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# How to tell your story using Story Map apps

ALLEN CARROLL BERN SZUKALSKI





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What are Story Maps?

Stories we love The path to success

Avoiding pitfalls What's new and coming

Why it matters

Story Maps are simple web apps that combine interactive maps,



Story Maps are simple web apps that combine interactive maps, <u>multimedia content</u>,





Story Maps are simple web apps that combine interactive maps, multimedia content, and <u>user experiences</u>



Story Maps are simple web apps that combine interactive maps, multimedia content, and user experiences to tell stories about the world.



Most story maps are hosted by Esri in the cloud (but you can opt to host them yourself).



Story Maps include a builder that enables you to author a sophisticated story with no GIS or web development skills.



# Story Maps work equally well on PCs, tablets, and smartphones



# Story Maps are open source. You're free to download and customize them.



# Story Maps include an array of apps that provide different ways to tell a story.



Sequential narratives

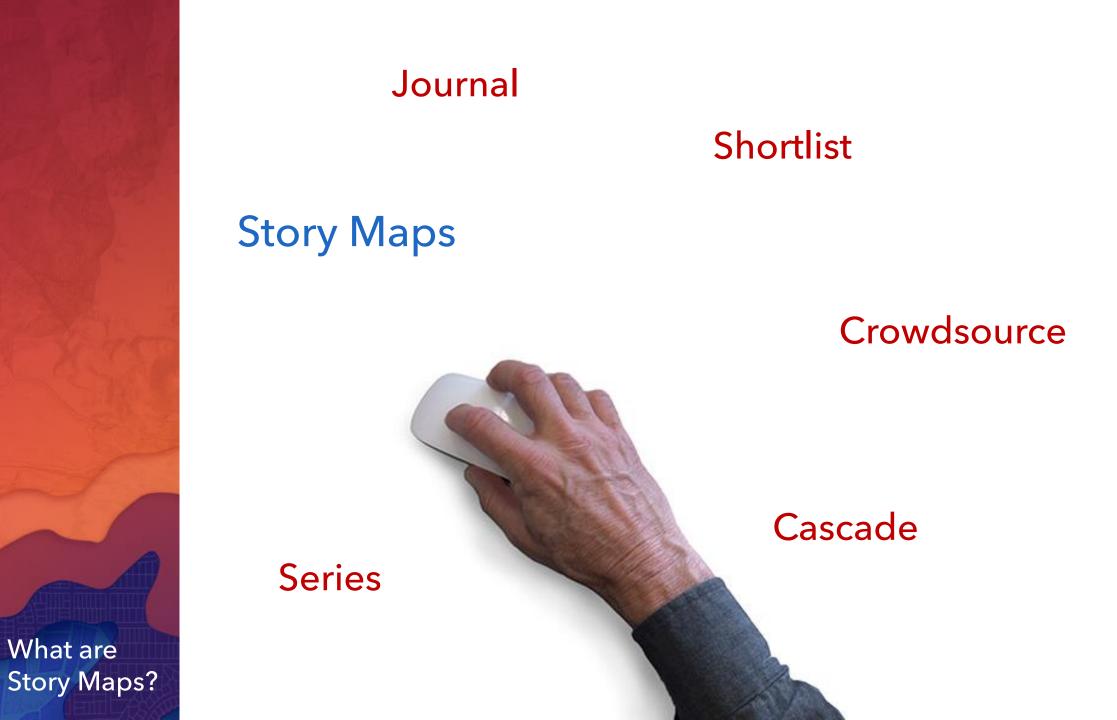
## Story Maps

Presenting a series of points of interest

Enabling a "crowd" to participate in a story

Scrolling through maps and multimedia

Comparing several maps



What are



# Story Maps We Love

## **Stories that explain**

NATURAL RESOURCES

# Washington's Ice Age Floods

The rugged terrain of eastern Washington was shaped by floods of unimaginable power during the last ice age. Here is the story of the floods and of the landscape they left behind.

Story Maps We Love

Washington's Ice Age Floods | Washington Geological Survey | Link





Story Maps We Love

Downtown Reborn | City of Greenville, SC | Link

## Stories that summarize (annual reports)



Story Maps We Love

Canal & River Trust Annual Report | Canal & River Trust, U.K. | Link

### **Stories that entertain**

# The Rickshaw Run

2 brothers, 1 dad, 7 horsepower, a glorified lawnmower and 3,453km across India

Story Maps We Love

The Rickshaw Run| Chris Counsell| Link

### **Stories that inform**



Over the past fifty years, oil production has <u>drastically increased</u> in order to meet the world's growing demand for oil. At the intersection between incessant demand and exploitation processes that entail serious socio-environmental harm lies western Amazonia, one of the world's primary petroleum sources. This region, <u>considered one of the lungs of the planet</u> and home to hundreds of indigenous communities, is at risk of suffering irreversible damage.

Among the communities that inhabit the Ecuadorian Amazon are the Kichwa de Sarayaku people. This community has struggled for decades against illegal incursions, defending their territory, way of life and environment. Above all, the Sarayaku people defend the living forest.

This tool aims to recount, using images and maps, the long road of struggle of the Kichwa de Sarayaku people in order to protect their territory both within Ecuador and before international courts of justice. Throughout this journey, they have been assisted by a legal team, in which the Centre for Justice and International Law (CEJIL) is a participant.

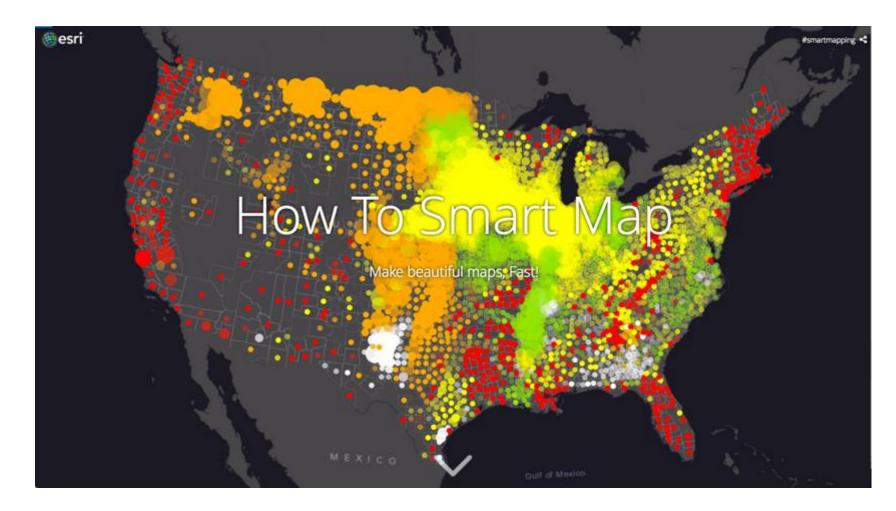
To arrest the narrative in its entirety risk on the red text or the humons to discover

Story Maps We Love

Sarayaku: In Defense of Territory Amazon Conservation Team | Link

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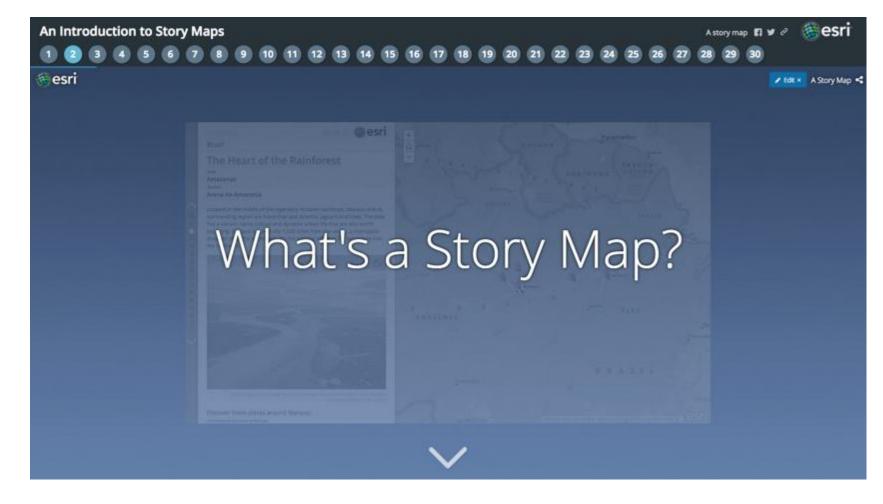
## **Stories that teach**



Story Maps We Love

How to Smart Map | Esri | Link

## **Stories that present**



Story Maps We Love

An Introduction to Story Maps | Esri | Link

### **Stories that inspire**

# #Fridaysonthefarm

Restoring a Majestic Love

Natural Resources Conservation Service

Story Maps We Love

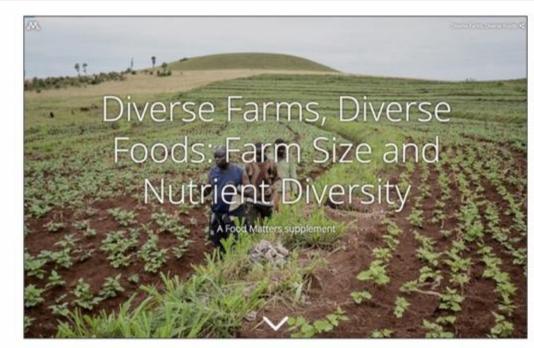
Fridays on the Farm | Natural Resources Conservation Servicee | Link



storymaps.arcgis.com

The Path

to Success



### Story Map of the Month

#### Diverse Farms, Diverse Foods

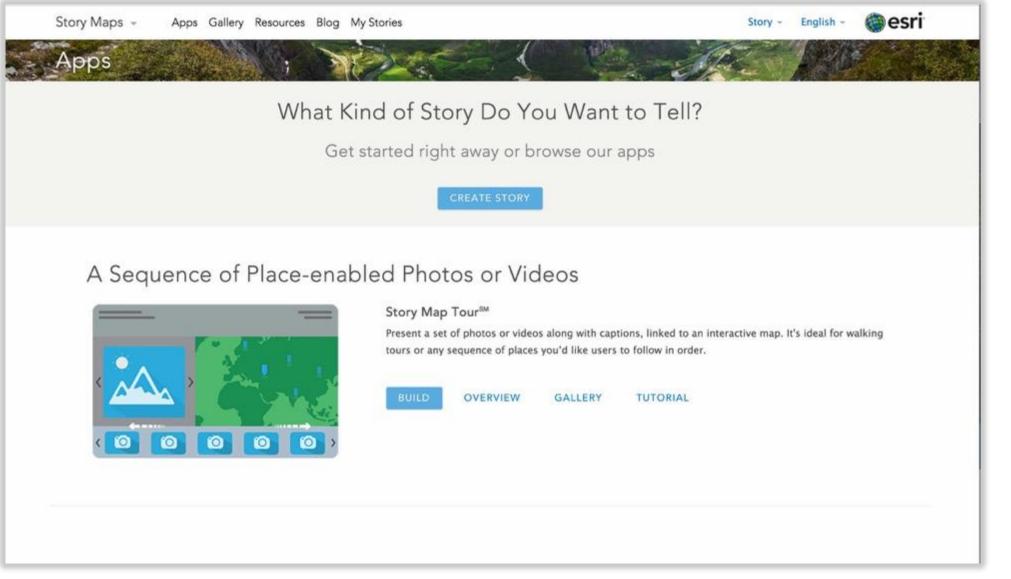
Created by the University of Minnesota Institute on the Environment using the Story Map Cascade app.



The Path to Success

Story Map of the Month; featured gallery

1 Top



The Path to Success

**Apps Page** 

#### A Dynamic Collection of Crowdsourced Photos



#### Story Map Crowdsource<sup>SM</sup> BETA

Publish and manage a crowdsourced story to which anyone can contribute photos with captions. Use Crowdsource to engage your audience and collect their photos and experiences, thoughts or memories on the subject of your choice, all linked to a map. A vetting function lets you review and approve contributions.

GALLERY

GALLERY

UILD OVERVIEW

TUTORIAL

#### A Curated Set of Places of Interest



#### Story Map Shortlist<sup>™</sup> BETA

Present a large number of places organized into tabs based on themes, for example, food, hotels, and attractions. As your users navigate around the map, the tabs update to show them just the places in their current map extent.



TUTORIAL

1 Top

The Path to Success

Apps Page

States of the Party of the	s Gallery Resources Blog	My Stories		Story -	English - OCE
Apps		Create a	New Story		
		Pick an App	Ask the Pros		
A Sequen	MAP TOUR	MAP JOURNAL	CASCADE	MAP SERIES	
	CROWDSOURCE	SHORTLIST	SWIPE/SPYGLASS	BASIC	t's ideal for walking
				CLOSE	

Create a Story wizard

Story Maps - Apps Gallery Resources Blog My Stories



esri

English -

#### Before you start

To make a Story Map Tours<sup>M</sup>, you first need to assemble and organize the media (photos or videos) you want to use.

For photos, you can use images of any size and shape, but we recommend landscape orientation (i.e., images that are wider than they are tall). Map Tours generally look best if all the images have the same size and aspect ratio, so your users don't get distracted by differently shaped images as they go through your tour. The recommended image aspect ratio is 4:3.

You have several choices for image storage. You can use images stored in Flickr or Google+/Picasa (but Picasa is no longer accepting new uploads). Map Tour takes advantages of optimizations in how these services store your photos, so you can upload an image of any size and it will load quickly in your story. Map Tour also automatically reads in geotag information from the images to locate them on your map, and uses any title and caption text stored with the images. If your images don't have location information the Map Tour Builder will let you specify their map location interactively.

If you are using an ArcGIS subscription account with Publisher privileges, you have the additional option of uploading your image files from your computer directly into the Map Tour Builder, where they will be stored in the cloud with your map. This is a convenient option if your images aren't already online, or if you are creating a Map Tour that will be shared only inside your organization using images that you don't want to be accessible publicly.

You can also reference images that are on the web directly via their URLs. If you do this make sure the image file sizes aren't too large, because this can slow down performance. See the Story Map Tour FAQs for our image size recommendations.

A Map Tour can use videos instead of images, as well as both images and videos. The Builder can access videos stored in a YouTube account directly, or you can specify URLs to individual videos in YouTube, Vimeo, and so on.

You'll include the names and captions for the photos and videos in your Map Tour directly in the Builder. Alternatively, if you want to prepare everything ahead of time, you can make a spreadsheet containing the names, captions, locations, and media URLs that define your Map Tour, and import that spreadsheet into the Map Tour Builder as a CSV file. The Builder the Builder is the spreadsheet into the Map Tour Builder as a CSV file. The Builder is the spreadsheet into the Map Tour Builder as a CSV file. The Builder is the spreadsheet into the Map Tour Builder as a CSV file.

#### Step-by-step tutorials for each app

#### Story Maps -

#### Apps Gallery Resources Blog My Stories

9

Search Story Maps Gallery

Gallery

#### Show Me

All

Story Map App

Basic Cascade Crowdsource Map Journal Map Series Bulleted

Side Accordion

Tabbed Map Tour

Shortlist Swipe and Spyglass

Spyglass

Swipe



100 Years of Washington Water Law By Washington State Dept of Ecology



Unlock the insights hidden in your Drone I By Esri Patterns and Practices Team



Geo-enabling the Health Information Syste By Myanmar Dept. of Public Health, Minist



Civitates Orbis Terrarum By Patricia Carbajales, Clemson University



Story -

English -

esri

🚯 🕕 Anchorage by bike

Anchorage by bike By The Municipality of Anchorage, Alaska



2017 Conservation Innovation Grants: USE By USDA Natural Resources Conservation 5

**Custom Designs** 

#### Curated, filterable gallery

Story Maps - Apps Gallery Resources Blog My Stories



Resources

#### Basics

Learn the fundamentals of storytelling with maps.

- Learn How to Make a Story Map
- The Five Principles of Effective Storytelling
- Tips for Story Map Success
- Workshop Video: How to Tell Your Story With Story Maps
- The ArcGIS Book: Tell Your Story Using A Map
- What's New in Story Maps



#### FAQs

Have a question? Start with our FAQ page.

Frequently Asked Questions

 Follow Us on Twitter
 Keep up-to-date on latest news from the team, and discover the best new work by storytellers around the world.
 @EsriStoryMaps
 @AllenCarroll

Story -

esri

English -

#### Training (

Learn how to use ArcGIS, including story maps and web mapping.

- Esri Training Course: Creating Story Maps With ArcGIS
- Learn ArcGIS
- Maps We Love
- Story Maps Videos
- = Story Maps Training Seminar
- Story Maps for Non-Profits Seminar

Get an account Start making story maps today! Simply sign up for a free account or sign in with your Facebook or Google

#### Resources



#### Community

Seek advice from fellow storytellers and our team. Vote on ideas or submit your own.

Story Maps Forum on GeoNet
 ArcGIS Ideas on GeoNet

#### Blog

Discover tips, best practices, and new features.

Story Maps blog

Newsletter

Sign up!



#### If You're a Developer...

Get Planet Story Maps, our email newsletter.

sign in with your Facebook or Google credentials. Or get an ArcGIS Subscription to access premium data, publish your own data, perform analysis, set up enterprise-wide use, and more.

- Get a free, non-commercial ArcGIS Public Account
- Get a 60-day free trial ArcGIS Subscription
- Purchase an ArcGIS Subscription
- Esri Help and Support Get help about story maps and ArcGIS.
  - ArcGIS Online Help
  - = Esri Technical Support
  - Browse or search all blog posts about story maps

Esri Storytelling with Maps Contest Browse the winning entries from our annual competition.

= 2017

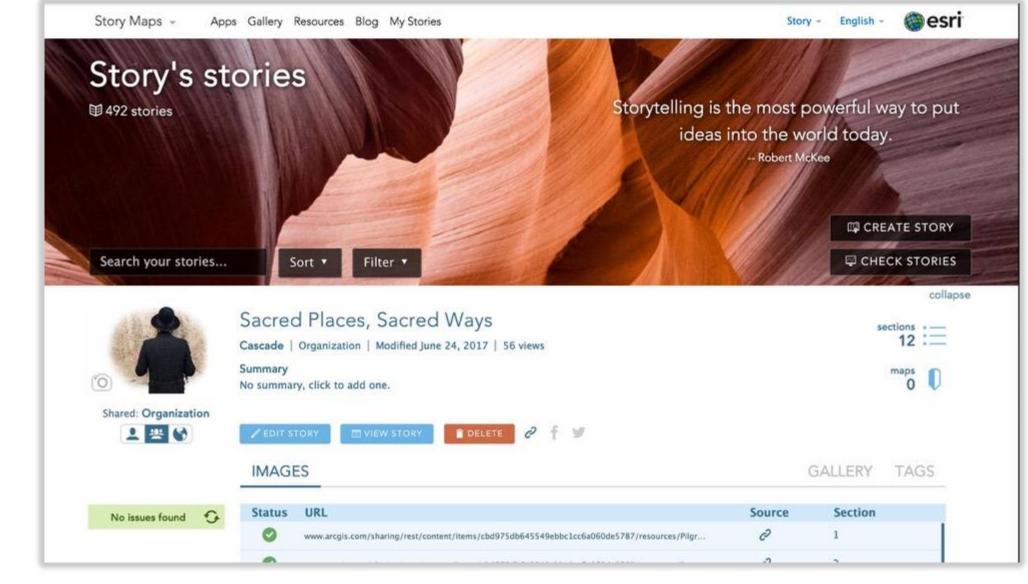
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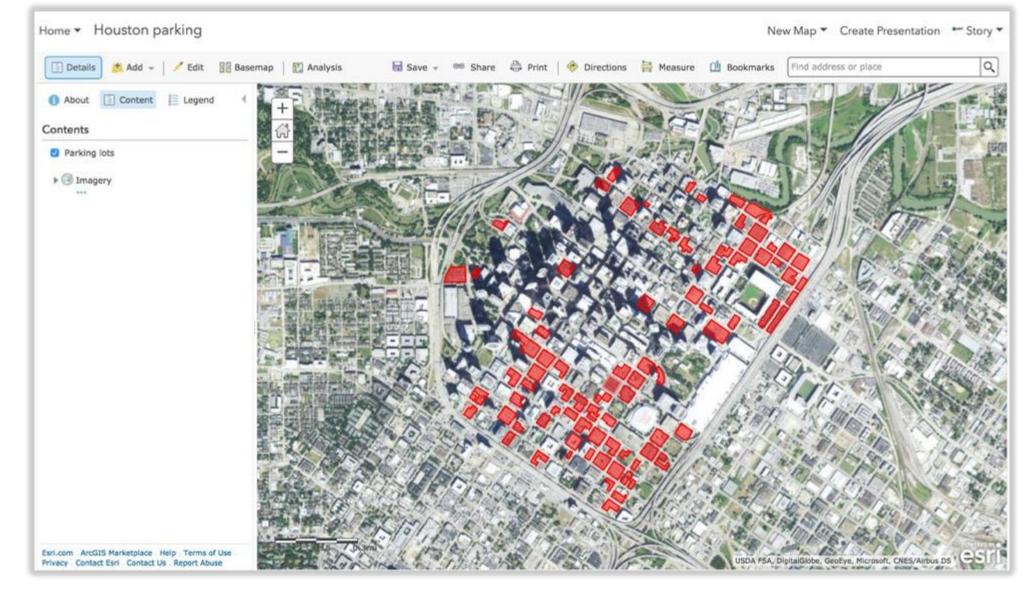
Top

The Path to Success

#### Resources



My Stories



Alternate workflow: ArcGIS Online

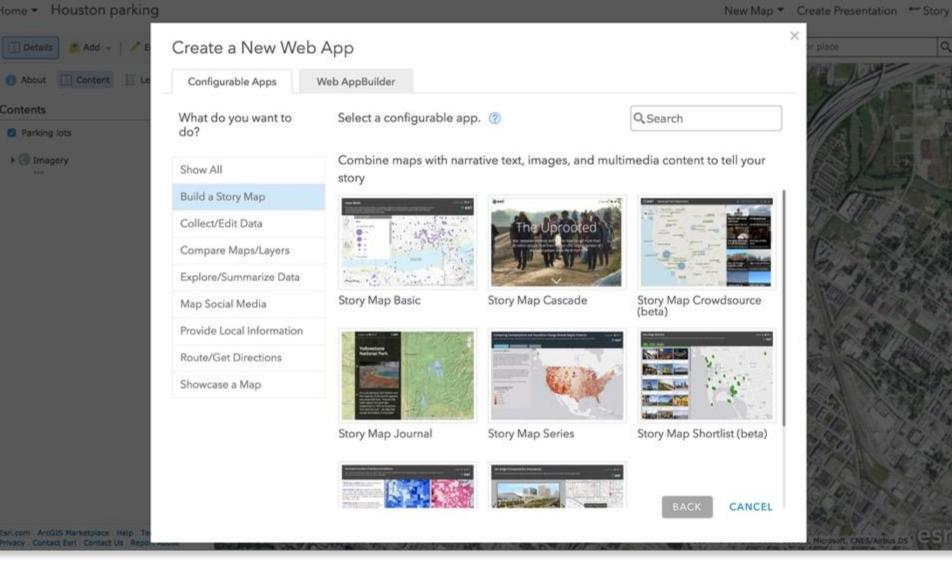
Home - Houston parking	Share	New Map  Create Presentation  Story  X is place Q
About Content E Le	Choose who can view this map. Your map is currently shared with these people.	
Parking lots	Everyone (public)  Storytelling with Maps  Members of these groups:  AGOL maps for story map viewer Asbury share Cross-cours sharing test with Bern	
	Cross-org sharing test with Bern GeoJobe Admin Tools Jon Share Lee's Test Group My BAO Group My CA Group	
	Share current map extent Embed this map EMBED IN WEBSITE CREATE A WEB APP	
Earl.com ArcGiJS Marketplace Help Terms Privacy Contact Earl Contact Us Report A2	of Use	DONE

Alternate workflow: ArcGIS Online

Details Add - / About Content Contents Parking lots > Imagery

The Path

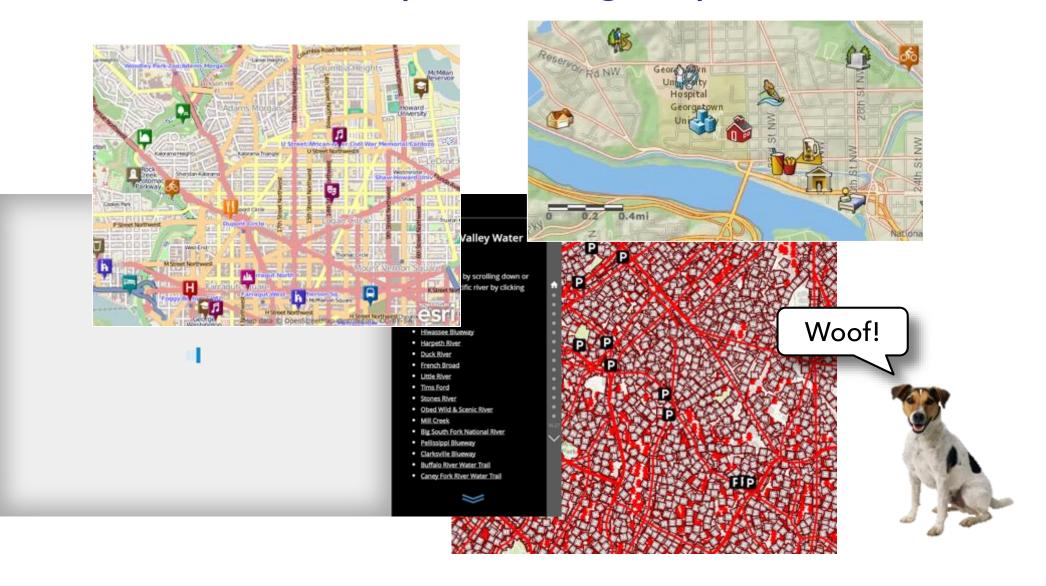
to Success



Alternate workflow: ArcGIS Online

# **Avoiding Pitfalls**

### **Pitfall:** Poor or slow-performing maps



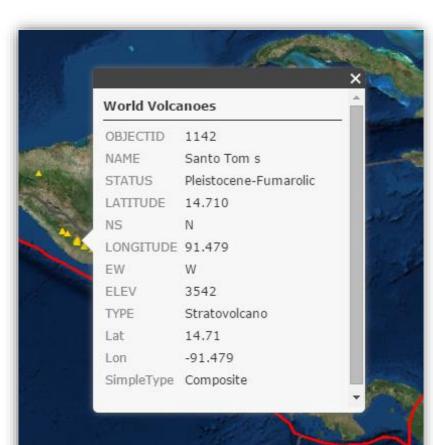
- Tile layers buddied with feature layers
- Vector tile layers
- Smart mapping (Arcade)
- Custom symbols
- Scale dependencies
- Alternate layers







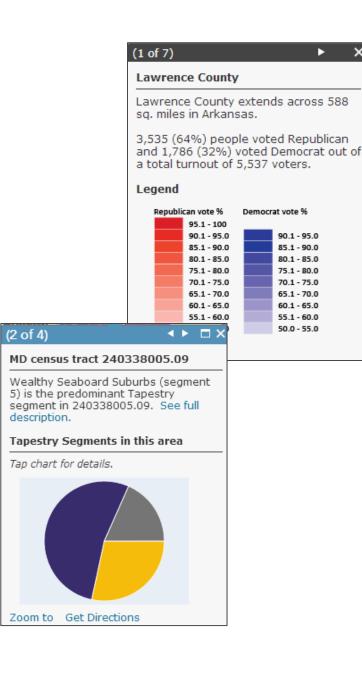
### **Pitfall:** Unconfigured pop-ups





#### WHY ARE YOU YELLING AT ME? WHAT'S AN OBJECTID?

- Hide unneeded fields
- Field aliases
- Custom pop-up displays
- Use of color
- Properly sized images with links
- Arcade



### **Pitfall:** Poor legends



day use only 0 limited camping, fire in Ο designated sites only, 3-night max urban camping, fire in 0 designated sites only, 1-night max dispersed camping, 3-night Ο max Waterway - Large Scale Black River Central Sands Wisconsin River Fox & Wolf Rivers Fox (IL) River Green Bay Tributaries Lake Superior Tributaries

LEGEND

Points

Wisconsin River Islands -

Lower Chinnews

- Remove layers from legend
- Does your map really need one?
- Add custom legend as a graphic
- Style your own legend using html/CSS
- Use colored type within a text description

#### **Pitfall:** Too much information

#### **Grand Traverse County - Brownfield Projects**

Mapping provided by Grand Traverse County G.I.S. Department 🛛 🖉 🤗

Grand Traverse County, Planning & Development





Bank of Northern Michigan The Kinney Building historically operated as a gasoline service station from at least 1918 to June 1986 at the northwest corner of Union Street at State Street. After 1986, it was used solely as an automotive repair facility until purchased and redeveloped through the aid of Brownfield Plan tools. The small, one-story, slab-on-grade service station was to become the Bank of Northern Michigan with three stories and a full basement along with the neighboring "Mid-Block Building" -

















Bank of Northern Michigan

Avoiding

Pitfalls

Melling Tool Property R

River's Edge (Midtown)

Radio Centre / Park Street Redevelopment VanWagoner

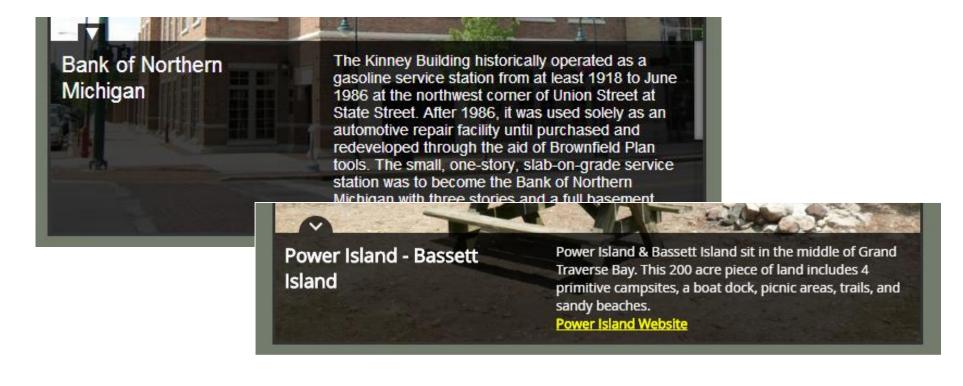
Harbour View Centre

Traverse City Place

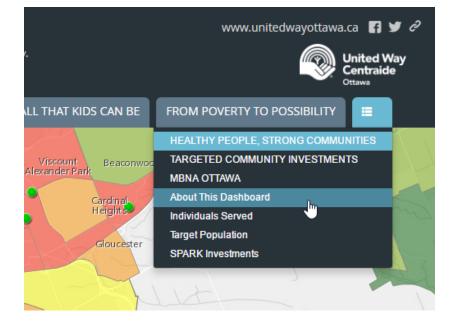
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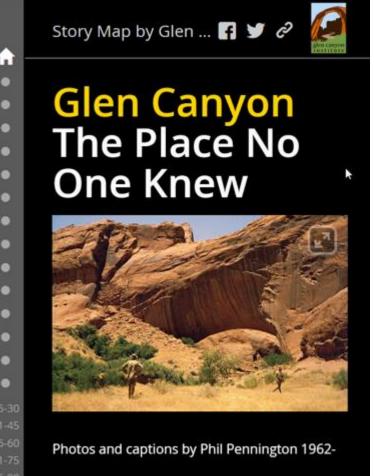
(Midtown) R

- Keep descriptions to their essence
- Use links (if you really need to)



#### **Pitfall:** Your story is a novel





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- Think about the essentials
- Divide and conquer
- Embed story maps in a "binder" story map\*
- \* but don't over do it

### **Pitfall:** Your story sounds boring

#### Wanganui Street Art

and other interesting things

#### SPATIAL NARRATIVES & DEEP MAPS

NEH Institute for Advanced Topics in the Digital Humanities



#### Add some excitement, lure your audience into your story

#### A huge international ivory trade threatens the future of Africa's wild elephants

Illegal poaching has caused populations of African elephants to plummet. Earth's largest land mammal is doomed to extinction in the wild unless demand for ivory is reduced and poaching is halted.





A story map

a) esri

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## **Pitfall:** Who are you?



- Customize the header
- Use color branding
- Add your own links and logo



#### **Pitfall:** Images not optimized for display

#### **Snow Journal**

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Boston Snow 2015

A Story Map

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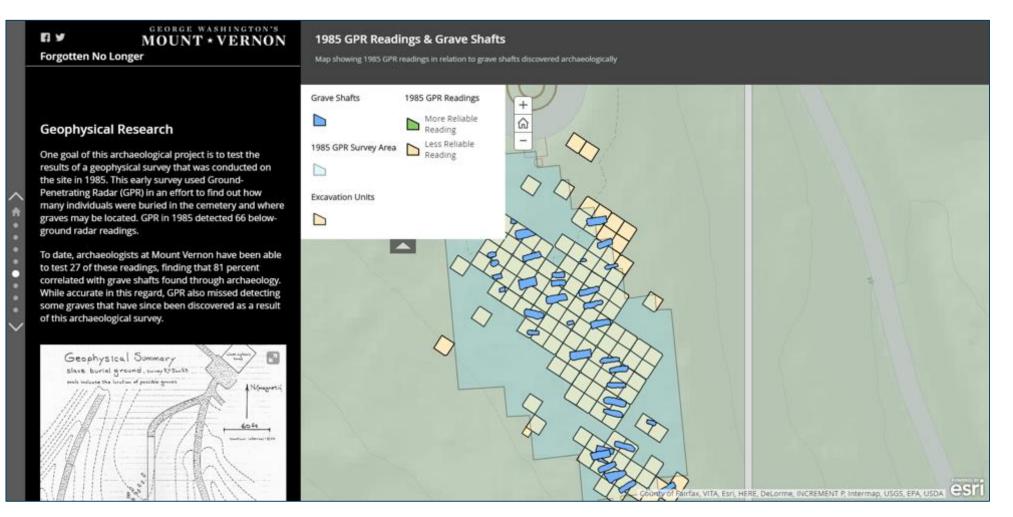
This was a year for breaking records. An incredible 110.6 inches of snow fell on Boston, making this the snowlest winter in recorded history. From January 26th to February 18th, Boston received over 7 feet of snow from four major snowstorms. Very little melting occurred due to consistantly frigid temperatures. Boston Public Schools closed for 8 days. Travel was banned one day and people were encouraged to stay off the roads on several other days. Boston Police and Inspectional Services gave over 1,100 rides to nurses and emergency workers. Our homeless shelters were open around the clock, sheltering more than 600 guests each night.

The topics covered in this Map Journal are:



- Load your local images into the story map builder
- Leverage Flickr
- Optimize your images for web use before hosting

### **Pitfall:** Apps and Story Maps in your story map



#### **Pitfall:** Apps and Story Maps in your story map

#### Snow Journal

#### Catch Basins

#### Prevent Flooding from Snow Melt

With this year's record breaking snowfall, flooding is a real danger as temperatures begin to rise. Clearing snow, ice, and trash from catch basins or storm drains keeps our streets clear of puddles and our waterways free of pollutants.

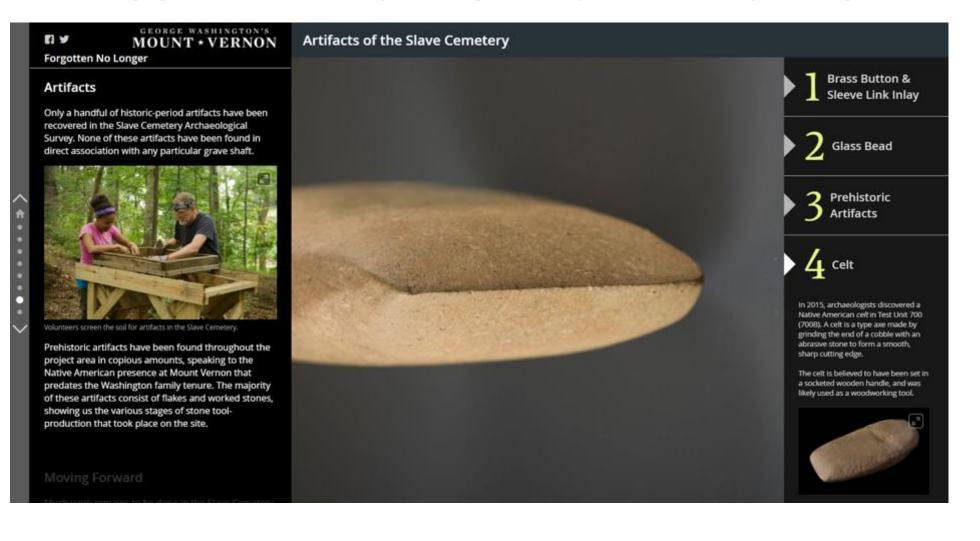
This map shows where all of the catch basins are located. It also shows locations of fire hydrants, restricted parking roads and alternative parking garages. To zoom into a neighborhood, enter the address on the search bar to the right of the title. Click on the icons under the map title to view the legend or select the layer(s) that interest you.

Winter Roof Advisory for Homeowners

Preventing Potential Roof Collapses With the significant amount of snowfall seen in Boston this writter, residents and property owners should be mindful of the potential risk of roof collapses.

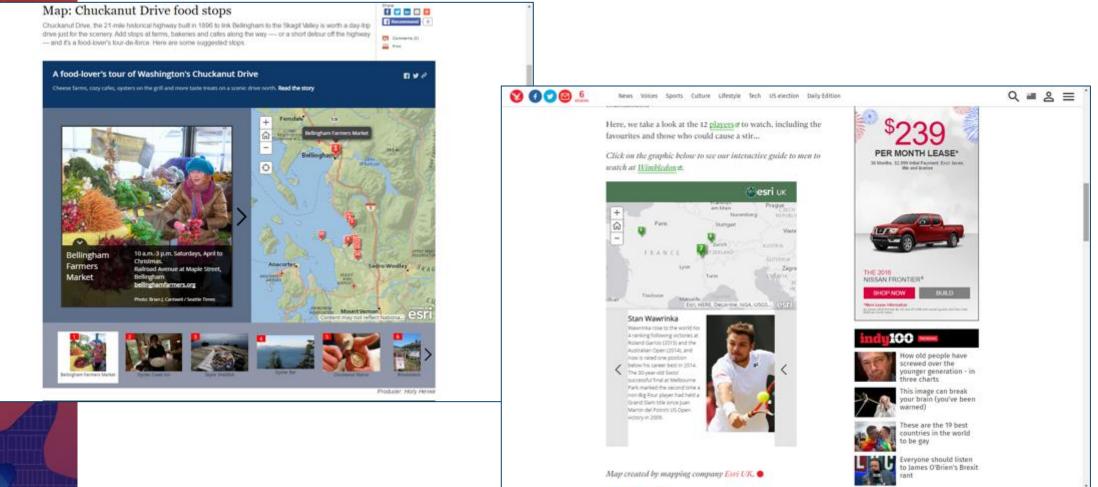


#### **Pitfall:** Apps and Story Maps in your story map



- Only embed other apps when it adds to your story
- Minimize the header of the embedded apps
- Consider Minimalist and other map-focused apps

### Pitfall: Not enough breathing room



- Minimize header
- Add "View larger map"
- Use links instead of live story map

#### **Pitfall:** Side panel images too small



#### An Example of Spatial Analysis

You've just seen an example of Spatial Analysis applied to evaluating a potential location for a new store.





#### Parque Nacional de los Picos de Europa



Simas que llegan a los 1.000 metros, lagos, erosión glaciar... Los Picos de Europa, representantes del ecosistema del bosque atlántico, es mucho más que un pulmón descomunal y refugio de más de 100 especies de aves, así como de corzos, lobos y osos.

#### Use View Larger button





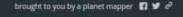
### Pitfall: Map, image, or app does not fit

The Lowest

The Highest

The Most Remote

#### Living on the Edge: The Extremes of Human Inhabitance



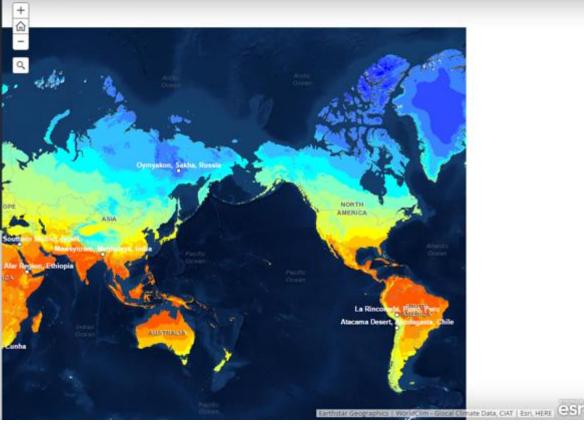


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Oymyakon, Russia Mean annual temperature: 4.2°F (-15.4°C) Lowest recorded temperature: -90°F (-67.8°C) Population: 547

There's chilly, there's cold, and then there's Oymyakon. Several hundred miles from the Arctic Circle, this village in Siberia is nicknamed the "Bele of Cold." The valley it's nestied in, far from the temperature-moderating effects of a sea, locks cold Arctic air over Oymyakon, encapsulating it in a frigid bubble. Oymyakon is no place for PETA activists: the best way to <u>stay warm outside is to wear fur</u>. It was just a stop for reindeer herders until the early 1920s, when the Soviet government forced nomadic peoples to settle there. Around that time, the government installed a weather station that in February 1933 measured <u>the coldest recorded</u> temperature in an inhabited area. a record that still stands today.

The cold makes everything difficult. The region's permatrost permits only a very short growing season, so the local diet is nearly exclusively fish, reindeer, horse, and their animals' mile. Vehicles are usually stored in heated garages since diesel freezes at -38°F (-50°C), and lighting fires beneath fuel tanks to prevent freezing is commonplace. Many homes don't have running water due to pipes' tendency to freeze, meaning that <u>outhouses</u> are the commode of choice. Oddly enough, laundry is dried outside, where wet clothing turns to ice, and the ice then sublimates, leaving the clothing mostly dry. Despite the challenges, residents are





V OVERVIEW MAP

- User proper Position (default is usually best)
- Pay attention to map extent and sync
- Test on different monitors and resolutions

# What's New and Coming



Cascade enhancements

# The same of a performed to be properties to Meson, some before and some during the Fug), during which garticipates to our among average boostions in and user Meson. acred Places, Sacre eri Sacred Places, Sacred Way enri Sacred Places, Sacred Ways menel Sacred Places, Sacred Ways With some 1.6 hilling Musiling adultable, assumed a wait exceeds of 'Dag gilgeting has beened a surger challenge. In prog-er planes pilgeting seen Albeit is a creat during the Dag. Officials or they black sounds to all sufficients of

Uncropped vertical images



A Story Map

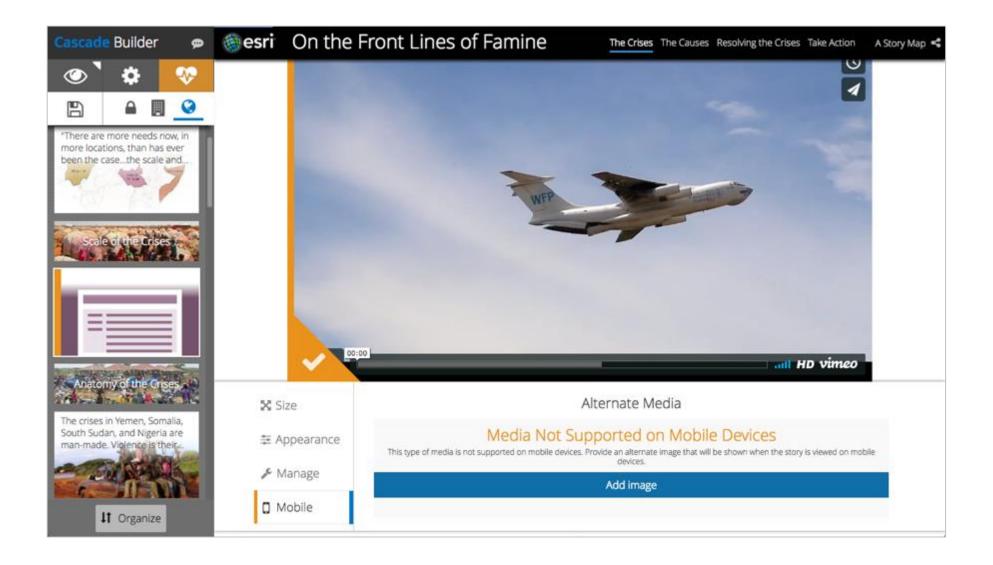


Whether it is an intentional effort or the byproduct of industry, we emit a glow that strongly echoes our footprint on the earth, and the beautiful and tragic stories behind it.

Cascade enhancements | White type on black background theme

Theme   Light   Dark   Fonts   Titles   Body   Georgia ▼   Georgia ▼ Georgia ▼	Logo & Sharing	Bookmarks	Appearance
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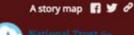
Cascade enhancements | Font choices

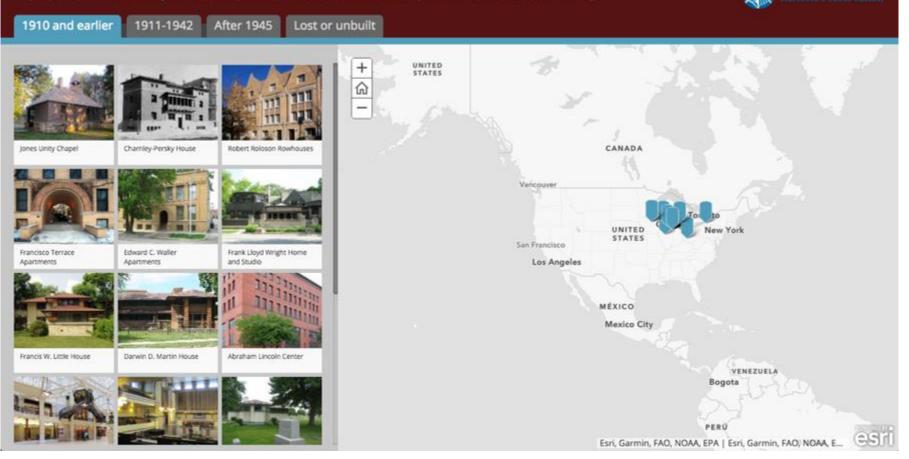


Cascade enhancements | Alternate Media ...and MP3 sound files!

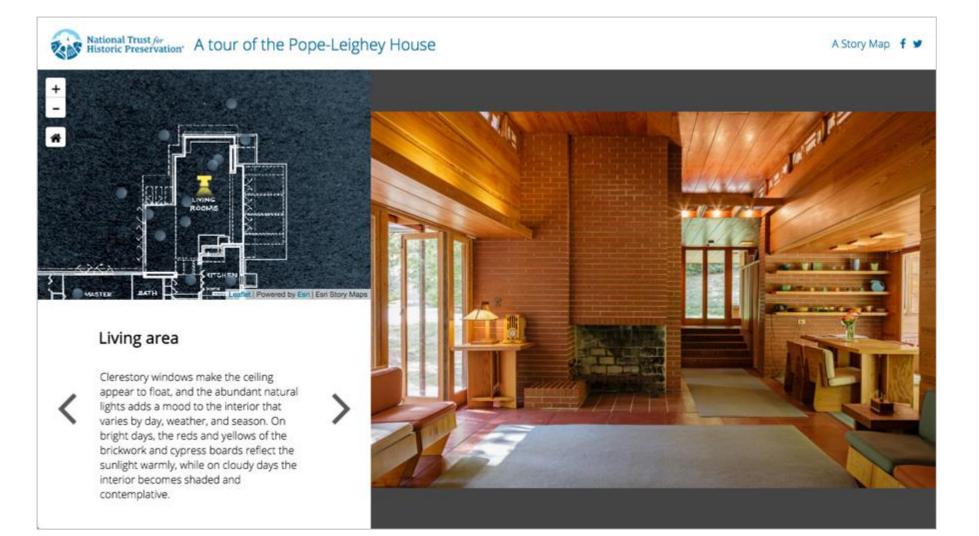
#### A selection of Frank Lloyd Wright buildings

Over the course of his storied career, Frank Lloyd Wright designed over 400 different structures, ranging in scope and scale from modest houses to cavernous museums. This story map, created on the eve of Wright's 150th birthday on June 8, 2017, celebrates some of the enigmatic architect's most memorable buildings.

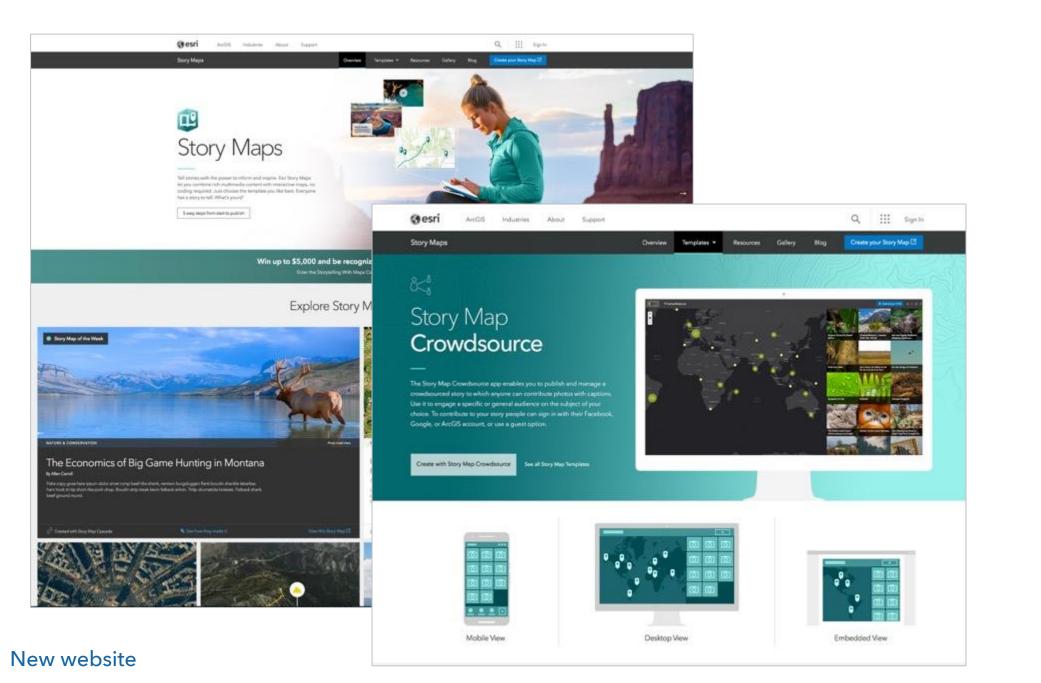




Shortlist enhancements | Customize header color



#### "Places" app; new Map Tour | Coming later this year



#### What's Coming

HIPNS

# Why Does it Matter?

 $\left( \right)$ 

## 1 Liberate Your Data

Too much data is imprisoned within the organizations that own it

## 1 Liberate Your Data

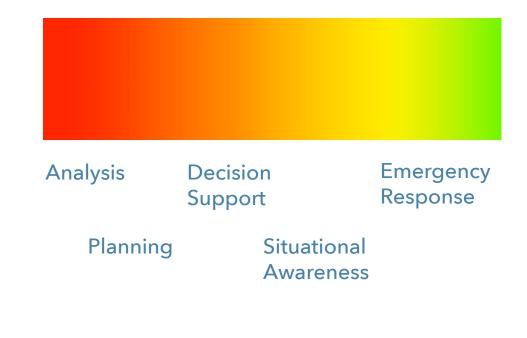
It will do more, and better, if it's available to all

> Part of the process is making your data a "good citizen"

# 2 Expand the GIS Spectrum

#### It's more than just analysis

Storytelling

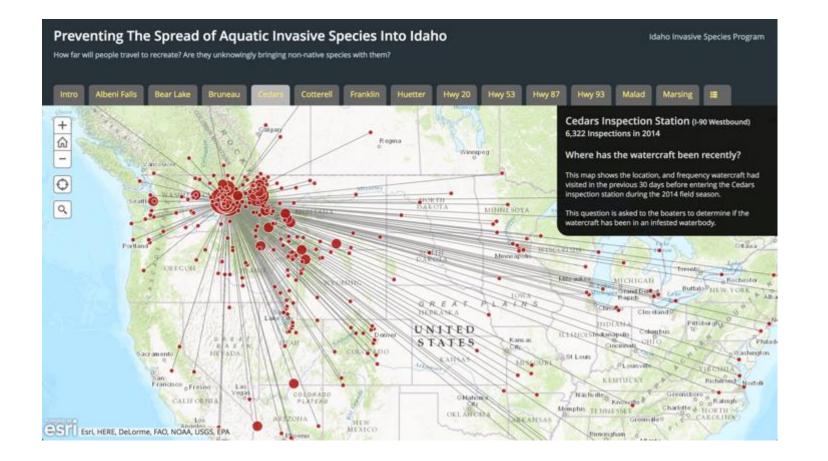


Why it

Matters

# 3 Share Your Work

If you're a GIS professional... show what you've done



# 4 Spread the Word

Story maps can show people how special your place is

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# **5 Rally People to Your Cause**

# Recruit, convince, inspire



#### Brazil's People of the Forest

The Yudja are one of many indigenous groups who call Brazil's Amazon rainforest home. For decades, they've sustainably managed their community forest, relying on it for food, shelter and livelihoods.

But in the face of new roads, hydroelectric dams and mines, what will become of the Yudja and the forest they inhabit?

StoryMap by Caleb Stevens, Sarah Parsons, Katle Reytar and Bill Dugan Photos and video by André D'elia



# 6 Express Yourself!

Story maps are a creative medium whose potential has barely been tapped

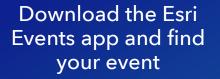
#### Making Waves: The Evolution of Ska! EntertainMaps.com 🖬 🎔 🖉 The genre of music known as ska has gone through three very different waves in three very different places. From the early cuts of Jimmy Cliff to the current riffs of Less Than Jake, see where ska was formed on the maps below. Second Wave: England First Wave: Jamaica Calgary atones / Mustard Plug / Operation Ny / Less Than American bands took ska into its third wave with heavily distorted guitars and even faster song tempos, which in turn created the subgenre known as ska punk. While the beginnings of most groups can be traced back to the 1980s, it was the success of several bands on major commercial record Demo 1997 album "Let's Face It" before labels during the 1990s that propelled ska into the ..... returning to the independent label mainstream. Despite this success being short-lived, many ska market in 2002. Despite a brief hiatus punk acts still exist today with the help of independent labels. ending in 2005, the group remains an icon within the genre and continues to Data Source: Wikipedia. "Ska punk". Accessed: May 2015. perform. Dallas Monteers Mexic esri Map tiles by Stamen Design, under CC BY 3.0. Data by OpenStreetMap, under CC BY SA. | Esri,

# 7 Telling the Story of the Earth

In aggregate we can make a difference

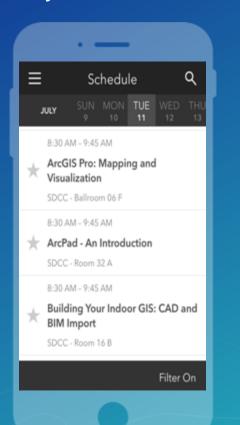


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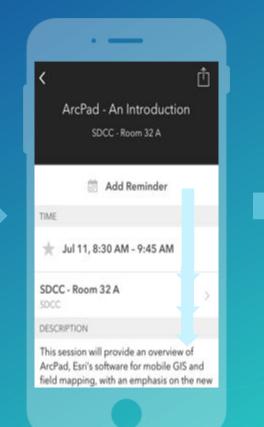




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