

# National Wild and Scenic Rivers

Database and Story Map

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Geographer/Landscape Ecologist



# Outline of Presentation

- National Wild and Scenic River Database
- Wild and Scenic Story Map Application (AGOL)
- Web Maps (AGOL)
- Next Steps
  - Improve database
  - Link web maps to [rivers.gov](http://rivers.gov)
- Lessons Learned

# Acknowledgements



- Susan Rosebrough, National Park Service, Wild and Scenic River Project Manager
- Peter Bonsall, National Park Service, GIS Technician
- Joan Harn, National Park Service, Co-Chair of the Wild and Scenic Rivers Council
- Steve Bowes, National Park Service, Hydropower and Wild and Scenic Rivers Programs, California Project Coordinator
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- Steve Boutcher, U.S. Forest Service, Wilderness and Wild and Scenic Data Manager
- Illana Cohen, Bureau of Land Management, Wild and Scenic Rivers Coordinator
- Dan Haas, U.S. Fish and Wildlife Service, Web Coordinator
- Caitlin Scopel, Environmental Science Research Institute (ESRI)
- Jon Bowen, Environmental Science Research Institute (ESRI)
- Wikimedia Commons (<http://commons.wikimedia.org/>)

# Project Goals

- Develop a National Wild and Scenic Geodatabase, based on high resolution National Hydrography Data (USGS).
- Share the geodatabase with the general public



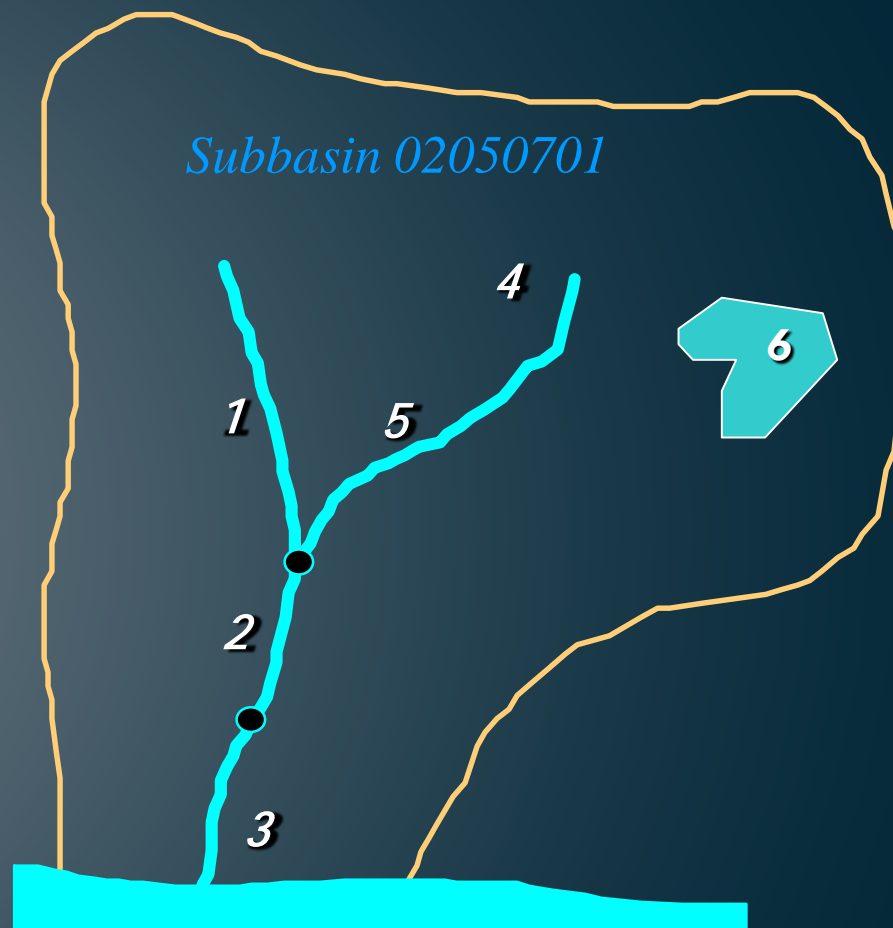
# National Wild and Scenic Rivers Database

## Workflow

- NHD “event table”
  - Permanent Identifier
  - Event Date
  - From Reach Code
  - To Reach Code
  - From Measure
  - To Measure
- Extract data from NHD
  - Copy/Paste
  - Hydrography Event Management Tool ([nhd.usgs.gov/tools](http://nhd.usgs.gov/tools))



- Linear Referencing/Dynamic Segmentation



Each reach is an “addressable” unit  
(e.g. 02050701000001)

# Workflow (cont.)

- Attribute data entered using various systems (USFS- Oracle database, NPS-Spreadsheets).
- Developed a system for assigning River IDs and Segment IDs
- Data merged to create a single geodatabase for all National Wild and Scenic Rivers

A scenic river flows through a dense forest. The water is a deep green color, and the banks are lined with large, dark rocks covered in vibrant green moss. The trees are tall and thin, with some bare branches and some evergreens. The overall atmosphere is serene and natural.

**National Wild**  
**and Scenic Rivers**  
**Story Map**

# Story/Web Map (next steps)

- Integrate story map and web maps with Rivers.gov
- Add logos (Federal Agencies and W&SR Council)
- Work with ESRI to improve story map
- Present story map to the Wild and Scenic River Council for final approval



# Next Steps (Database)

- **Add more links to photos to river level database**
- **Add/repair links to local web sites**
- **Populate ORV fields for BLM rivers**
- **Correct errors**
- **Develop a more streamlined process for synchronizing edits between Federal Agencies**

# Lessons Learned

- Collaborating with multiple agencies is challenging
- Database
  - Spent too much time trying to populate reach codes for W&SRs
  - Use yes/no fields when possible
  - Finalize database (as much as possible) before creating web maps and applications
- Web Maps/Applications –
  - Keep it simple
  - Maps and applications should highlight your project
  - Create separate web maps for each theme

**Thanks for hanging in there!**



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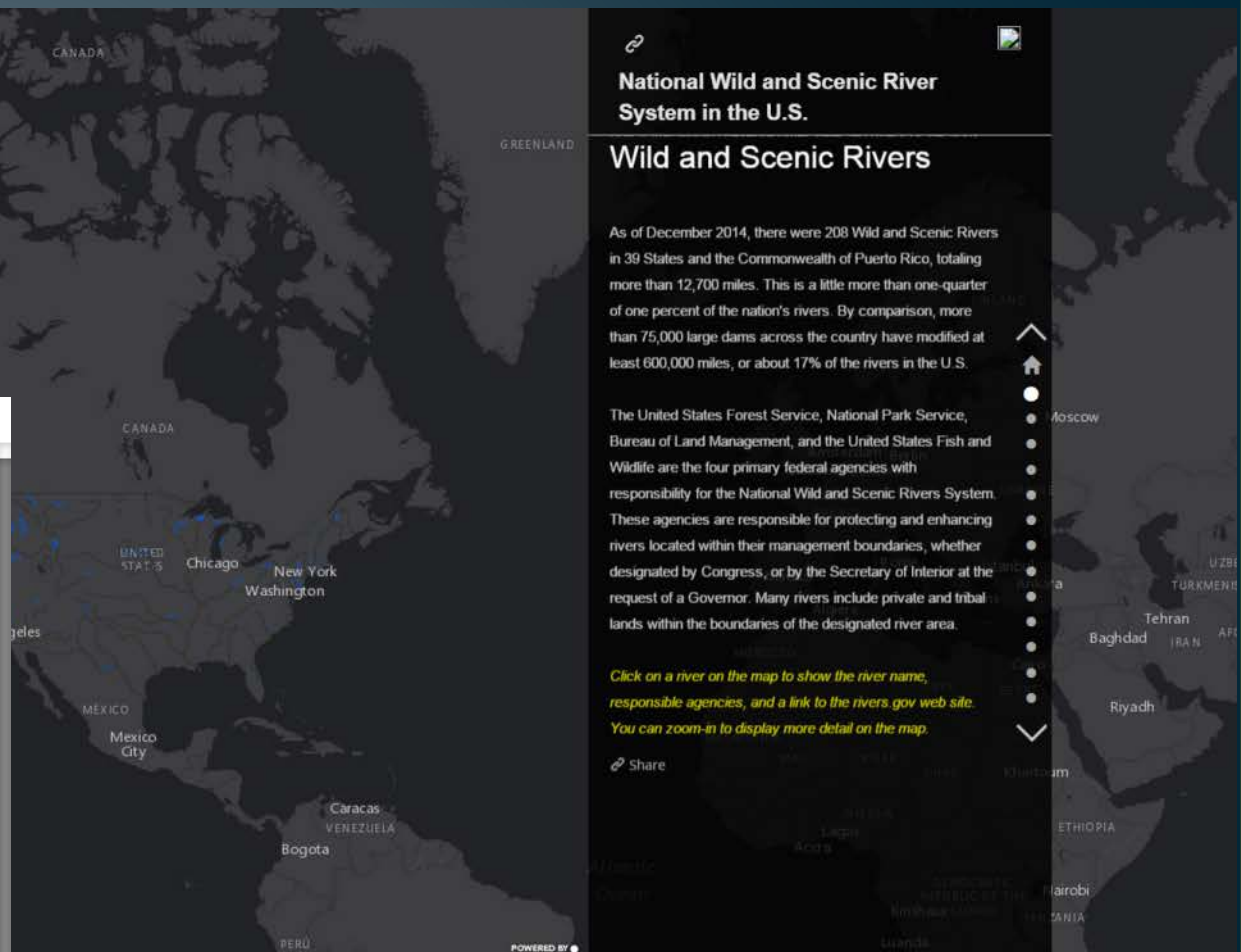
## National Wild and Scenic River System in the U.S.

Rivers often inspire us with their magnificent beauty and have long been recognized for providing us with water, food, energy, and opportunities to recreate and experience solitude. More recently, however, they have also been acknowledged for the ecological services they provide, such as clean water, flood mitigation, and fish and wildlife habitat; and for their role in the global water cycle.

During the 1960s the country began to recognize the damage we were inflicting on fish and wildlife, the landscape, our drinking water, and our legacy. Recognition of this fact led Congress to act to preserve the beauty and free-flowing nature of some of our most precious waterways.

*The Congress declares that the established national policy of dams and other construction at appropriate sections of the*





## National Wild and Scenic River System in the U.S.

### Wild and Scenic Rivers

As of December 2014, there were 208 Wild and Scenic Rivers in 39 States and the Commonwealth of Puerto Rico, totaling more than 12,700 miles. This is a little more than one-quarter of one percent of the nation's rivers. By comparison, more than 75,000 large dams across the country have modified at least 600,000 miles, or about 17% of the rivers in the U.S.

The United States Forest Service, National Park Service, Bureau of Land Management, and the United States Fish and Wildlife are the four primary federal agencies with responsibility for the National Wild and Scenic Rivers System. These agencies are responsible for protecting and enhancing rivers located within their management boundaries, whether designated by Congress, or by the Secretary of Interior at the request of a Governor. Many rivers include private and tribal lands within the boundaries of the designated river area.

*Click on a river on the map to show the river name, responsible agencies, and a link to the rivers.gov web site. You can zoom-in to display more detail on the map.*

Share

### Snake River Headwaters

**Responsible Agencies:** USFS, NPS, Federally Administered

For more information click [here](#)

### Photo



LEGEND



## National Wild and Scenic River System in the U.S.

### River Management by States and Partners

Some rivers have different management frameworks, and the federal agencies work with Tribal, State, and local governments and non-profit organizations in a variety of ways to protect and enhance the National Wild and Scenic Rivers, as follows:

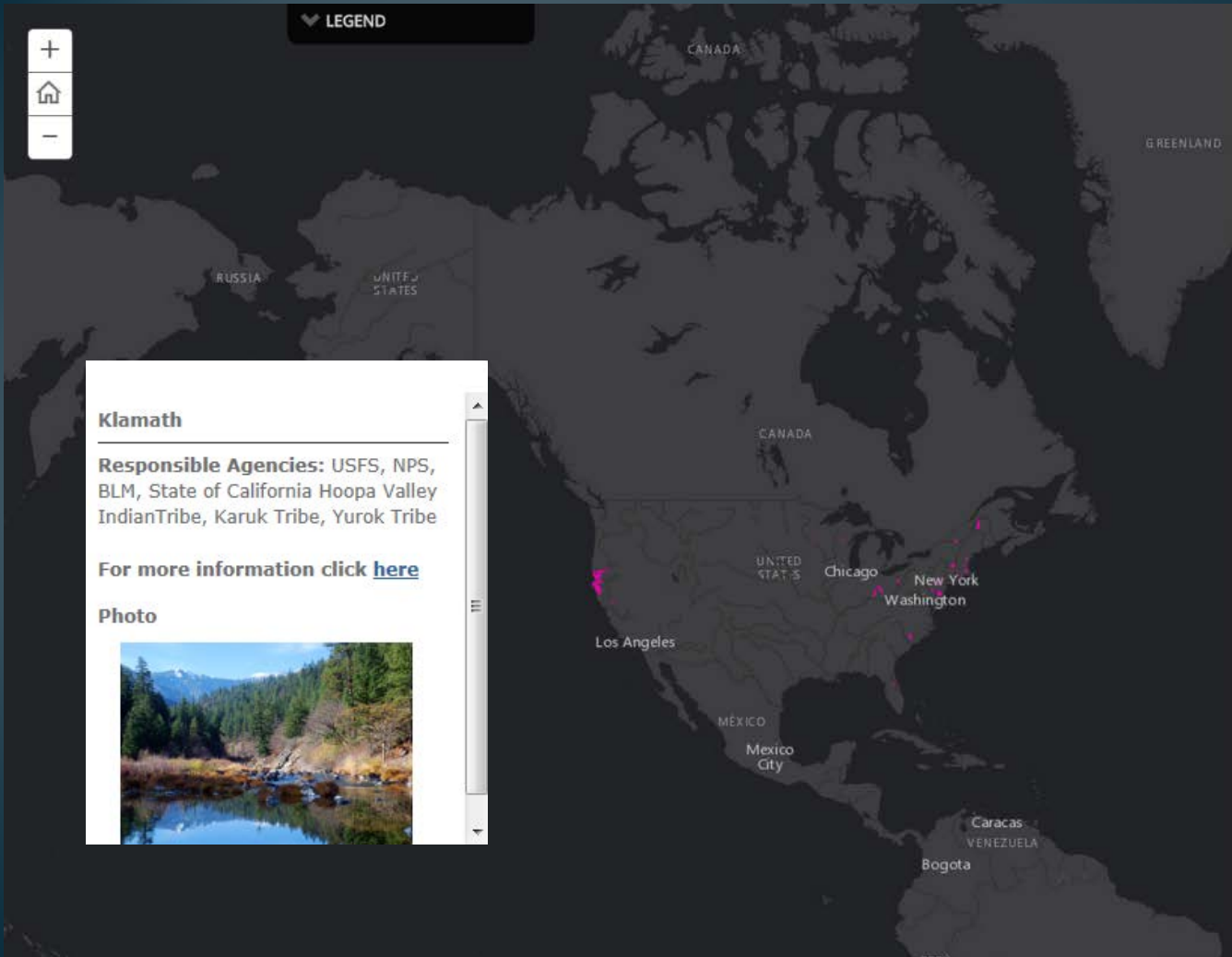
- State Administered National Wild and Scenic Rivers are designated by the Secretary of Interior at the request of the Governor. The State is responsible for protecting and enhancing the river values except when sections of these rivers flow through federal lands. Tribes also retain responsibility for their lands. In areas outside of federal land, the National Park Service is responsible for reviewing federally assisted water resources projects to ensure that river values are protected.
- Partnership National Wild and Scenic Rivers are managed collaboratively between the NPS and State, local and/or non-governmental entities, as specified in the designation legislation and the comprehensive river management plan. To date, locally based river management councils or committees have been formed on each partnership river specifically for this purpose. Generally, no federal land is acquired for the purposes of river protection. These rivers are primarily designated by Congress.

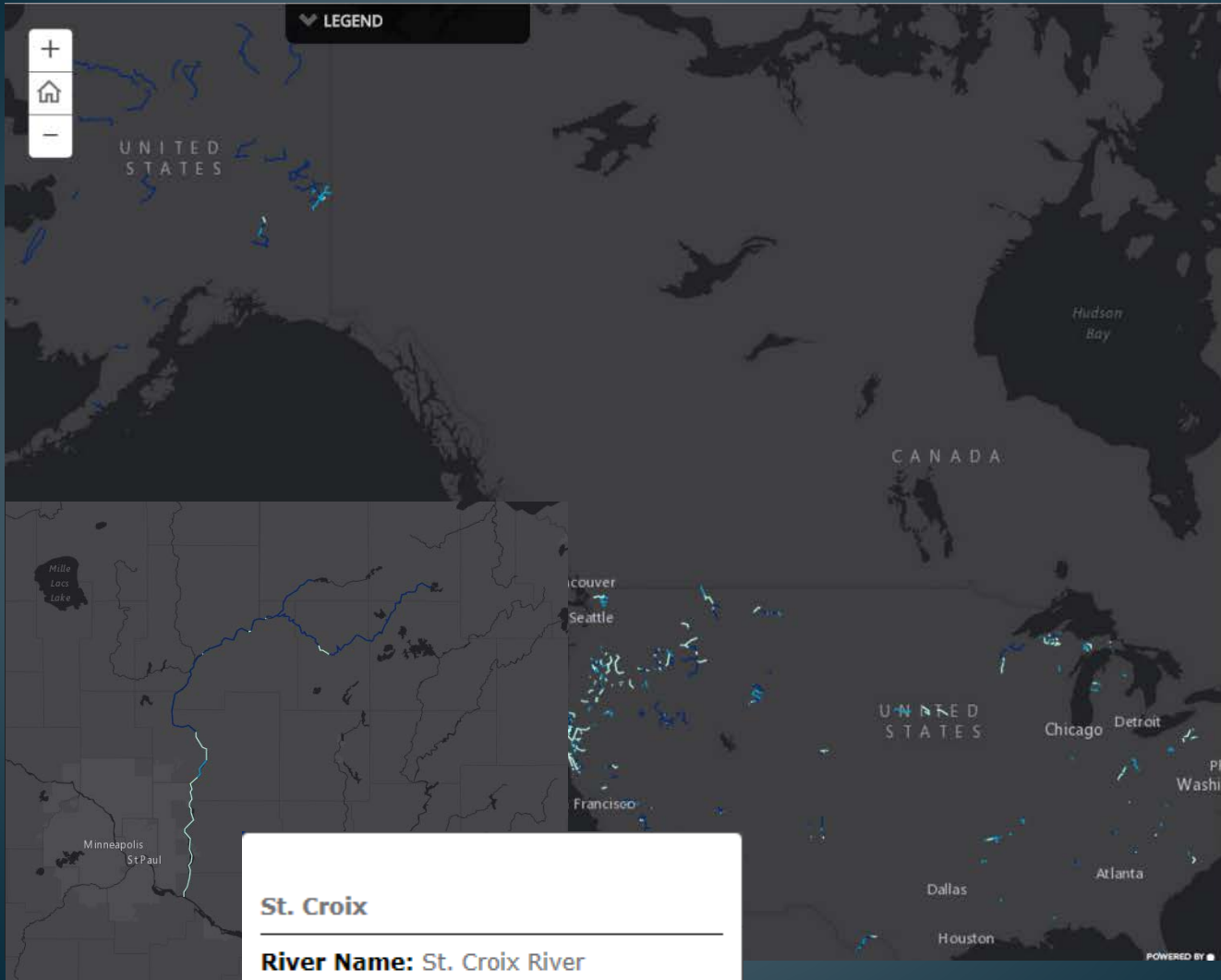
### Klamath

**Responsible Agencies:** USFS, NPS, BLM, State of California Hoopa Valley Indian Tribe, Karuk Tribe, Yurok Tribe

For more information click [here](#)

### Photo





LEGEND



## National Wild and Scenic River System in the U.S.

### Classification

Designated rivers are classified as wild, scenic, or recreational. The labels primarily relate to the degree of development and access along the river, not its proposed uses. Regardless of the classification, each designated river in the national system is to be managed in a way that protects and enhances the values and characteristics that prompted its designation.

According to the act, the three classifications are defined as follows:

- "Wild" river areas are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.
- "Scenic" river areas are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.
- "Recreational" river areas are readily accessible by road or railroad, that may have some shoreline development, and that may have undergone some impoundment or diversion in the past.

*Click the legend dropdown arrow above the map to display the legend. Information about the classification can be displayed in a popup table by clicking on a river segment.*

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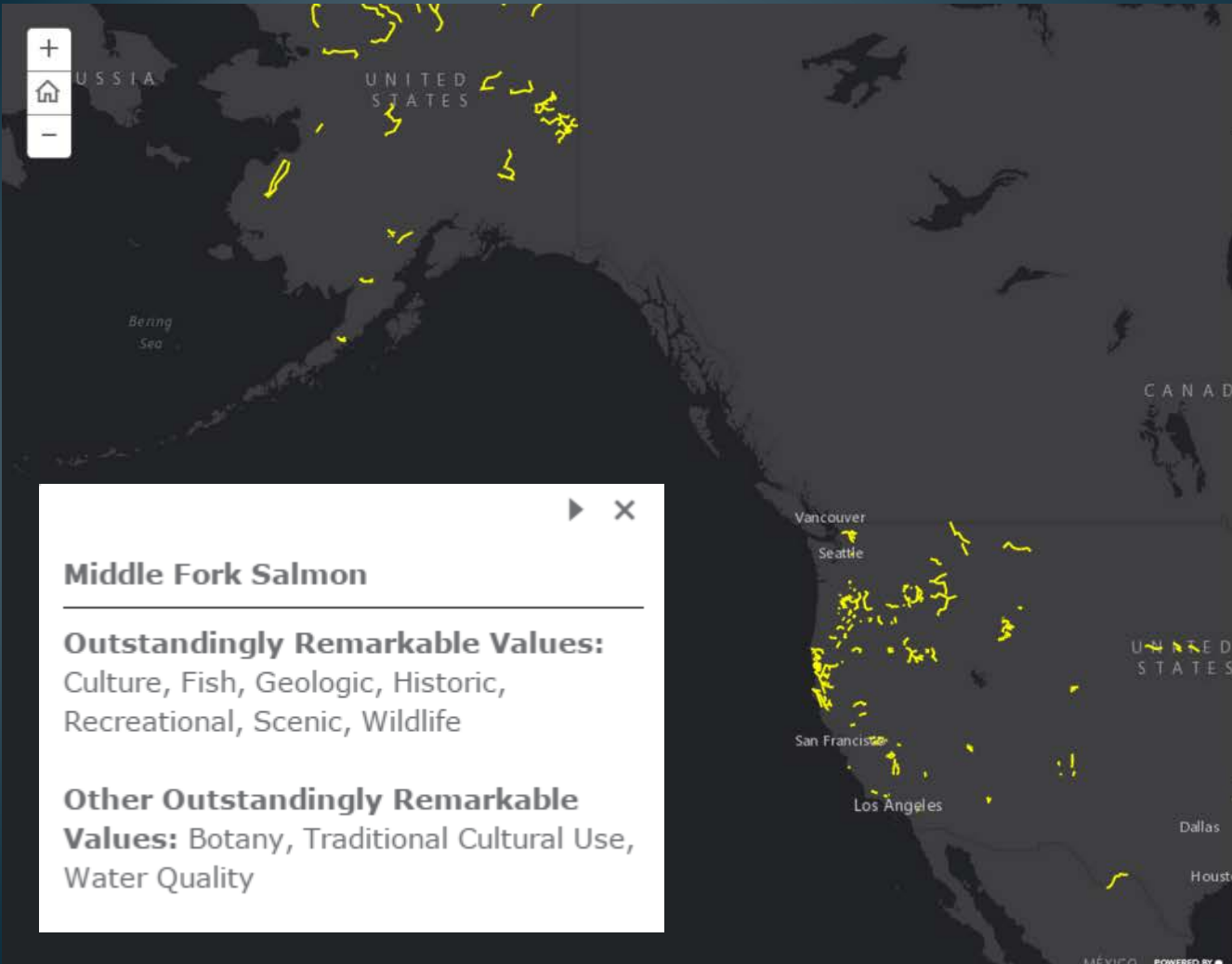
Full Screen

### St. Croix

**River Name:** St. Croix River

**Classification:** Wild

POWERED BY



**Middle Fork Salmon**

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**Outstandingly Remarkable Values:**  
Culture, Fish, Geologic, Historic, Recreational, Scenic, Wildlife

**Other Outstandingly Remarkable Values:** Botany, Traditional Cultural Use, Water Quality

**National Wild and Scenic River System in the U.S.**

**River Values**

Outstandingly remarkable values (ORVs) are defined by the Wild and Scenic Rivers Act as the characteristics that make a river worthy of special protection. Thus the foundation for wild and scenic river management, is a clearly defined set of ORVs.

In order to be considered outstandingly remarkable, a value must be rare, unique, or exemplary at a comparative regional or national scale. It must also

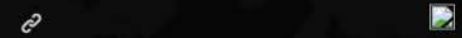
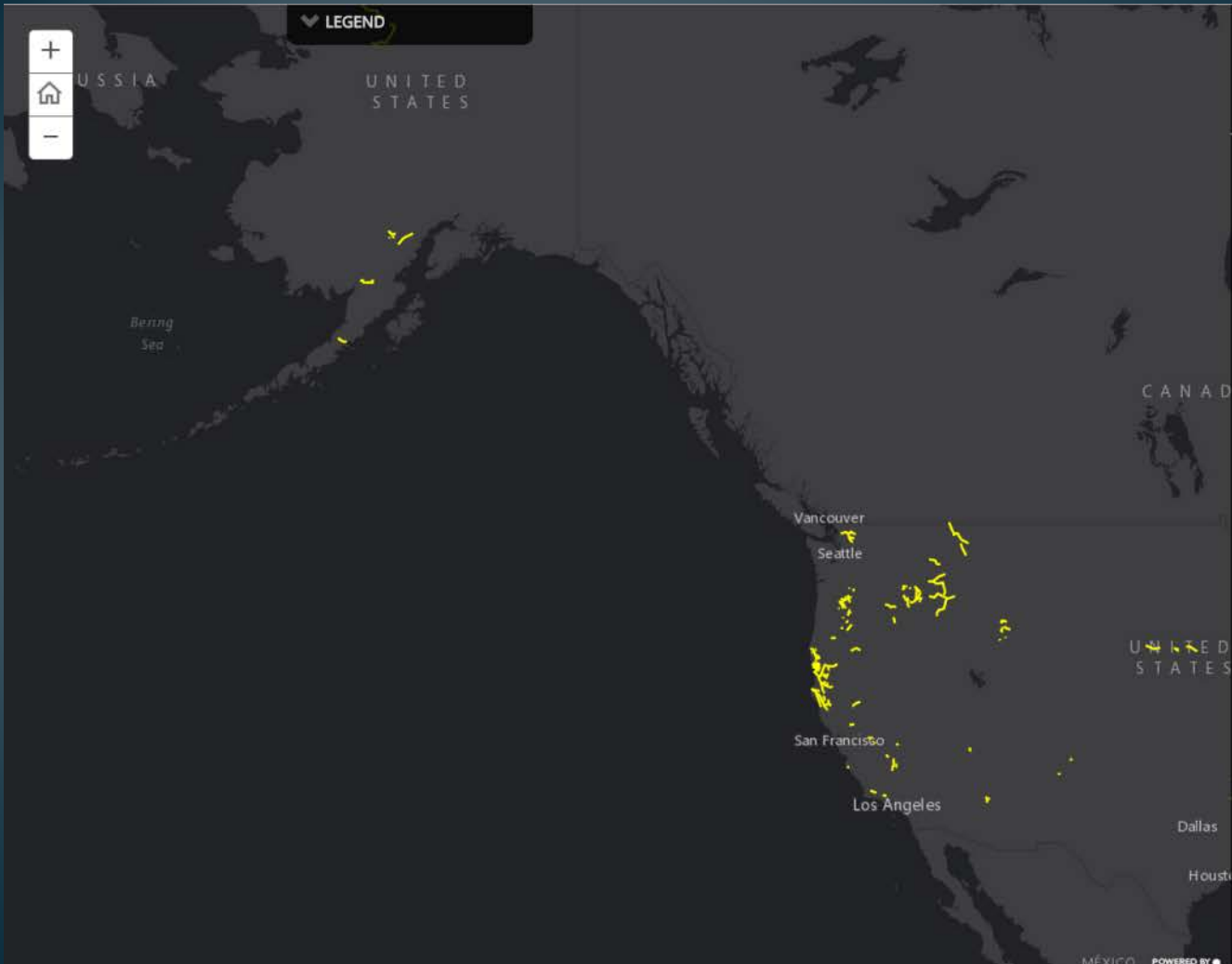
- be located in the river or on its immediate shorelands (generally within 0.25 mile on either side of the river), and either
- contribute substantially to the functioning of the river ecosystem, or
- owe its location or existence to the presence of the river

A river can have **scenic, recreational, geologic, fish, wildlife, cultural, historical, and other outstandingly remarkable values.**

*Click on a river segment on the map to display a list of the outstandingly remarkable values in a popup table. (Note: this is an incomplete data set; the ORVs are not included for all rivers.)*

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## National Wild and Scenic River System in the U.S.

### Fish

A river's fish ORVs may be judged on the relative merits of fish populations, habitat, or a combination of these river-related conditions (see criteria below).



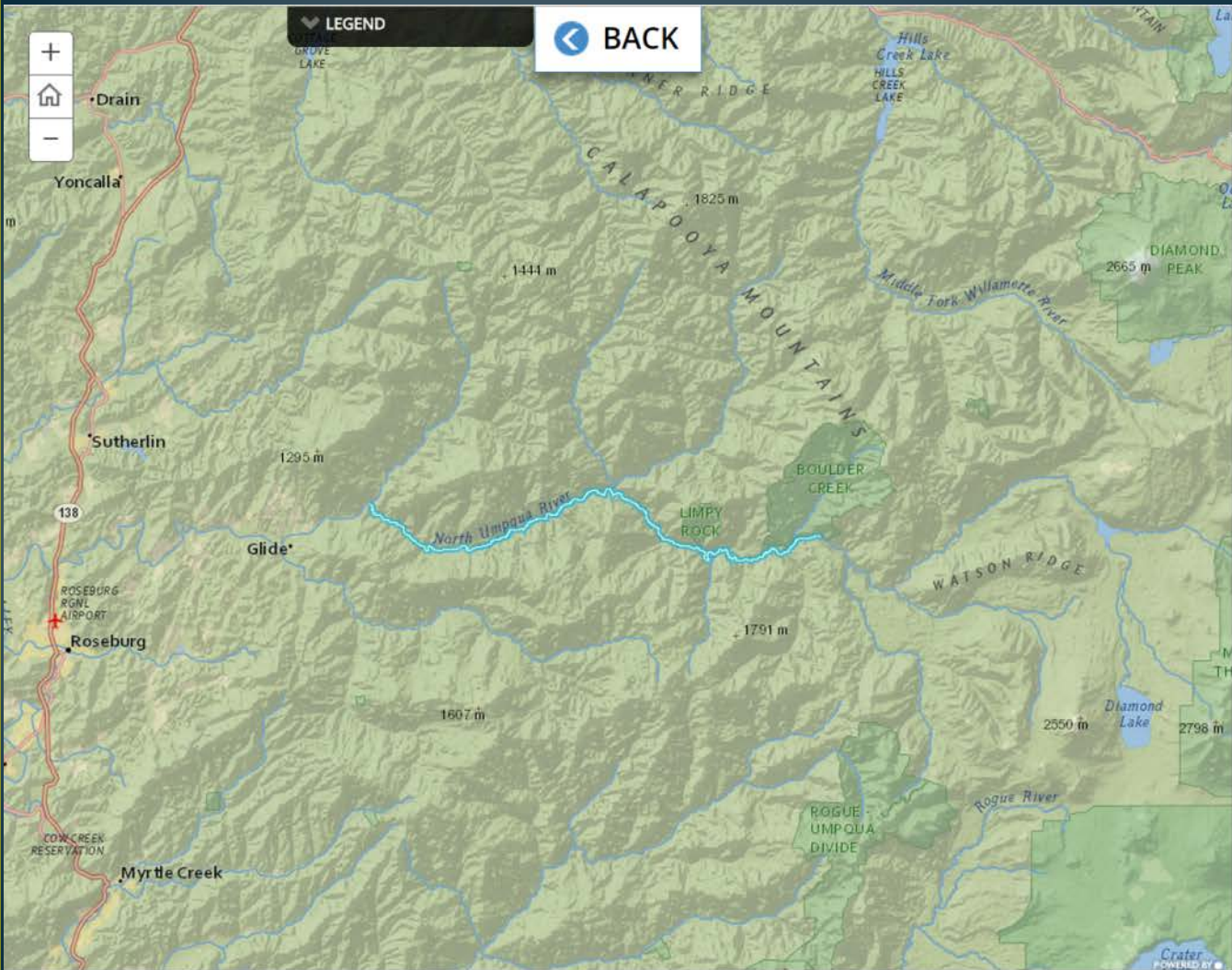
North Umpqua River, Oregon (Wikimedia)

The North Umpqua, for example, serves as needed habitat for a variety of resident and anadromous fish species including summer and winter steelhead, fall and spring Chinook, Coho and sea-run cutthroat trout, and is distinguished from other rivers by the large and consistent numbers of native (non-hatchery) fish in the run. The North Umpqua summer steelhead fishery is considered to be one of the most outstanding on the West Coast.

### Example Criteria

**Populations:** The river is nationally or regionally an important producer of resident and/or anadromous fish species. Of particular significance is the presence of wild stocks and/or





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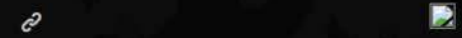
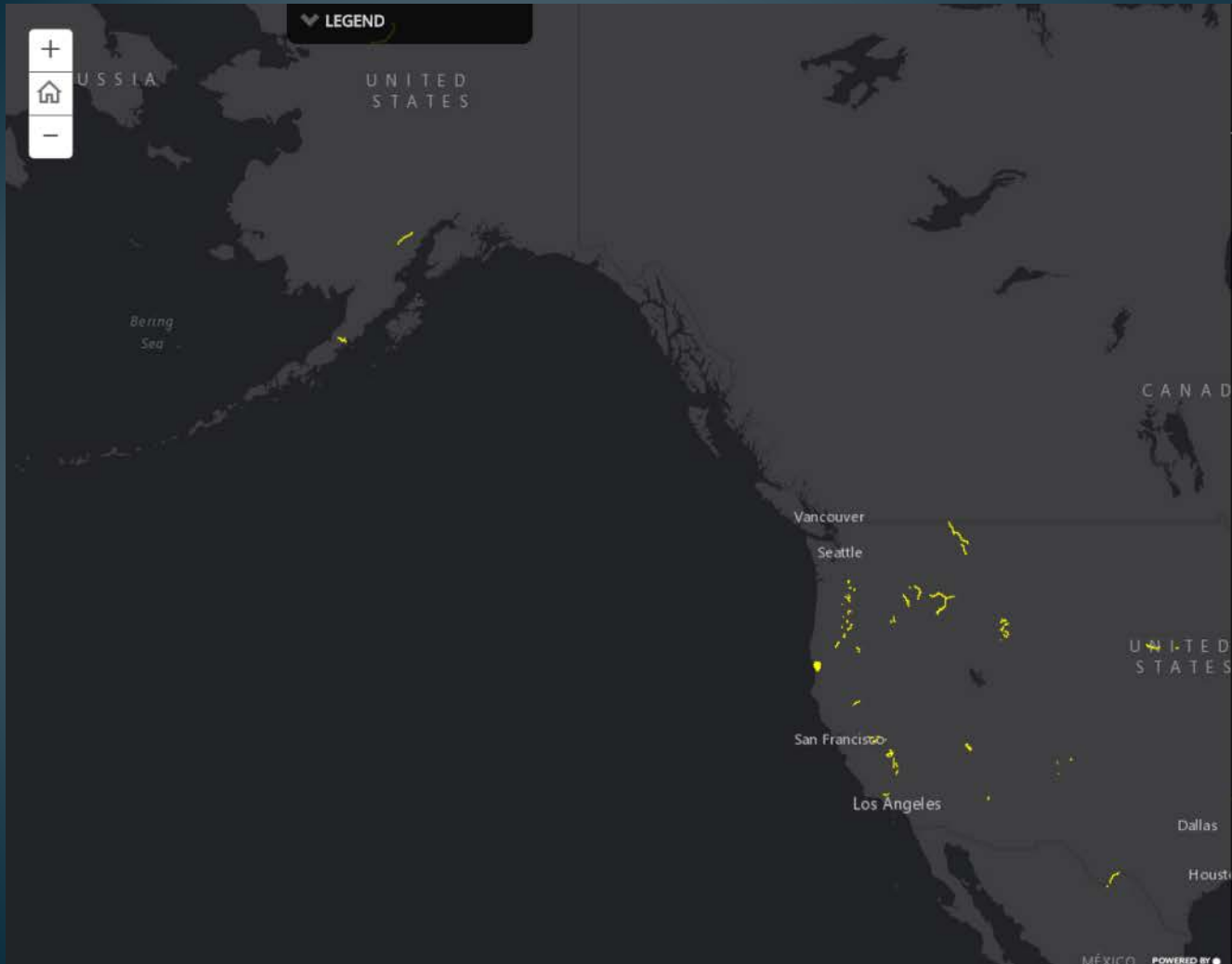


[North Umpqua River, Oregon \(Wikimedia\)](#)

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**Populations:** The river is nationally or regionally an important producer of resident and/or anadromous fish species. Of particular significance is the presence of wild stocks and/or federal or state listed (or candidate) threatened, endangered or

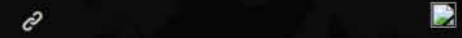
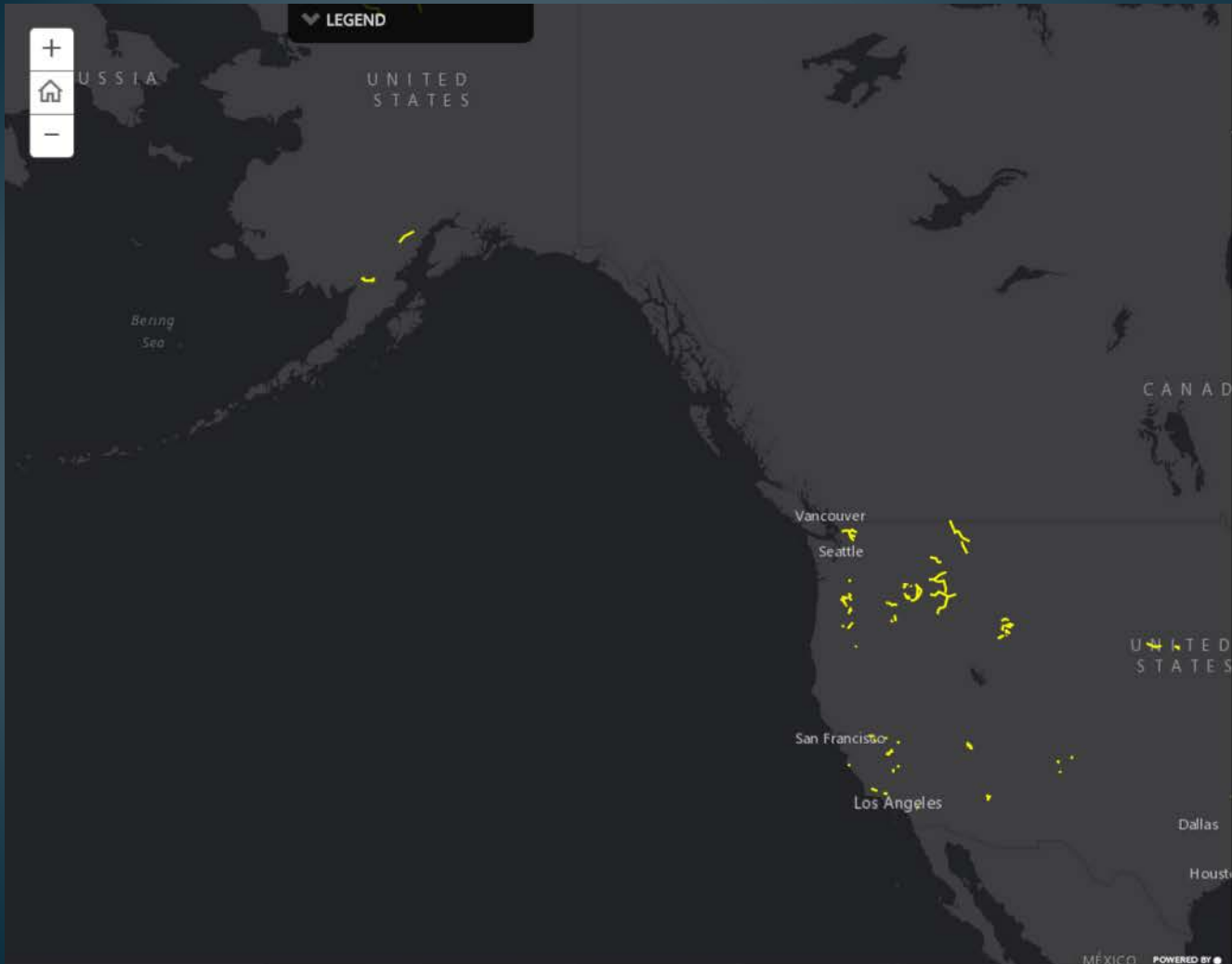


## National Wild and Scenic River System in the U.S.

### Geologic

Wild and Scenic rivers that include geologic features, processes, or phenomenon that are rare, unusual, or unique to the geographic region are considered to have geologic ORVs. The feature(s) may be in an unusually active stage of development, represent a textbook example, or represent a unique or rare combination of geologic features (erosional, volcanic, glacial, or other geologic structures)





## National Wild and Scenic River System in the U.S.

### Wildlife

Wildlife values may be judged on the relative merits of wildlife populations, habitat, or a combination of these conditions.



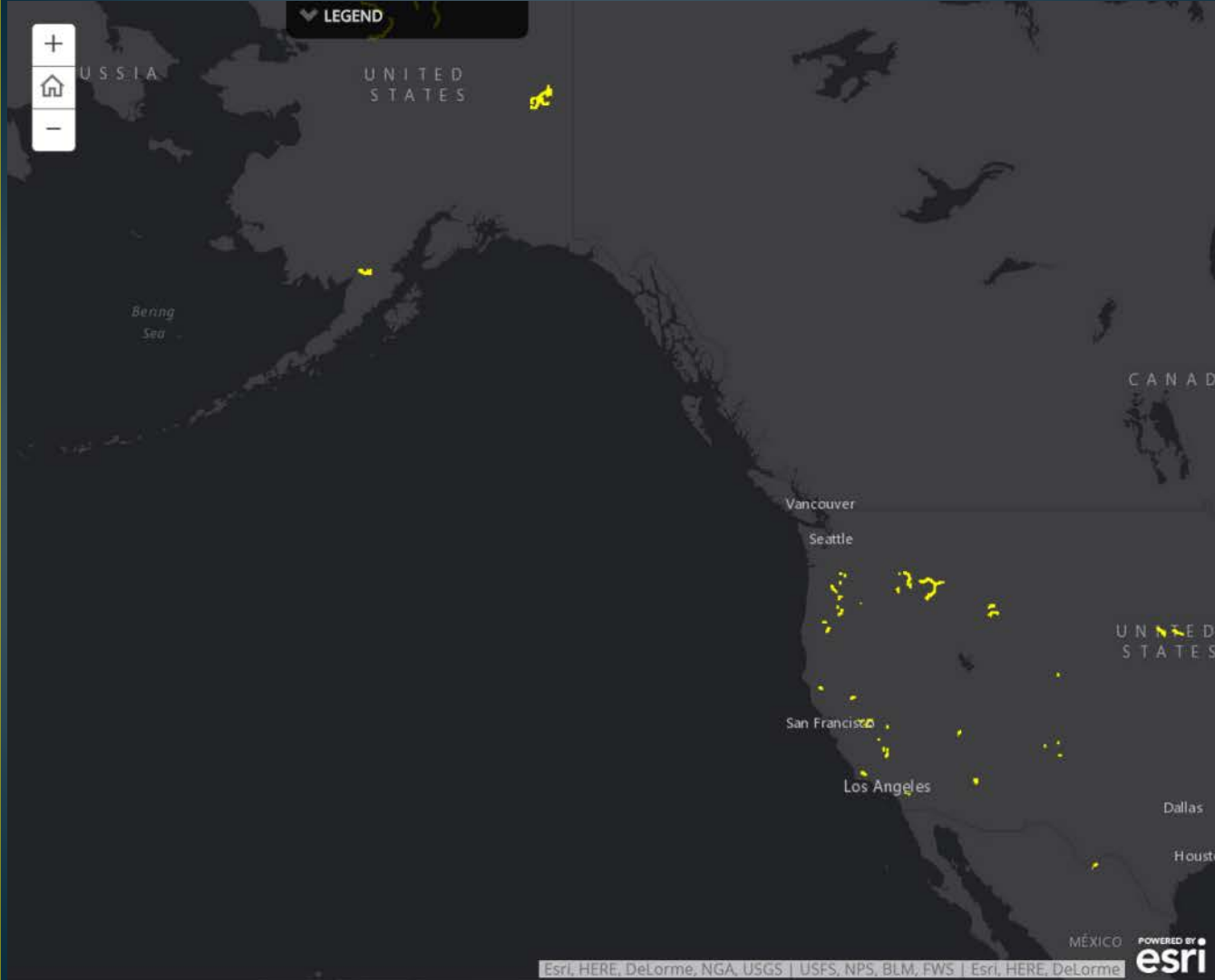
Selawik River, AK (FWS) Montana

Many Wild and Scenic Rivers provide important habitat for wildlife; the Selawik River for example supports much of the Western Arctic Caribou Herd.

### Example Criteria

**Populations:** The river, or area within the river corridor, contains nationally or regionally important populations of indigenous wildlife species. Of particular significance are species considered to be unique, and/or populations of federal or state listed (or candidate) threatened, endangered or sensitive species. Diversity of species is an important consideration and could, in itself, lead to a determination of "outstandingly remarkable."





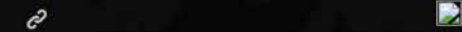
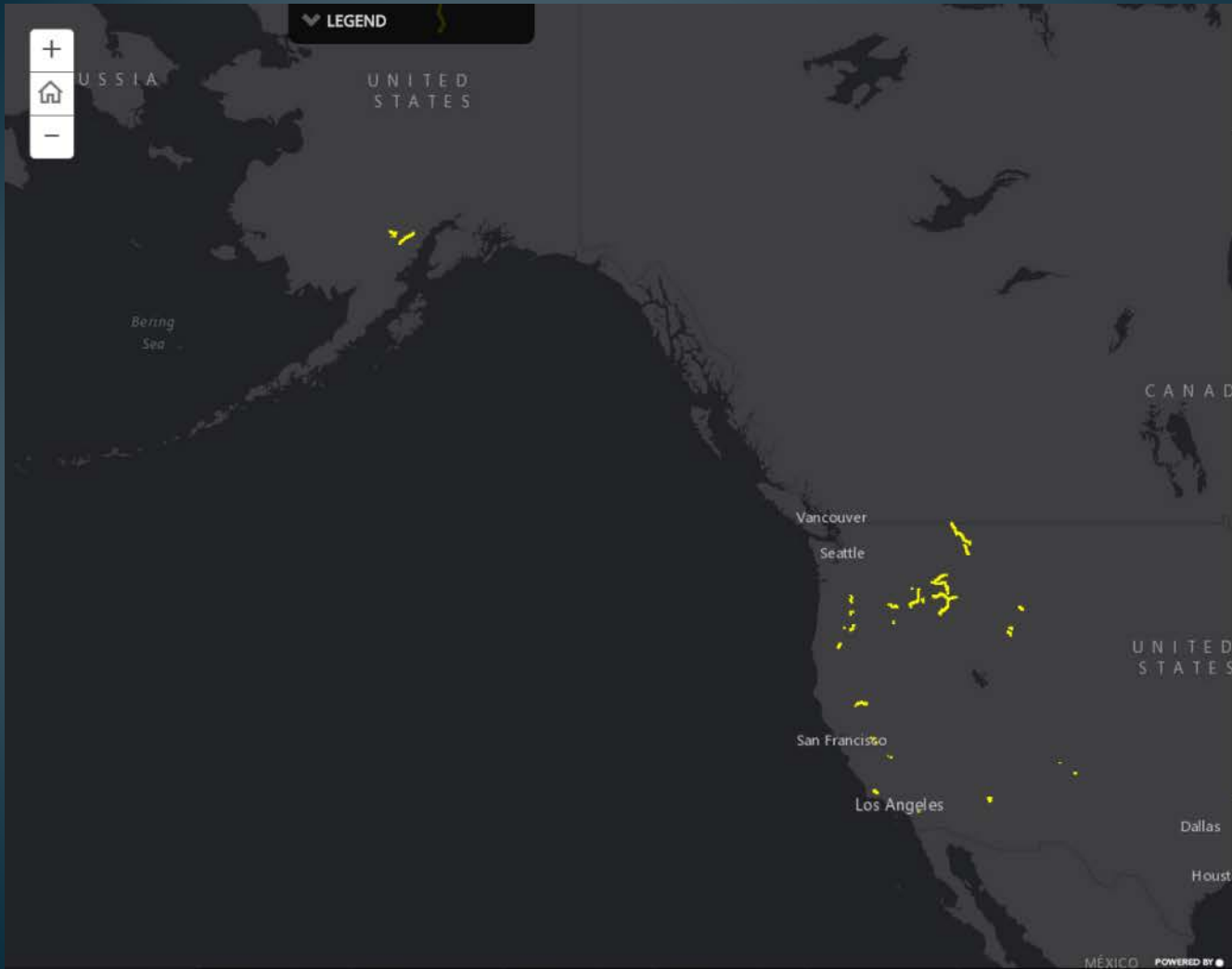
🔗 **National Wild and Scenic River System in the U.S.**

**Cultural**

The cultural ORVs are present on Wild and Scenic Rivers that have evidence of river-related occupation or use by Native Americans. Sites may have national or regional importance for interpreting prehistory, may be rare, may be representative of an area where a culture or area was first identified and described, may have been used concurrently by two or more cultural groups, or may have been used by cultural groups for rare or sacred purposes. Many such sites are listed on the National Register of Historic Places, which is administered by the National Park Service.



The Rio Grande, New Mexico, offers an opportunity to view petroglyphs drawings made by Native Americans many years ago.



## National Wild and Scenic River System in the U.S.

### Historic

Wild and Scenic Rivers with Historic ORVs have sites or features associated with a significant event, an important person, or a cultural activity of the past that was rare or unusual in the region. Many such sites are listed on the National Register of Historic Places. A historic site and/or feature is 50 years old or older in most cases.

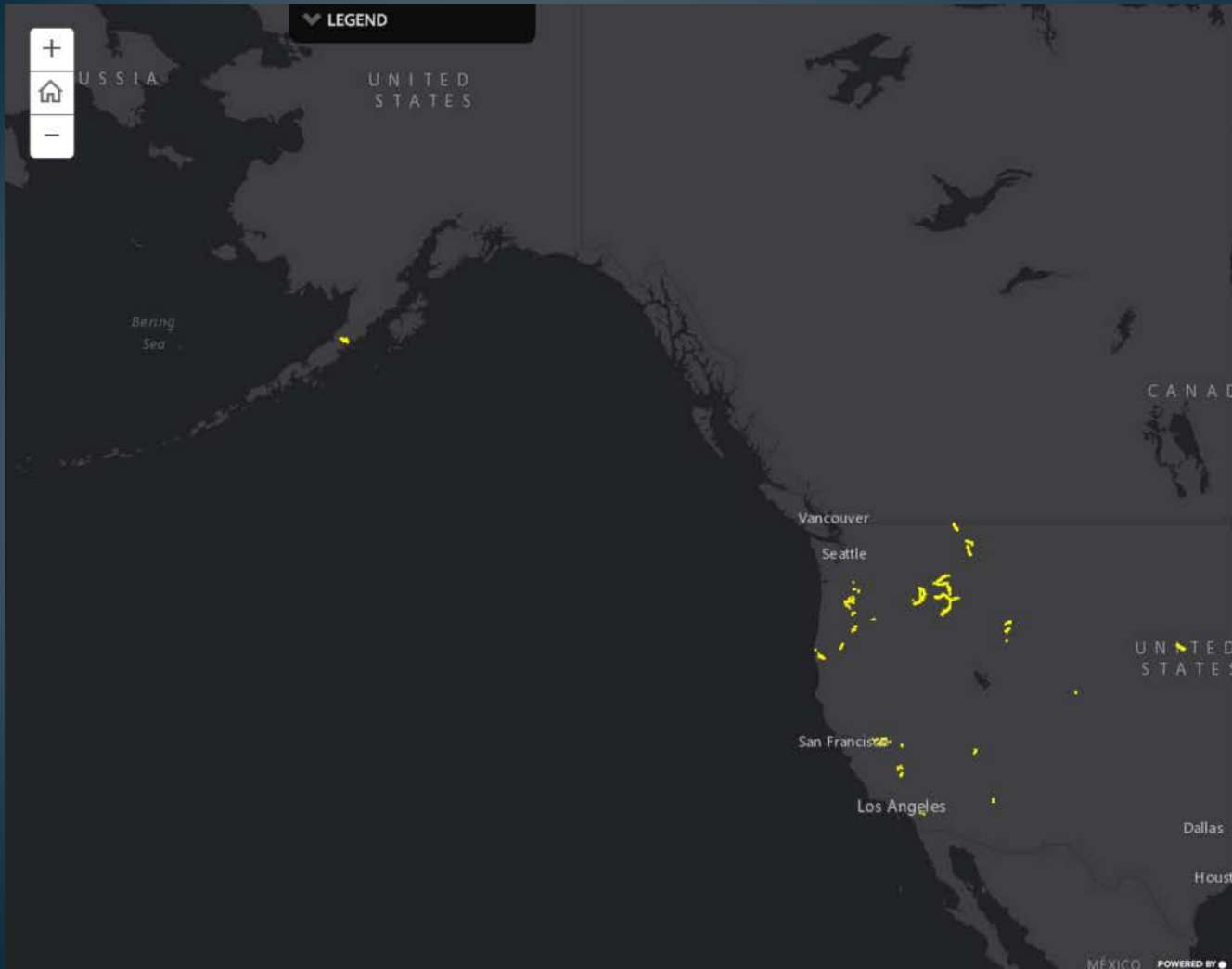


Missisquoi Valley Rail Trail, VT ([Wikimedia](#))  
Washington

The **Missisquoi River Bridge** is on the National Register of Historic Places and is the first of 12 truss bridges on the Missisquoi River between the Canadian Border and Lake Champlain.

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Scale in Miles



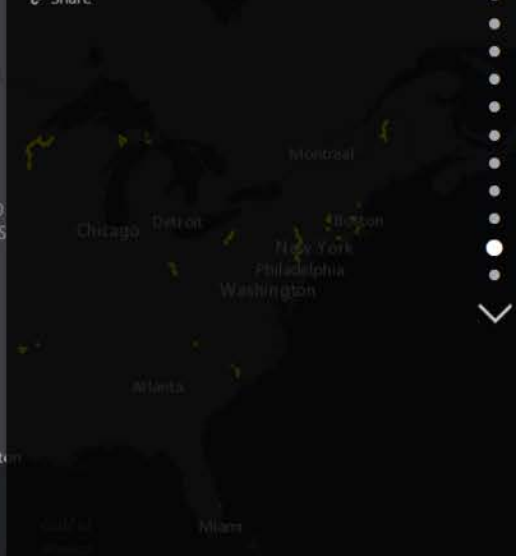
## National Wild and Scenic River System in the U.S.

### Other River Values

Other outstandingly remarkable values can include fossils exposed by a stream, rare plant communities, ecological processes, riparian plant communities, and hydrologic and ground water systems such as springs, hot springs, and underground rivers.

*Click a river to display it's "other outstandingly remarkable values."*

Share





## National Wild and Scenic River System in the U.S.

### Explore On Your Own

You can find out more information about Wild and Scenic Rivers by visiting:

- ArcGIS Online Web Maps:
  - [Wild and Scenic Rivers](#)
  - [Classification Segments](#)
  - [Outstandingly Remarkable Values](#)
- Local web sites for rivers displayed on [this map](#) can be accessed via a popup
- and the [Rivers.gov](#) web page

**Find and enjoy the closest Wild and Scenic River near you!**

*Photo of the Klamath River, CA*

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Details Basemap

Share Print Measure Bookmarks

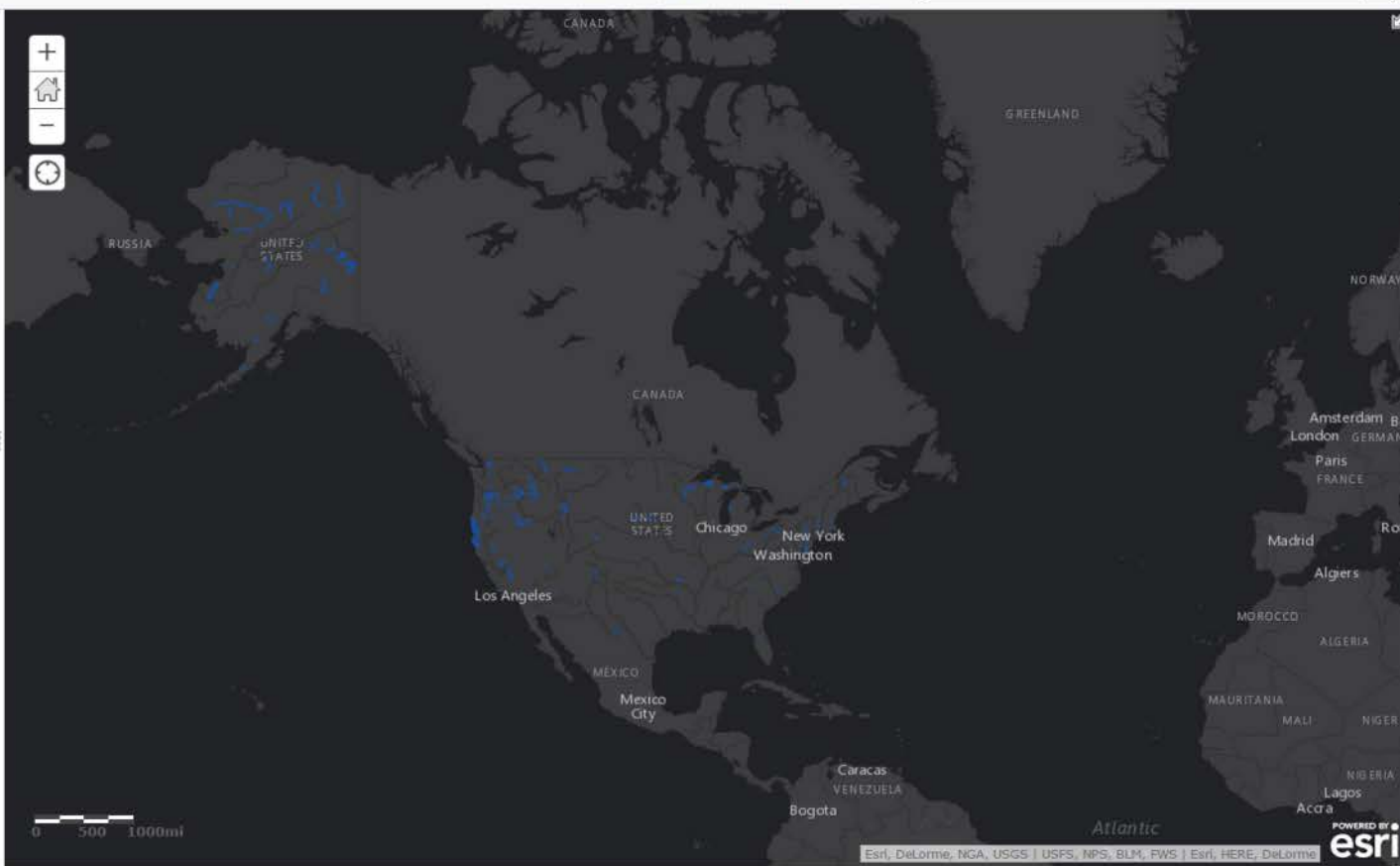
Find address or place

About Content Legend

### Legend

National Wild and Scenic Rivers

Major Rivers (U.S.)

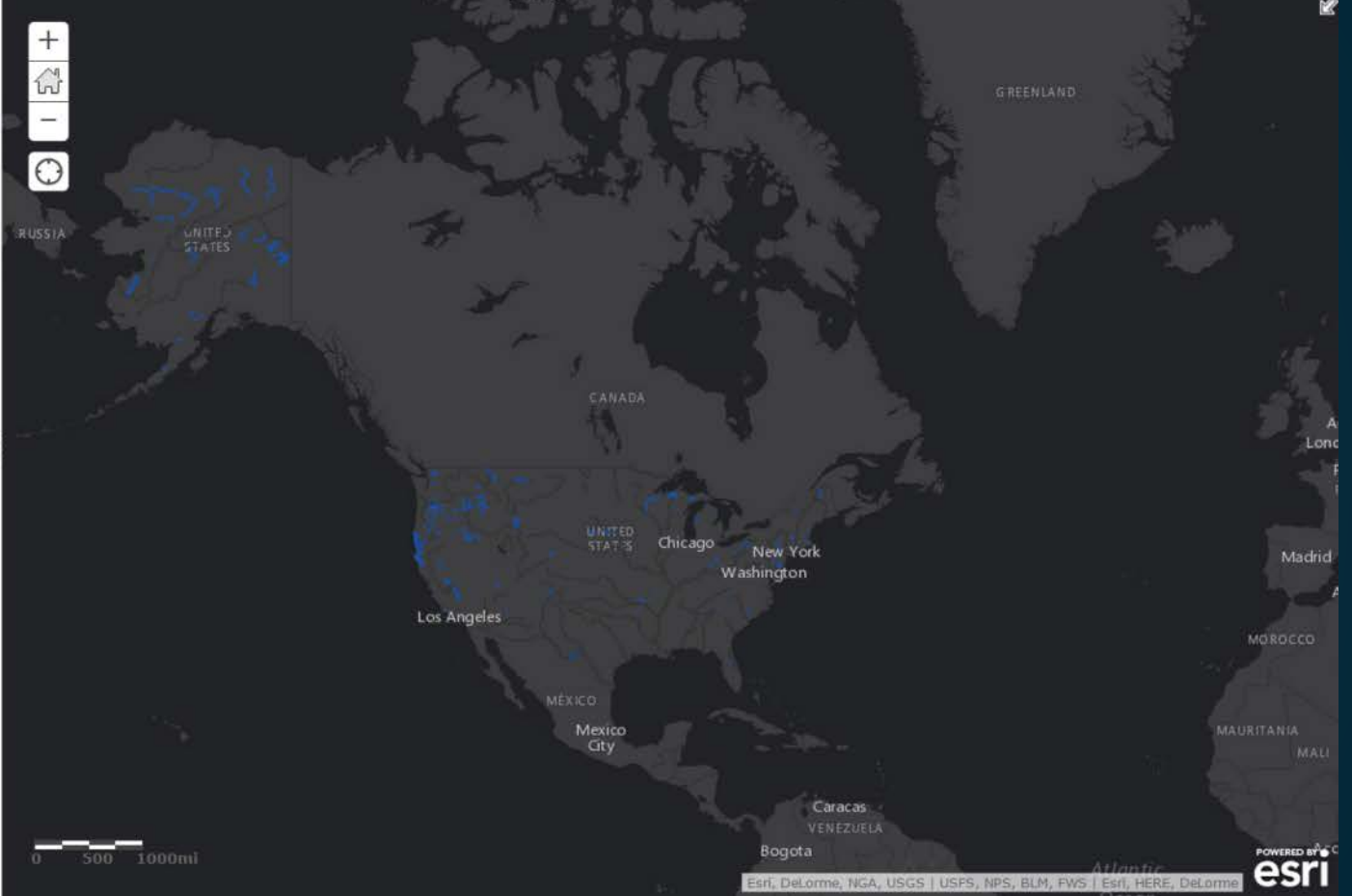


Details Add Basemap Analysis Save Share Print Directions Measure Bookmarks Find address or place

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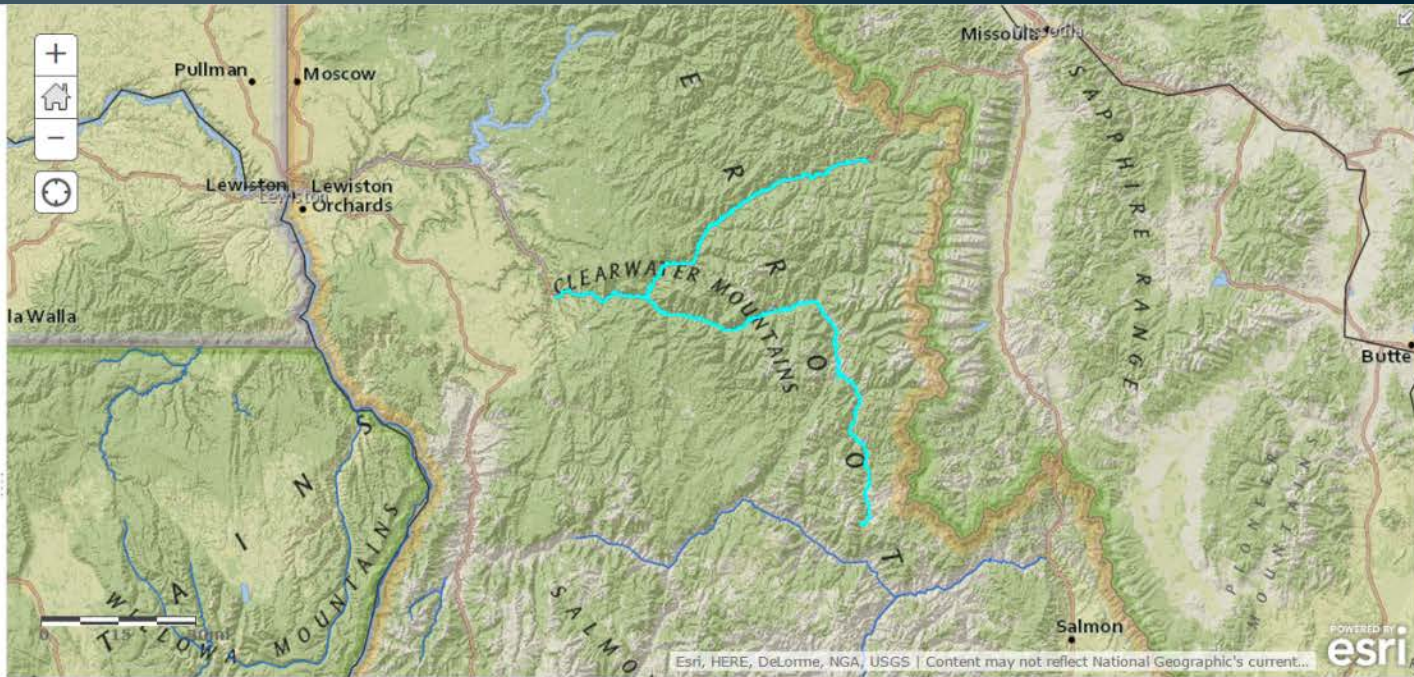
### Legend

#### National Wild and Scenic Rivers



Contents

- National Wild and Scenic Rivers
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- Rivers With Local Web Sites
- National Wild and Scenic Rivers (gray)
- Major Rivers (U.S.)
- National Geographic World Map
- World Imagery
- World Light Gray Base
- Dark Gray Canvas



National Wild and Scenic Rivers (227 features, 1 selected)

RIVER_ID	WSR Full NAME	WSR NAME	State	Management Plan	Classification Source	ORV Source	Managing Entities	Public Law Name	Public Law Number	Er De
1	Middle Fork Clearwater, Idaho Wild and Scenic River	Middle Fork Clearwater	Idaho	Yes			Federally Administered	THE WILD AND SCENIC RIVERS ACT	90-542	Oc
10	Chattooga, Georgia & North Carolina & South	Chattooga	Georgia & North Carolina & South Carolina	Yes			Federally Administered	93-279	93-279	Me

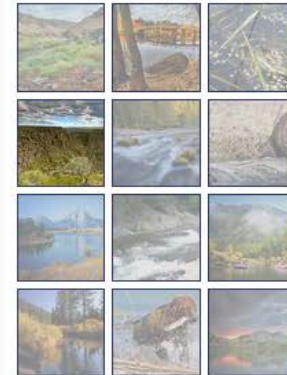


# NATIONAL WILD AND SCENIC RIVERS SYSTEM

[HOME](#)[NATIONAL SYSTEM](#)[MANAGEMENT](#)[RESOURCES](#)[PUBLICATIONS](#)[CONTACT US](#)[KID'S SITE](#)

## DID YOU KNOW...

Less than 1/4 of 1% of our rivers are protected under the National Wild & Scenic Rivers System.



## A NATIONAL SYSTEM

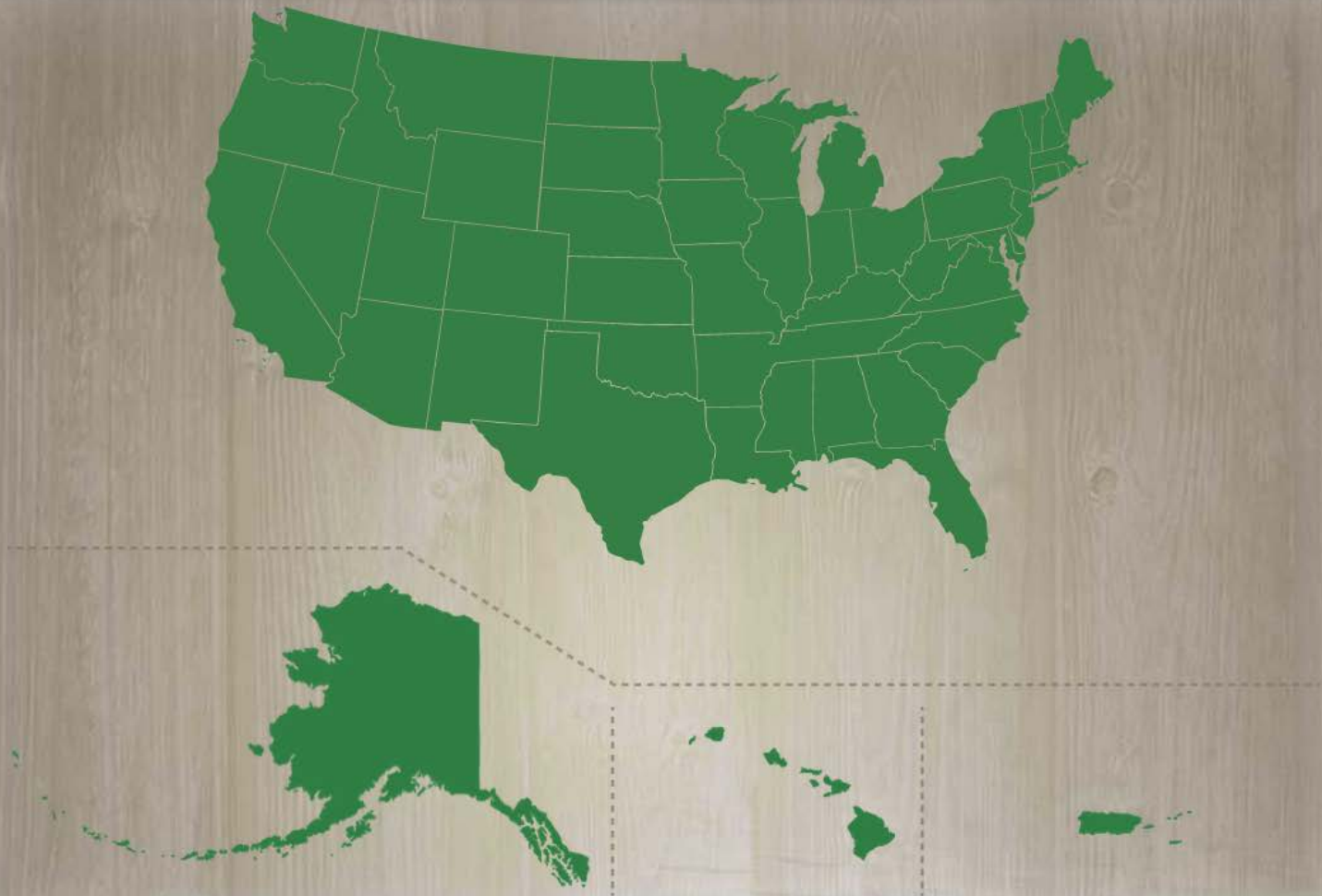
*In the past 50 years, we have learned—all too slowly, I think—to prize and protect God's precious gifts. Because we have, our own children and grandchildren will come to know and come to love the great forests and the wild rivers that we have protected and left to them . . . An unspoiled river is a very rare thing in this Nation today. Their flow and vitality have been*

## EXPLORE DESIGNATED RIVERS



Rivers.gov

EXPLORE DESIGNATED RIVERS



## NORTH CAROLINA

North Carolina has approximately 37,853 miles of river, of which 144.5 miles are designated as wild & scenic—less than 4/10ths of 1% of the state's river miles.

**Chattooga River**  
**Horsepasture River**  
**Lumber River**  
**New River**  
**Wilson Creek**

### EXPLORE DESIGNATED RIVERS



Choose a State ▾ Go

Choose a River ▾ Go

## CHATTOOGA RIVER, GEORGIA, N. CAROLINA, S. CAROLINA

### Managing Agency:

U.S. Forest Service, Chattahoochee National Forest  
U.S. Forest Service, Nantahala National Forest  
U.S. Forest Service, Sumter National Forest

### Designated Reach:

May 10, 1974. The segment from 0.8 miles below Cashiers Lake in North Carolina to the Tugaloo Reservoir. The West Fork from its confluence with the main stem upstream 7.3 miles.

### Classification/Mileage:

Wild — 41.6 miles; Scenic — 2.5 miles; Recreational — 14.6 miles; Total — 58.7 miles.





**NATIONAL WILD AND SCENIC RIVERS SYSTEM**  
**SEPTEMBER 2009**  
**CONTINUED LISTED PAGES**



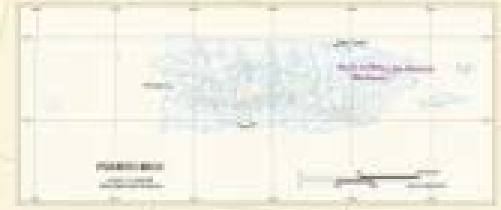
**THE NATIONAL WILD AND SCENIC RIVERS SYSTEM**

The National Wild and Scenic Rivers System (NWSRS) is a program of the National Park Service, U.S. Department of the Interior, that identifies, designates, and manages certain rivers with special qualities that are deemed worthy of protection because of their outstanding scenic, historic, prehistoric, or scientific values. The system is managed by the National Park Service, U.S. Department of the Interior, and the U.S. Fish and Wildlife Service, U.S. Department of the Interior.

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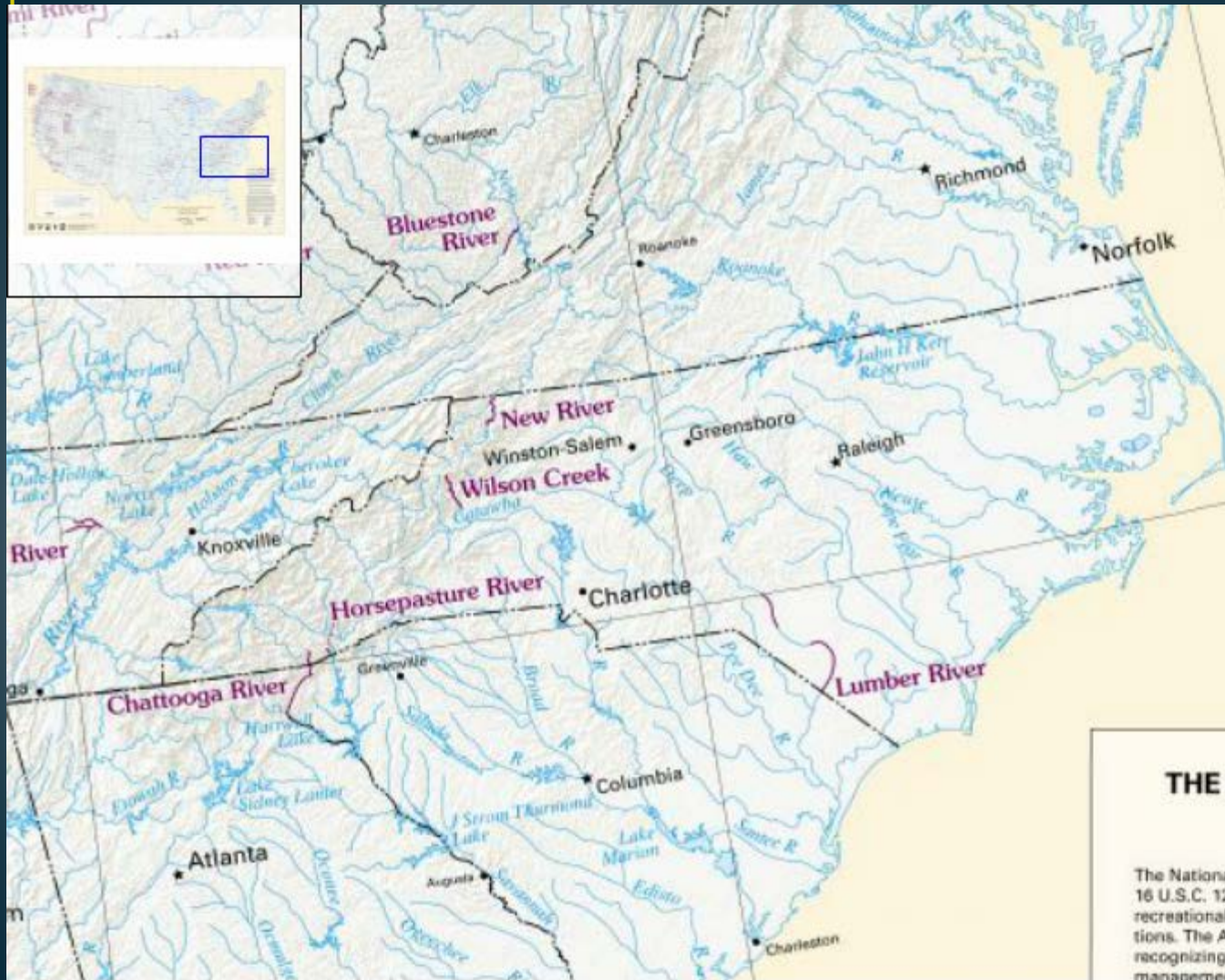
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NATIONAL PARK SERVICE  
 U.S. DEPARTMENT OF THE INTERIOR  
 U.S. FISH AND WILDLIFE SERVICE  
 U.S. DEPARTMENT OF THE INTERIOR  
 NATIONAL WILD AND SCENIC RIVERS SYSTEM





### THE NATIONAL WILD AND SCENIC RIVERS SYSTEM [www.rivers.gov](http://www.rivers.gov)

The National Wild and Scenic Rivers System was created by Congress in 1968 (16 U.S.C. 1271 et seq.) to preserve certain rivers with outstanding natural, recreational and historic values in a free-flowing condition for the enjoyment of present and future generations. The Act is notable for safeguarding the special character of these rivers, recognizing the potential for their appropriate use and development. It encourages management that crosses political boundaries and promotes public participation.



IN PARTNERSHIP WITH THE OFFICE OF COMMUNICATIONS

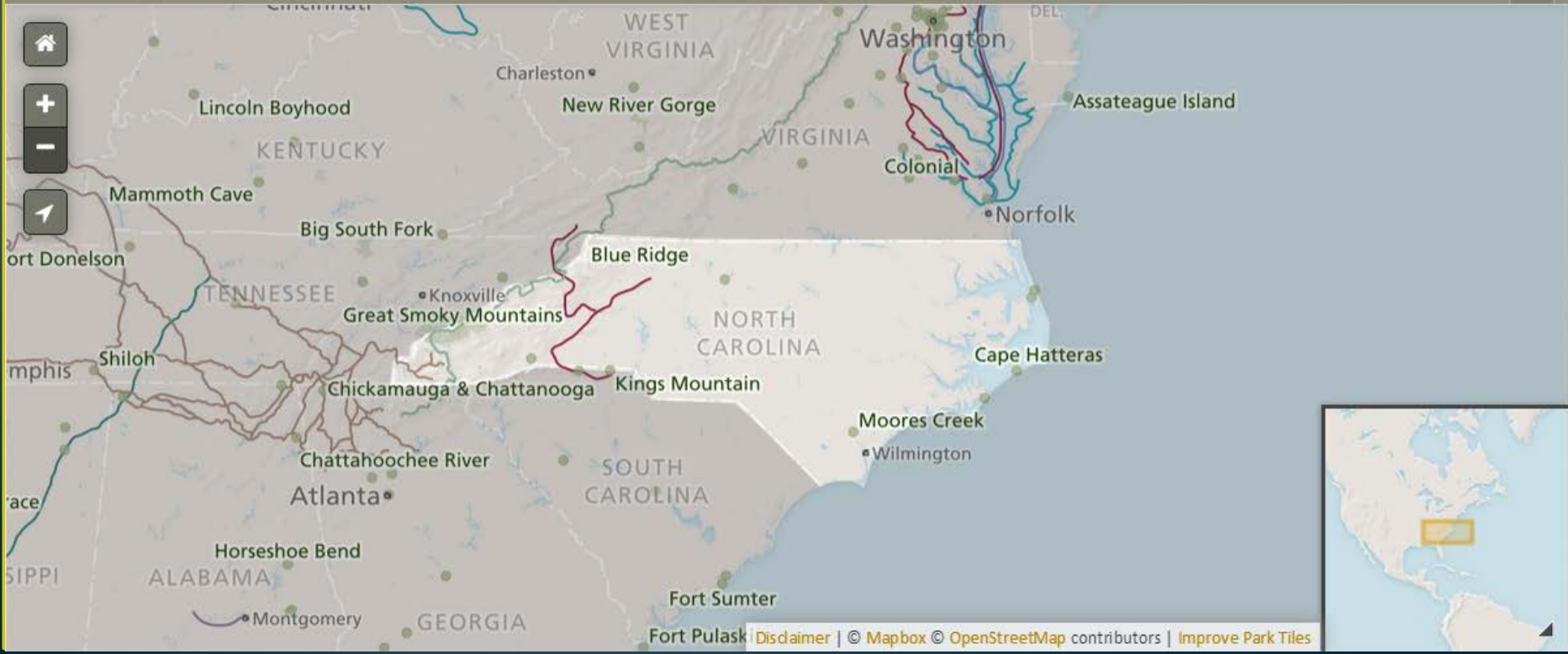
# State Page Maps

Discover the impact the National Park Service has on your state

ROCKY MOUNTAIN  
NATIONAL PARK

## North Carolina

Wright Brothers National Memorial



# Management / Stewardship

- The United States Forest Service, National Park Service, Bureau of Land Management, and the United States Fish and Wildlife are the four primary federal agencies with responsibility for the National Wild and Scenic River System.

