
HISTORICAL
STRUCTURE
AWARD WINNING ARCHITECTURE
MANAGED FACILITIES
PROTECTED WILDLIFE
NATIVE BIOTA

X

Heritage Resource Survey

Interactive mapping of historical, architectural and ecological resources of the Sea Ranch

with a grant from
THE SONOMA COUNTY
LANDMARKS COMMISSION

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What are heritage resources?

Elements of the Sea Ranch landscape that embody the unique inheritance of this ten-mile stretch of coastal land.

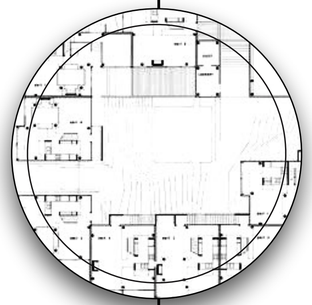
LANDFORM + CLIMATE

geological formations and the weather that influences them

BIOTIC RESOURCES

plant and animal communities that live alongside us

HUMAN MADE + INFLUENCED



man made or human influenced elements from the past, present + future

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Why do we need this survey?

The Sea Ranch stands on a rich history of contextual development, reflected in the every day efforts of the DCEM and the volunteer community, and most loudly in our core governing documents

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CONCEPTS & COVENANTS

The Sea Ranch is a vision, inspiring in its beauty; a concept, daring in its invention; a covenant with nature and the land. The Sea Ranch is a work of art, a single idea, a discrete piece of beauty in which successful structures become part of nature's tapestry. The Sea Ranch is a community drawn together by a shared vision and respect for its concept.

DESIGN MANUAL

The Sea Ranch is a unique coastal community that was planned explicitly to harmonize with the natural setting and the building traditions of this region. The goals for development have been to understand the inherent, unique opportunities and limitations of each site, to respond to the forces of the sun and wind and to seek an appropriate fit with the topography and existing vegetation.

COVENANTS, CONDITIONS & RESTRICTIONS

It must be assumed that all owners of property within The Sea Ranch, by virtue of their purchase of such property, are motivated by the character of the natural environment in which their property is located, and accept, for and among themselves, the principle that the development and use of The Sea Ranch must preserve that character for its present and future enjoyment by other owners.

MEMBER RULES

Use of Commons must be conditioned by the premise that The Sea Ranch is a private residential community with an immutable commitment to the preservation of the natural environment.

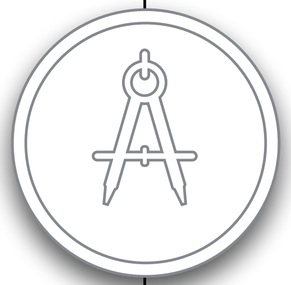
COMPREHENSIVE ENVIRONMENTAL PLAN

This covenant forms a second cornerstone of The Sea Ranch sense of place. It defines the appropriate relationship between people and the environment, and finds expression in its commitment to restoration, integration, and sustainable stewardship. The Sea Ranch designers prioritized restoration of the natural setting at the onset of their project.

How will we make use of this data?

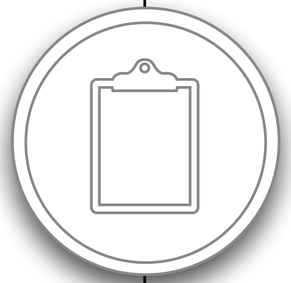
Infinite applications for a robust database

DELIBERATION TOOL



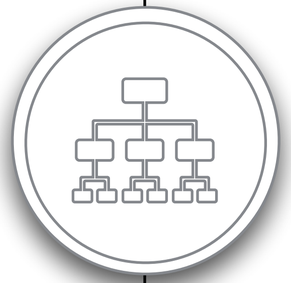
An essential reference tool for the Design Committee to help insure that architectural planning and environmental management continue to be based upon a solid knowledge and respect for shared resources.

RESOURCE INVENTORY



Like the Commons Landscape Plan, the HRS will be a comprehensive inventory, so that the Design Committee knows they are seeing the big picture while evaluating individual cases.

MORE MEMBER TOOLS + SERVICES



The Heritage Resources Survey and it's associated apps will be available to Sea Ranch members and committees, so they can explore and interact with their community collaboratively.

PRESERVATION INFORMATION

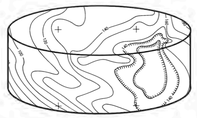
Analysis across data sets will reveal the impact of one element on another, and we use this information to fine tune our approach to perpetuating and preserving our landscape as it navigates the environmental challenges ahead.

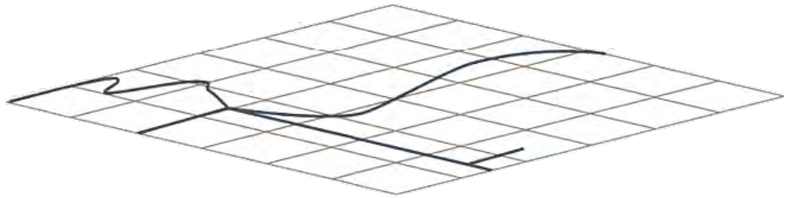
Which medium will we use to communicate the data?

Geographic
I nformation
Systems

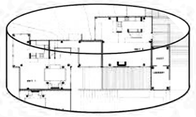
a form of data visualization that overlaps layers of geographic information to construct interactive maps of interacting overlapping systems

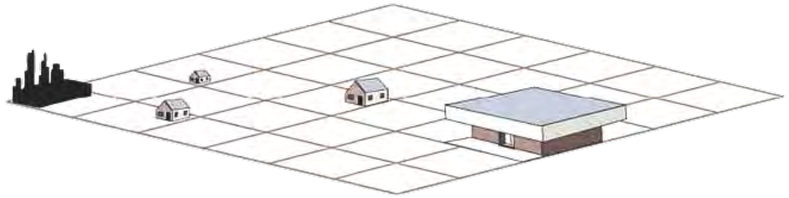
LANDFORM + CLIMATE



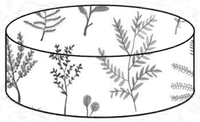


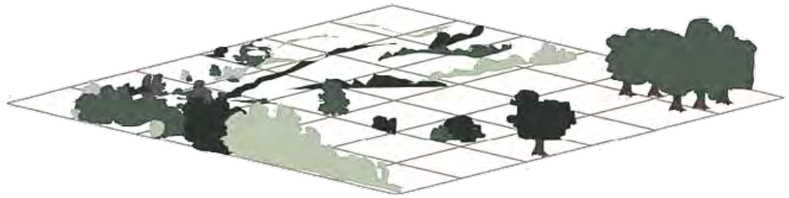
HUMAN MADE + INFLUENCED



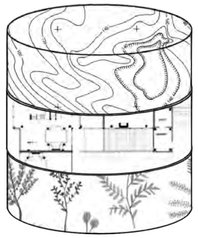


BIOTIC RESOURCES

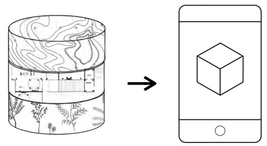


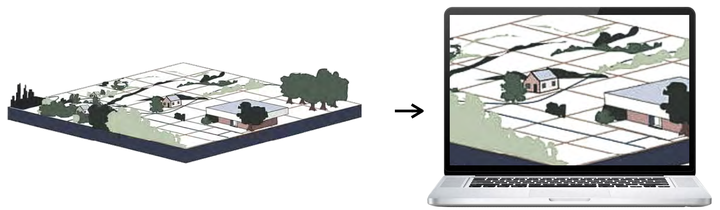


INTEGRATED MAPS



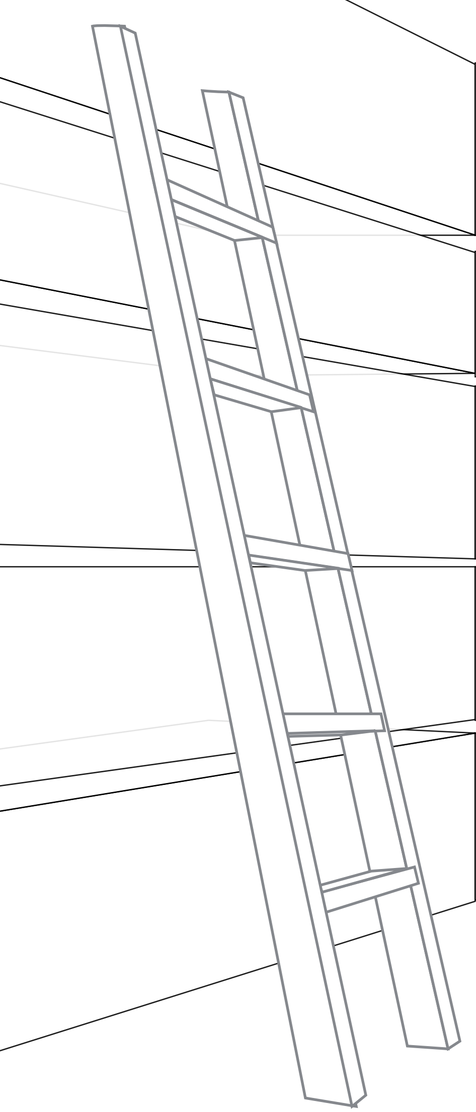
USER APPLICATIONS





Project Status

SOURCES OF DATA WITH VARIED ACCESSIBILITY



Public data from the SR committees, members and volunteers which requires translation into GIS

Private TSRA data already in the GIS server

Private TSRA data that requires translation into GIS

Publicly available GIS data from federal, state or stewardship entities

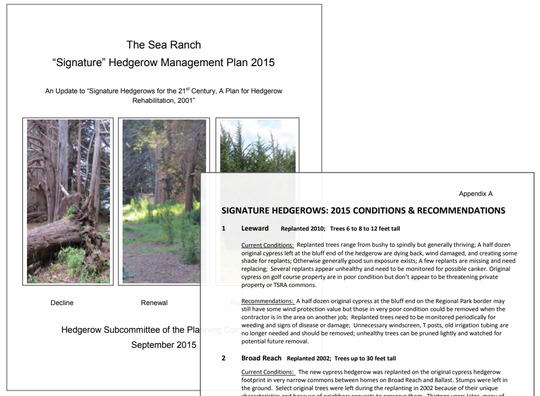
Publicly available research, which requires translation into GIS

Building a Data Library

CONSULTATION WITH STAFF + COMMITTEES

- Director Environmental Management + Compliance
- Member Volunteers
- Planning Committee
- Vegetation Manager
- Director F+R
- Commons Landscape Committee
- Resource Maintaince Crew
- Native Plant Committee

2015 HEDGEROW SUBCOMMITTEE MANAGEMENT PLAN



The Sea Ranch

"Signature" Hedgerow Management Plan 2015

An Update to "Signature Hedgerows for the 21st Century, A Plan for Hedgerow Rehabilitation, 2001"

Decline Renewal

Hedgerow Subcommittee of the Pla

September 2015

Appendix A

SIGNATURE HEDGEROWS: 2015 CONDITIONS & RECOMMENDATIONS

1 Leeward Replanted 2010; Trees 6 to 8 to 12 feet tall

Current Conditions: Replanted trees range from bushy to spindly but generally thriving; A half dozen original cypress left at the bluff end of the hedgerow are dying back, wind damaged, and creating some shade for replants; Otherwise generally good sun exposure exists; A few replants are missing and need replacing. Several replants appear unhealthy and need to be monitored for possible canker. Original cypress on golf course property are in poor condition but don't appear to be threatening private property or TSRA commons.

Recommendations: A half dozen original cypress at the bluff end on the Regional Park border may still have some wind protection value but those in very poor condition could be removed when the contractor is in the area on another job; Replanted trees need to be monitored periodically for weeding and signs of disease or damage; Unnecessary windscreen, T posts, old irrigation tubing are no longer needed and should be removed; unhealthy trees can be pruned lightly and watched for potential future removal.

2 Broad Reach Replanted 2002; Trees up to 30 feet tall

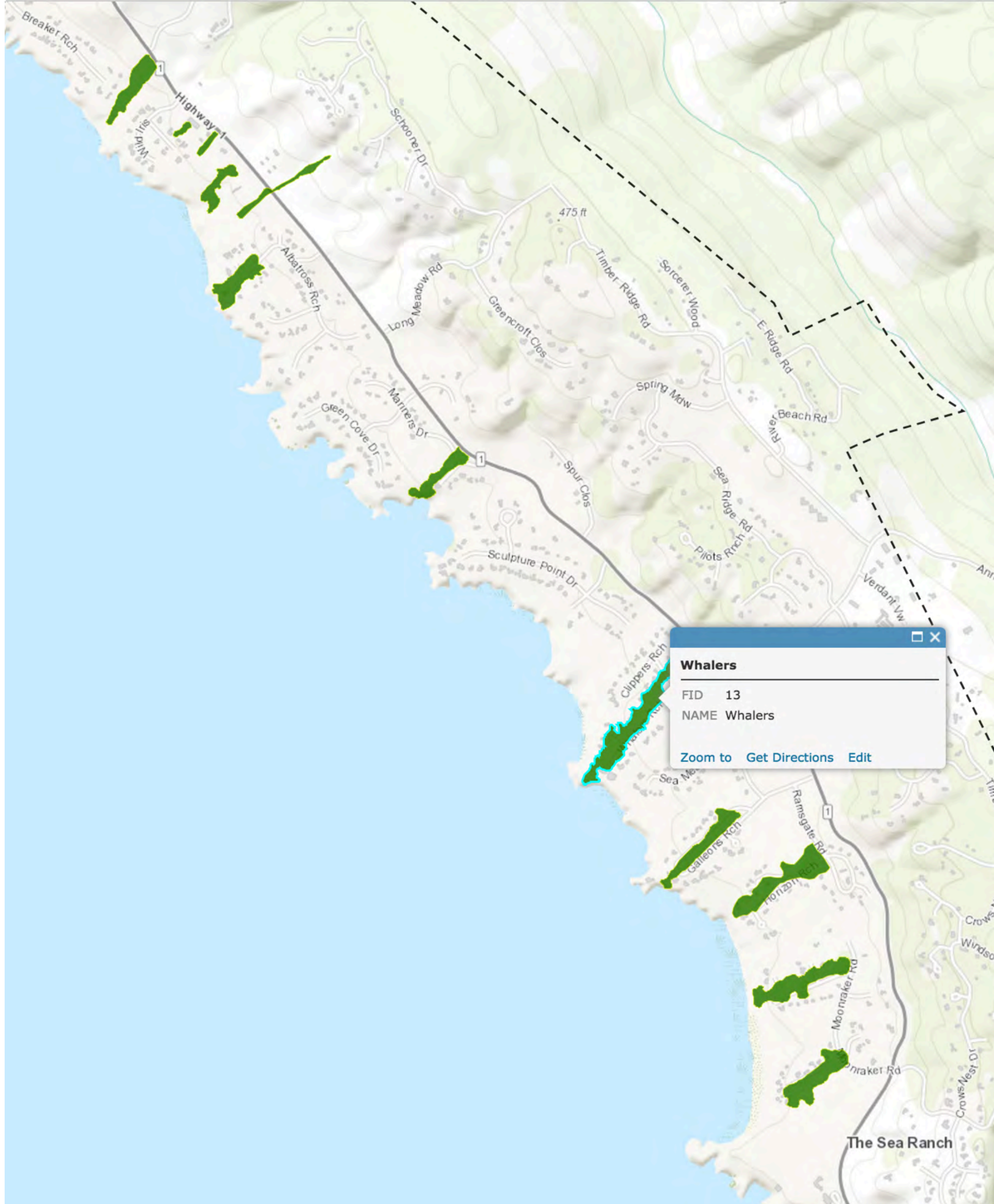
Current Conditions: The new cypress hedgerow was replanted on the original cypress hedgerow footprint in very narrow commons between homes on Broad Reach and Ballast. Stumps were left in the ground. Select original trees were left during the replanting in 2002 because of their unique characteristics and because of neighbors requests to preserve them. Thirteen years later, many of those originals are now either collapsing or overhanging the replanted trees and will be difficult to remove because of their locations within the 30' tall replanted hedgerow. The north and south exteriors of the replanted hedgerow trees which are well exposed to sun and wind are green, bushy and thriving. The interiors are totally shaded out with a large volume of dying branches on tall spindly growth and many small, dying saplings. Treatment by neighbors has been irregular: some hedgerow areas have been groomed, others totally ignored, others inappropriately pruned. Lack of a uniform management plan throughout is apparent. Property lines and commons boundaries are blurred. (Note: The cypress hedgerow east of Leeward to Forecastle may or may not be on Golf Course property. Work has been done to clean up the area by private owners, the Association, and the Golf Course.)

Recommendations: Clean up inner areas where masses of dead debris are building up; Remove weak trees that are dead or dying, leaning, and not part of the replanted hedgerow; Remove old stakes evident throughout. Develop a neighborhood plan for management of this hedgerow since its location prohibits it from ever functioning as a community trail. The primary function of this hedgerow is to provide a visual barrier between two rows of houses on Ballast and Broad Reach, mainly preserving privacy and possibly some wind protection on the south side. Careful pruning of the remaining old originals and consistent pruning of the replants are needed to restore the health and value of this hedgerow. Major tree removal here may be more disruptive than it is worth.

1

A Data Driven Approach

Example Data Set



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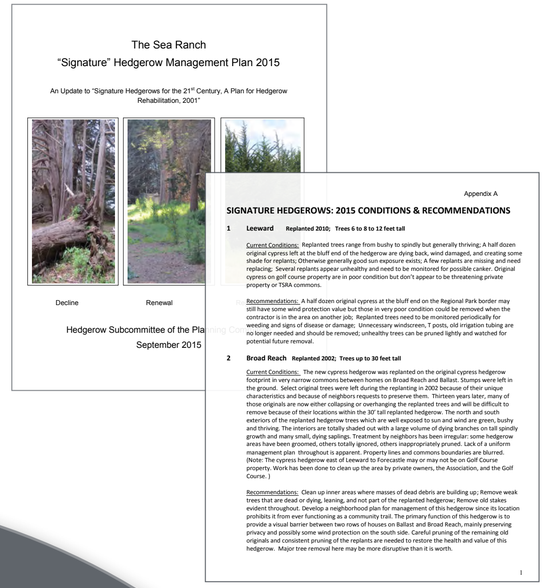

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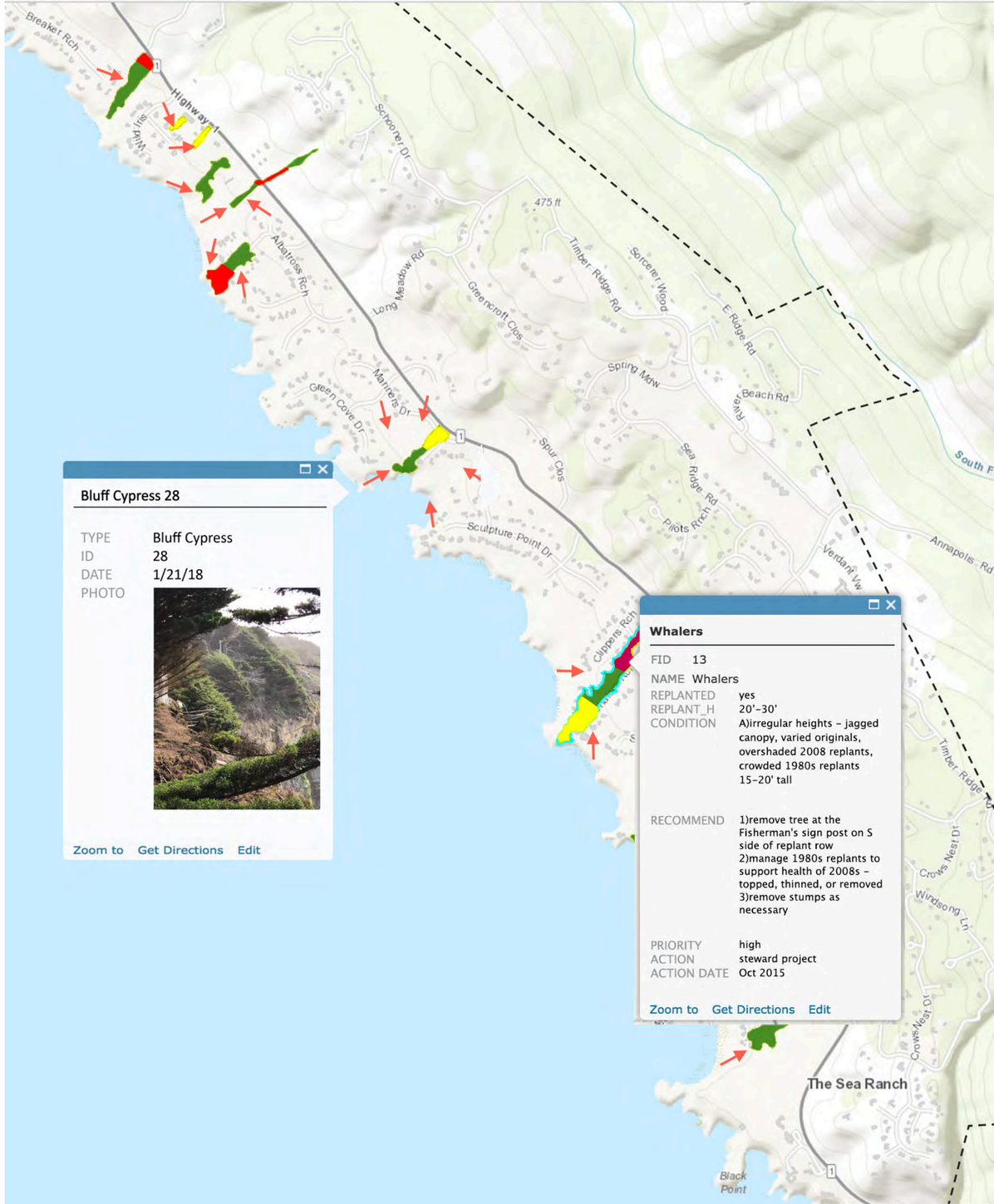


Visualizing The Data

BIOTIC RESOURCES

federally threatened & endangered animal habitat

wildlife migration routes

micro habitat zones

bluff Cypress

windbreak Hedgerows

sheep Grazing areas

vegetative Zones

Commons Landscape Committee stewardship actions

rare or endangered plant + animal sightings

landmark trees

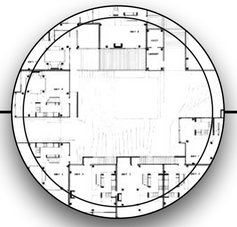
biodiversity areas

forest + fuel management plans

eucalyptus groves

remnant orchards

riparian channels



HUMAN MADE + INFLUENCED

architectural awards

parcel occupation and development status

unique ecological site treatment

member facilities

recreational areas

emergency infrastructure

TSRA utilities

public access points

highways + roads

hiking trails

historic indigenous heritage sites

historic European era sites

historic logging + ranching era sites

collaborative cultural history of sea ranch community

LANDFORM + CLIMATE

bluff erosion

fault lines

active + dormant landslides

soils + erosion danger

elevation contours

wetlands

ridges

ocean coves + beaches

coastal bluffs

terraces

sag ponds

streams and confluences

watersheds

natural + engineered drainage

iconic attractions

wind directions

sun patterns

Heritage Story Map

EDUCATIONAL STORY TELLING

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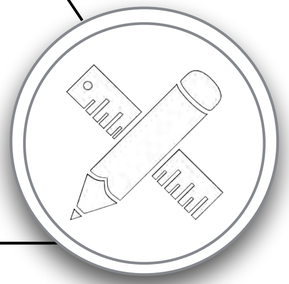
ADVISORY ANALYSIS TOOLS



DC/DCEM Design + Planning Tool

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Commons Landscape Committee Action Items

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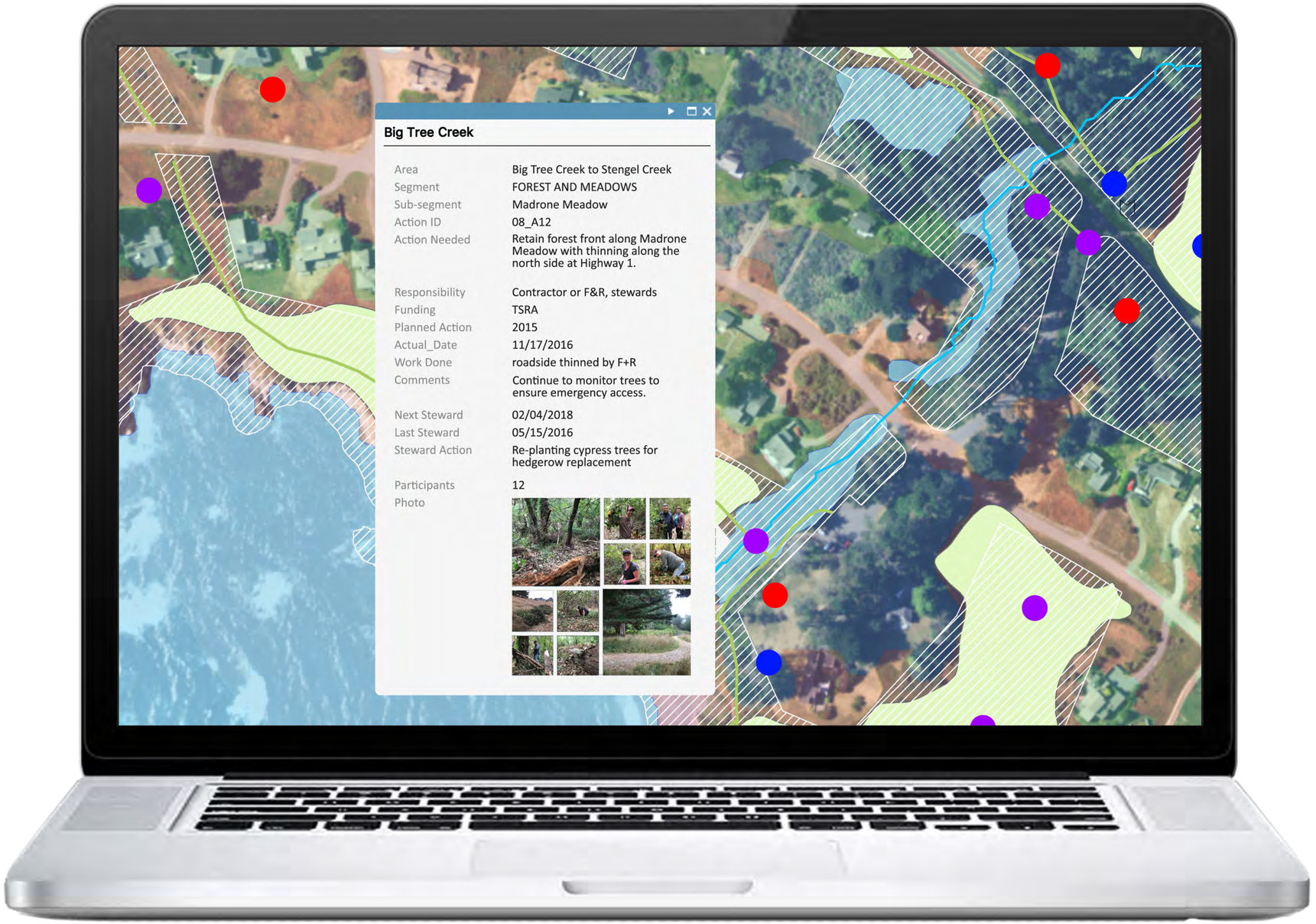

Trails Explorer

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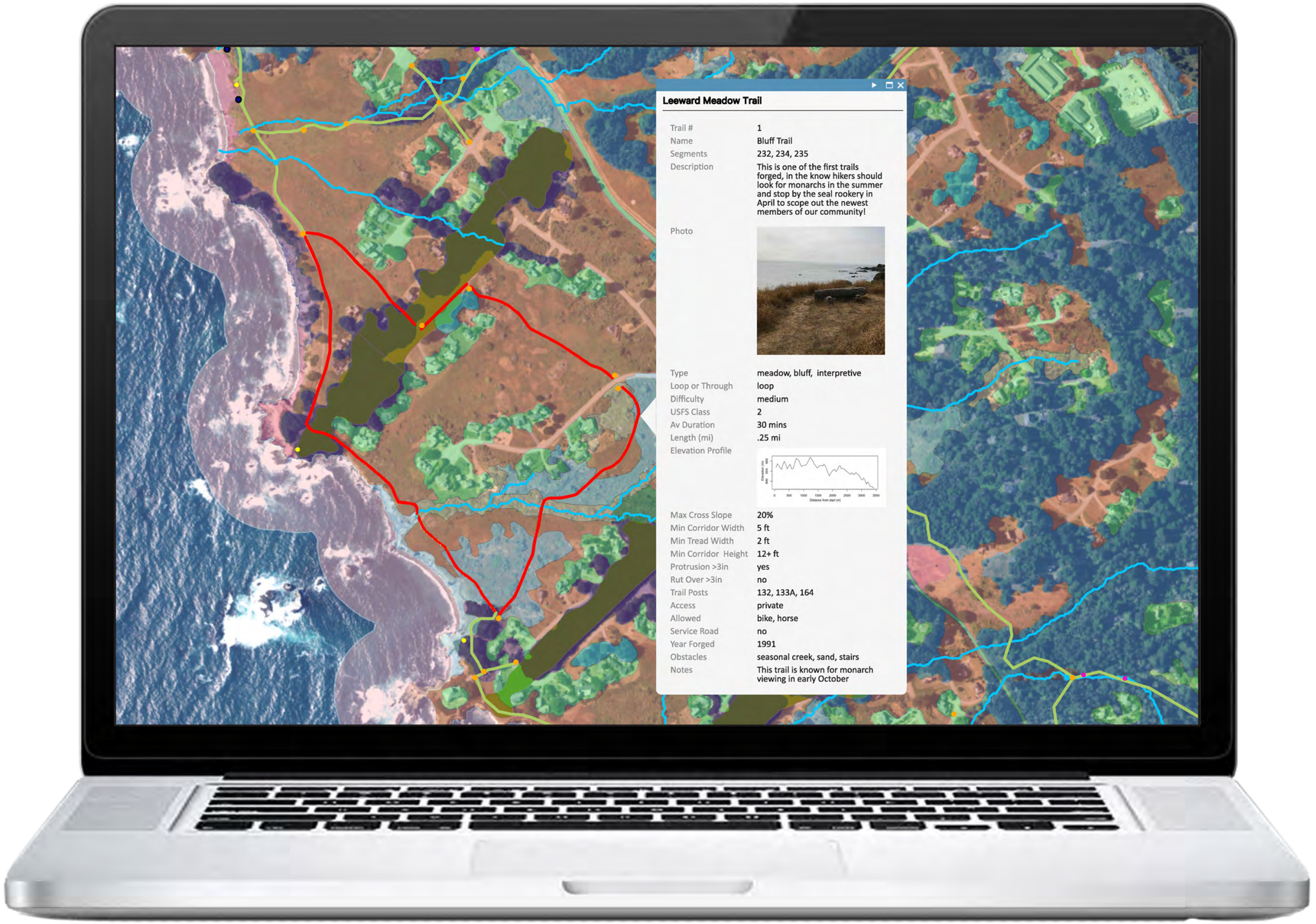
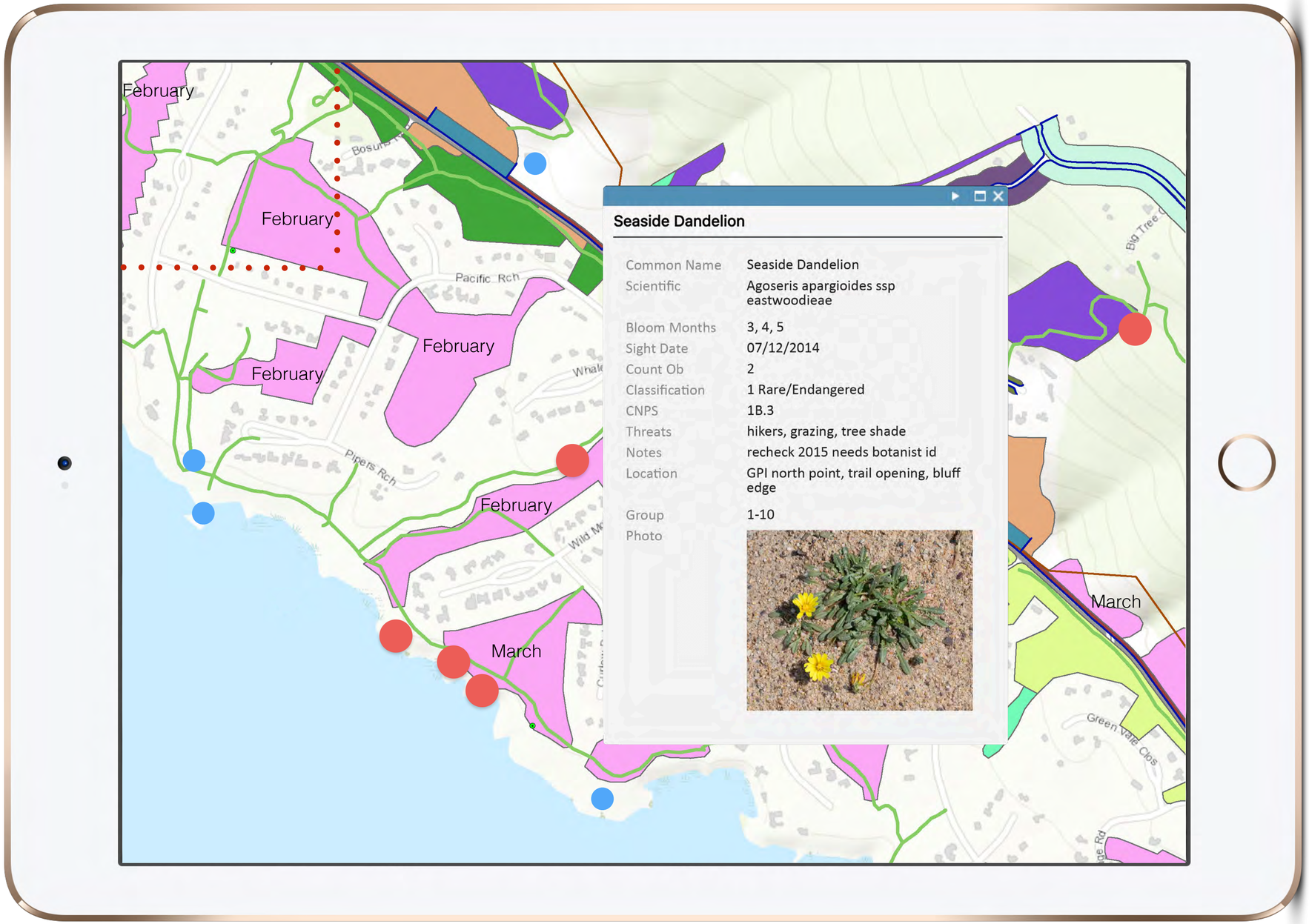


Rare + Endangered Bloom Alert System



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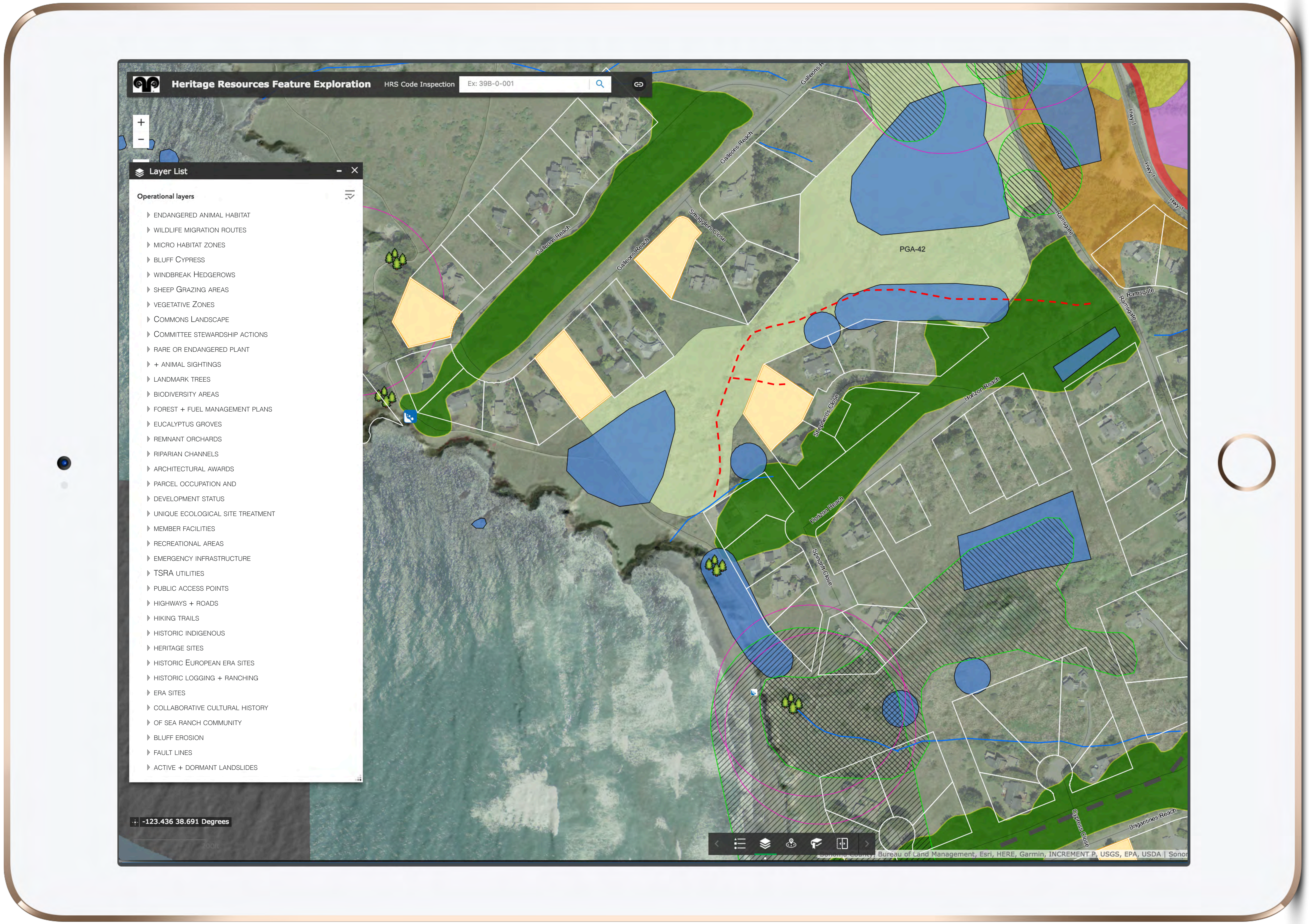
DCEM Planning Tool



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Heritage Story Map

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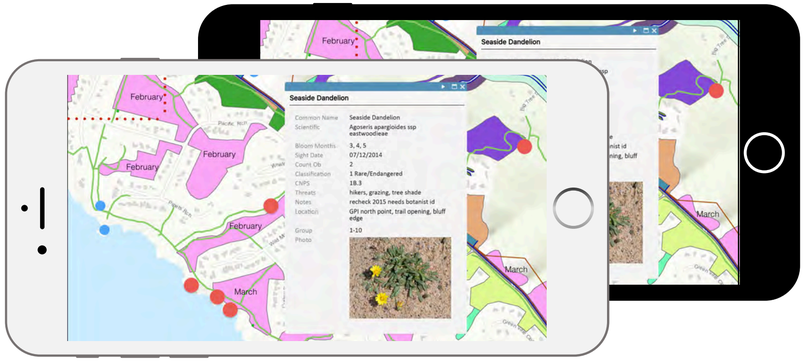
Heritage Story Map



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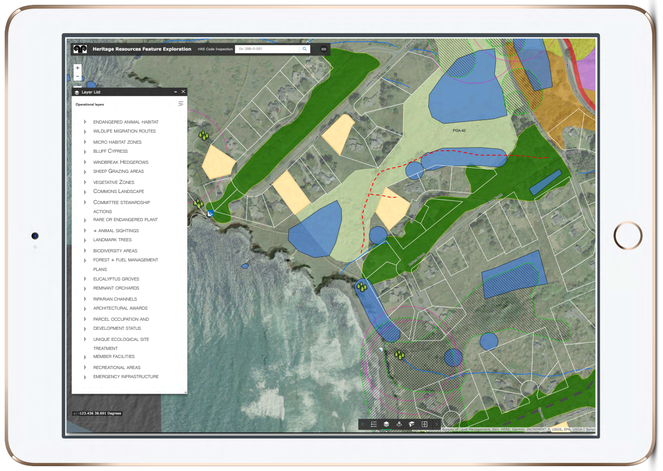
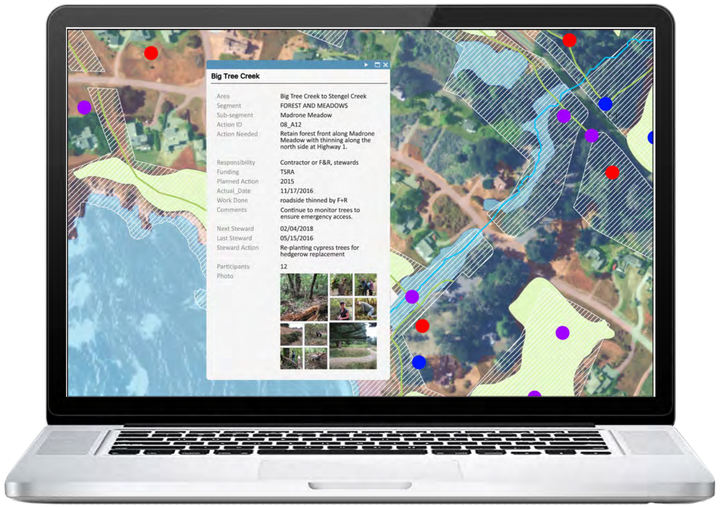


DC/DCEM Planning + Design Tool

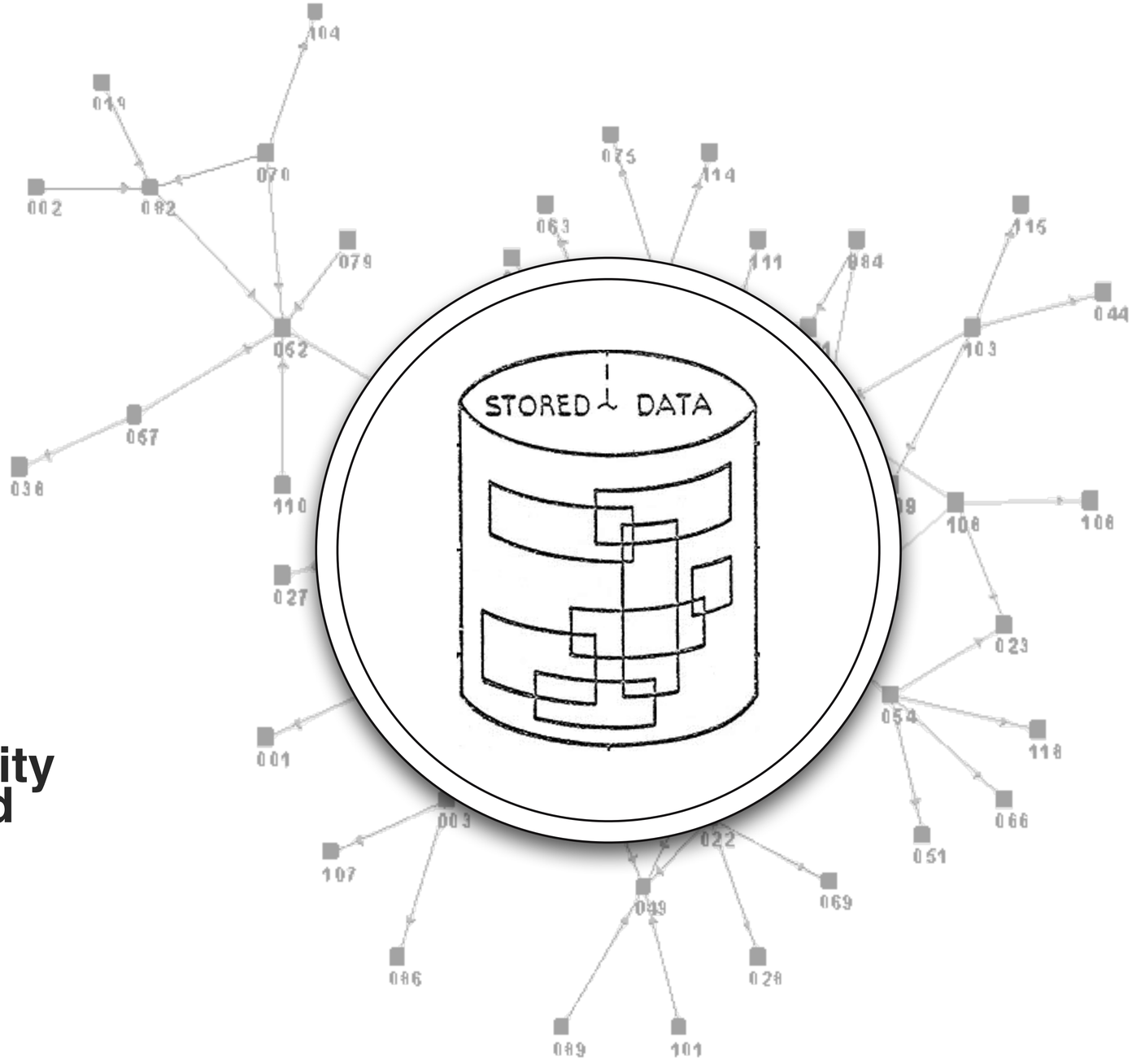
Commons Landscape Management



Looking Forward

Creating Institutional Memory

- compiling and proving a successful model for land management
- engaging with the community of dedicated volunteers and citizen scientists
- protecting the vision



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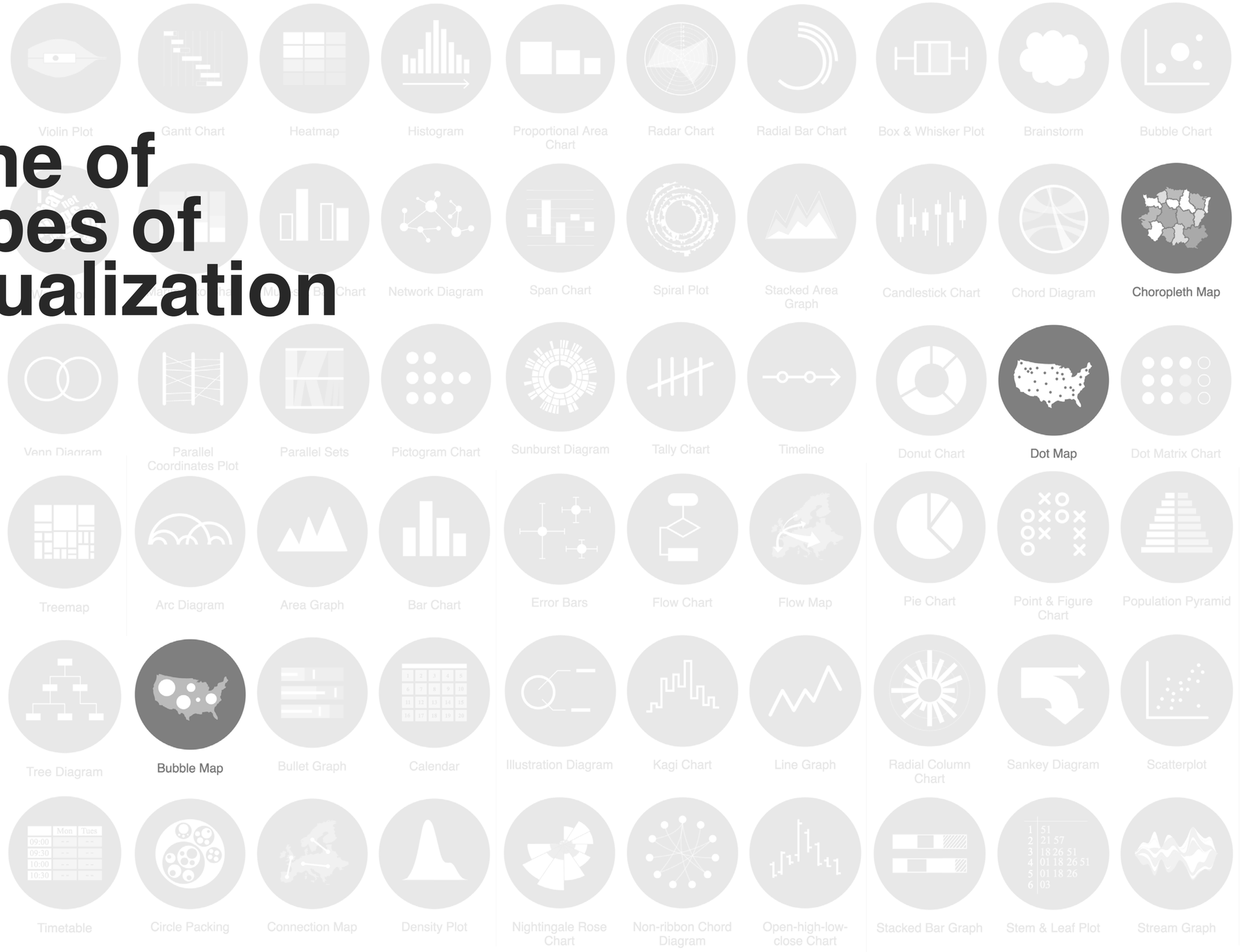
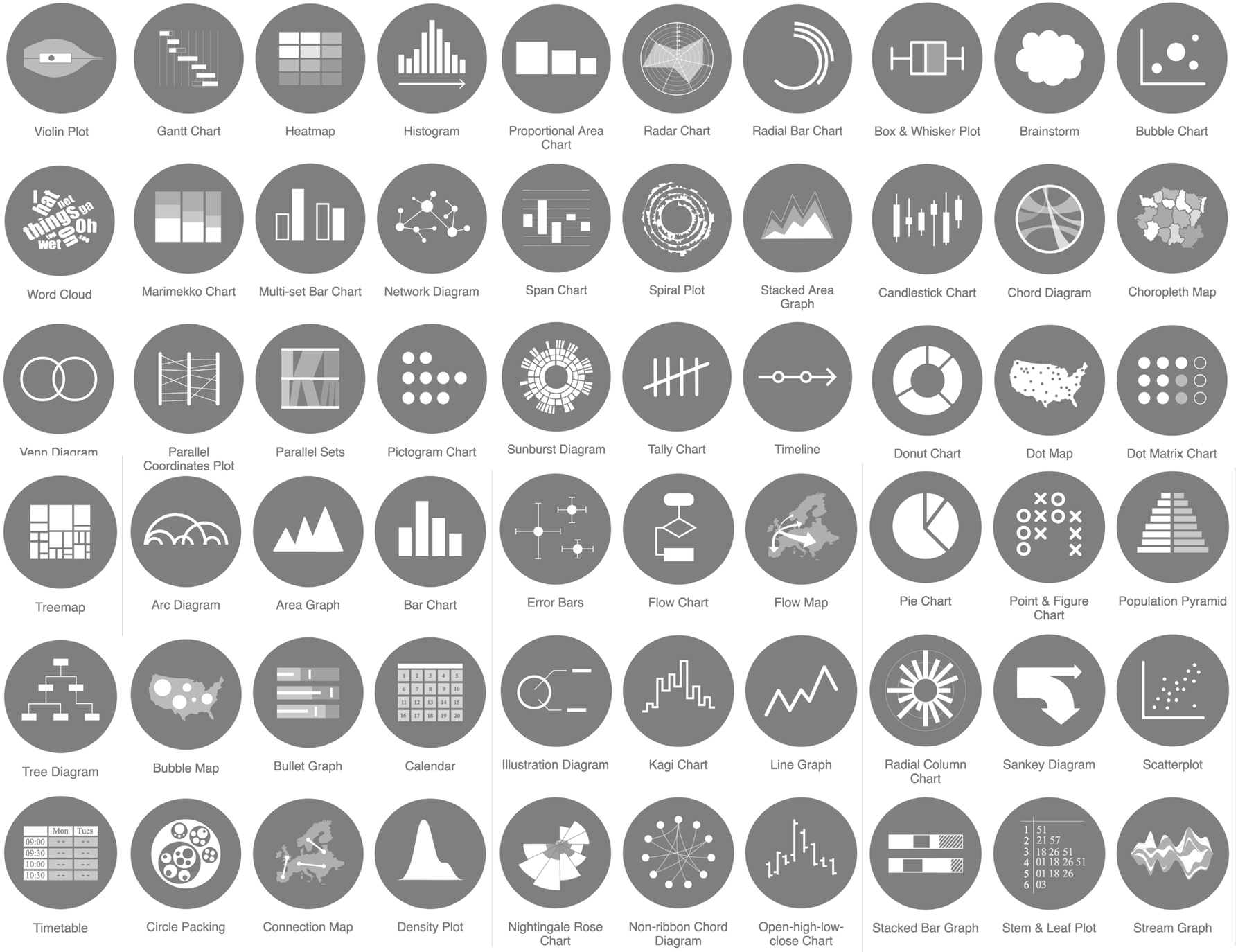
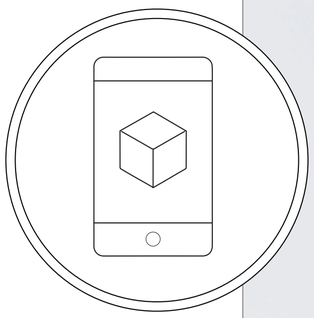
GIS is one of many types of Data Visualization

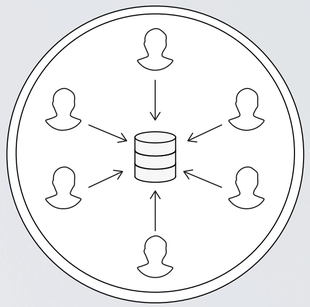



Violin Plot
Gantt Chart
Heatmap
Histogram
Proportional Area Chart
Radar Chart
Radial Bar Chart
Box & Whisker Plot
Brainstorm
Bubble Chart
Word Cloud
Marimekko Chart
Multi-set Bar Chart
Network Diagram
Span Chart
Spiral Plot
Stacked Area Graph
Candlestick Chart
Chord Diagram
Choropleth Map
Venn Diagram
Parallel Coordinates Plot
Parallel Sets
Pictogram Chart
Sunburst Diagram
Tally Chart
Timeline
Donut Chart
Dot Map
Dot Matrix Chart
Treemap
Arc Diagram
Area Graph
Bar Chart
Error Bars
Flow Chart
Flow Map
Pie Chart
Point & Figure Chart
Population Pyramid
Tree Diagram
Bubble Map
Bullet Graph
Calendar
Illustration Diagram
Kagi Chart
Line Graph
Radial Column Chart
Sankey Diagram
Scatterplot
Timetable
Circle Packing
Connection Map
Density Plot
Nightingale Rose Chart
Non-ribbon Chord Diagram
Open-high-low-close Chart
Stacked Bar Graph
Stem & Leaf Plot
Stream Graph

Visualizing The Future

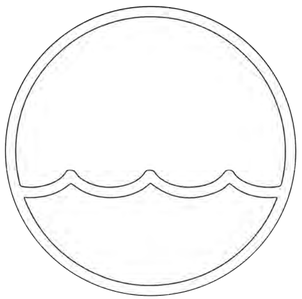


MORE TOOLS



CROWDSOURCE

FOREST FUELS



SEA LEVEL

TEMPERATURE

RESTORATION

The Heritage Resource Survey

Co-Managing Our Shared Inheritance

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