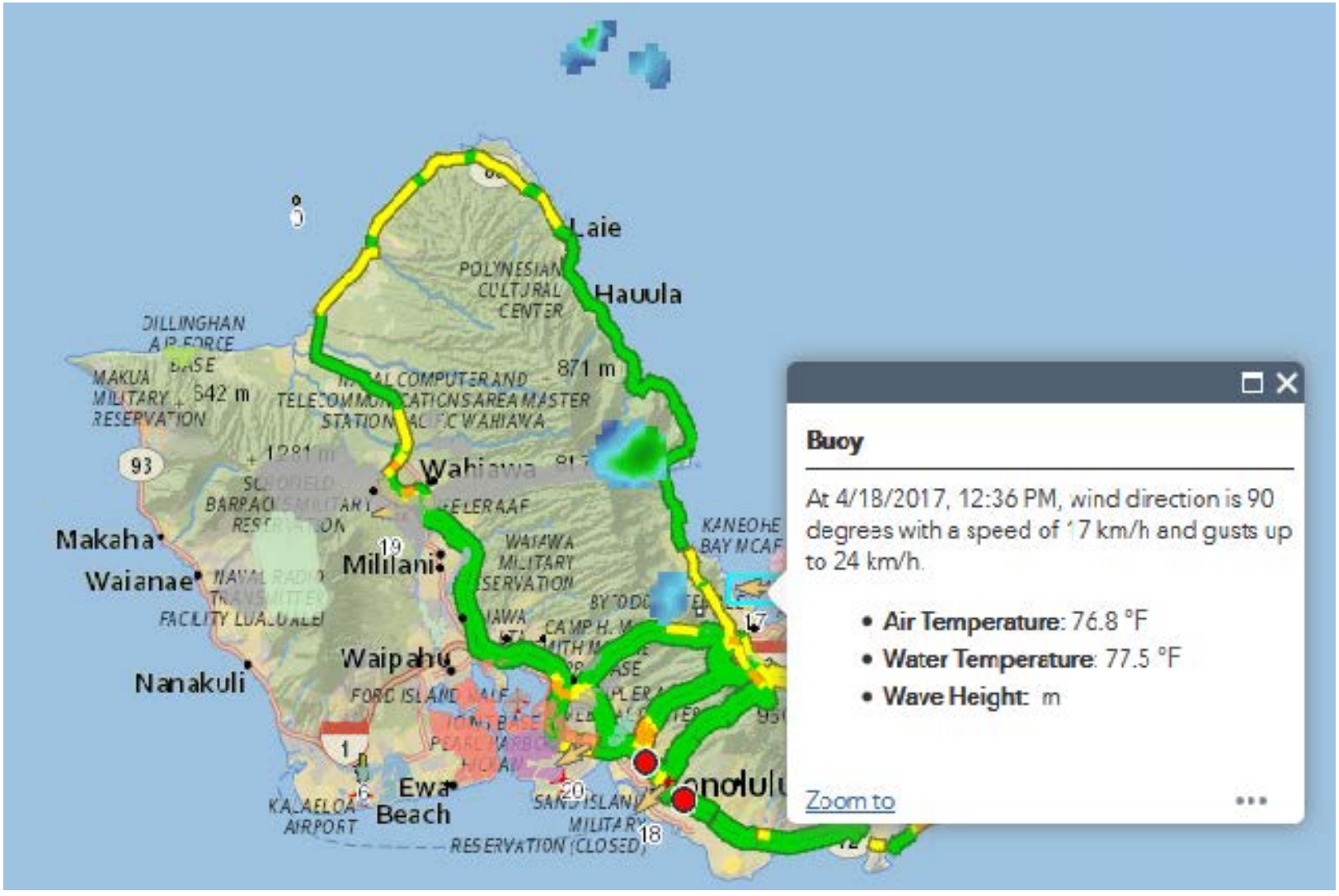
Viewshed Example

This map is an example of a viewshed analysis, where you can see the locations that viewer looking from the best-known beaches on Oahu would be able to see. The analysis is based on a 6-foot observer and a visibility of 10 miles. Other analyses that could be done in this type of map are for proposed structures out in the ocean - where on land would the structures be visible?



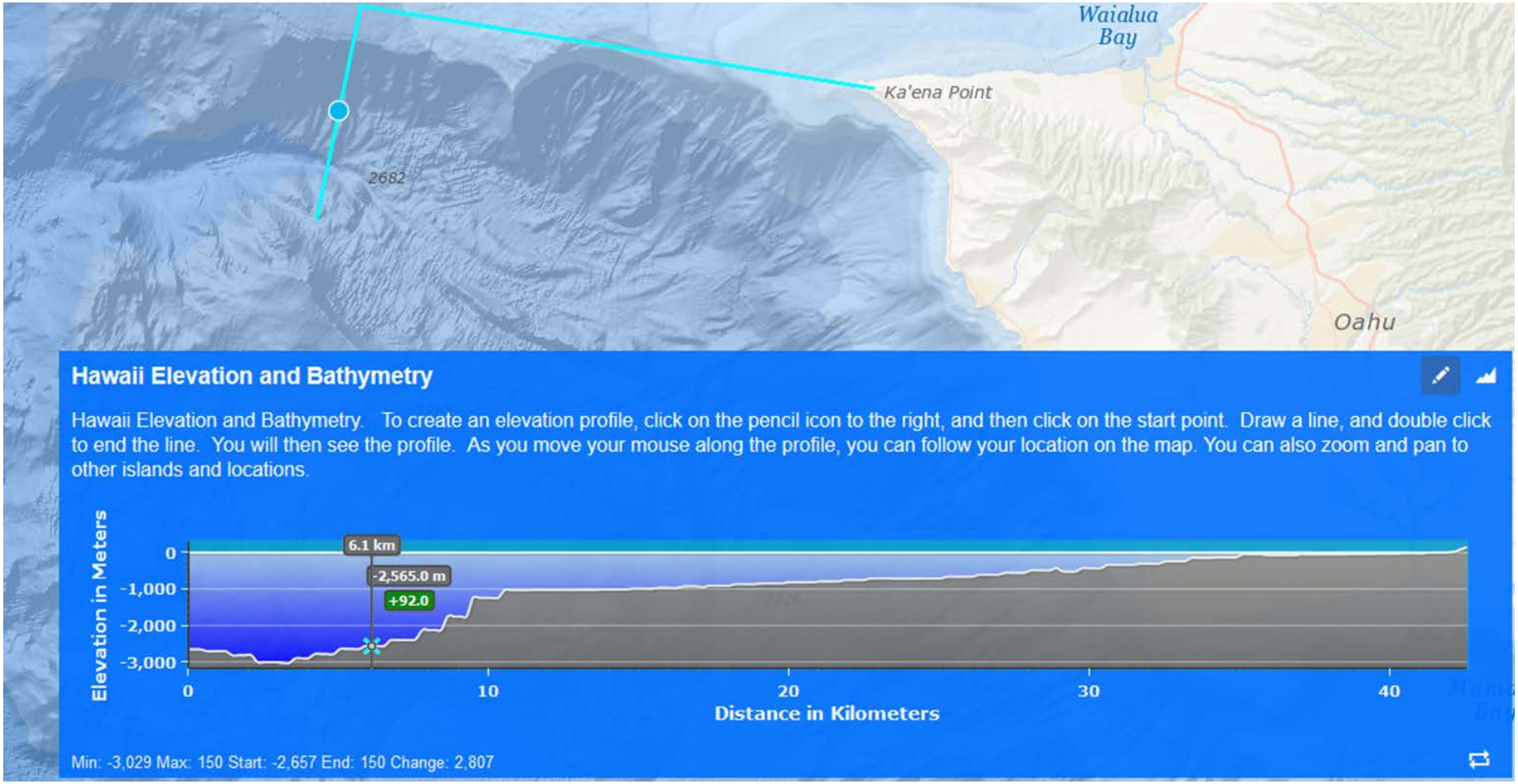
Real-time Data Feeds

Real-time data feeds on wind and temperature from stations and buoys in Hawaii, weather radar, traffic, current hazards and warnings and hurricane updates.



Elevation / Bathymetry Profiling

Users can draw a line and get the elevation profile on land and/or water along that transect.



User Input from a GeoForm

A form is used to collect information and location from the public or stakeholders. The data is uploaded and can be immediately viewed on the map.