TUTORIAL

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For the interactive mapping tool entitled:

Functional Floodplains Explorer

Version 1.0

Version history:

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Original release of the *National Functional Floodplains Assessment of the United States*.

Questions:

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Overview

This document outlines key functionalities for using the Functional Floodplains Explorer web mapping tool. The web-based tool provides a suite of controls for exploring spatial data on floodplain protection and alteration across the nation and contextual information about floodplain values and threats that help inform the safeguarding of current protections and identify opportunities for restoration and conservation actions.

Welcome screen

When the mapping tool loads the user will be presented with a welcome screen (Fig. 1). Clicking on "START EXPLORING" (1) will close the welcome message and open the mapping tool. The button "Summary" (2) will provide a summary of the findings of the National Functional Floodplains Assessment. The button "Methods" will provide a description of the analyses and data sources used (3) and "Data Request" (4) will provide a point of contact to request the data. "Tutorial" will open this document (0).
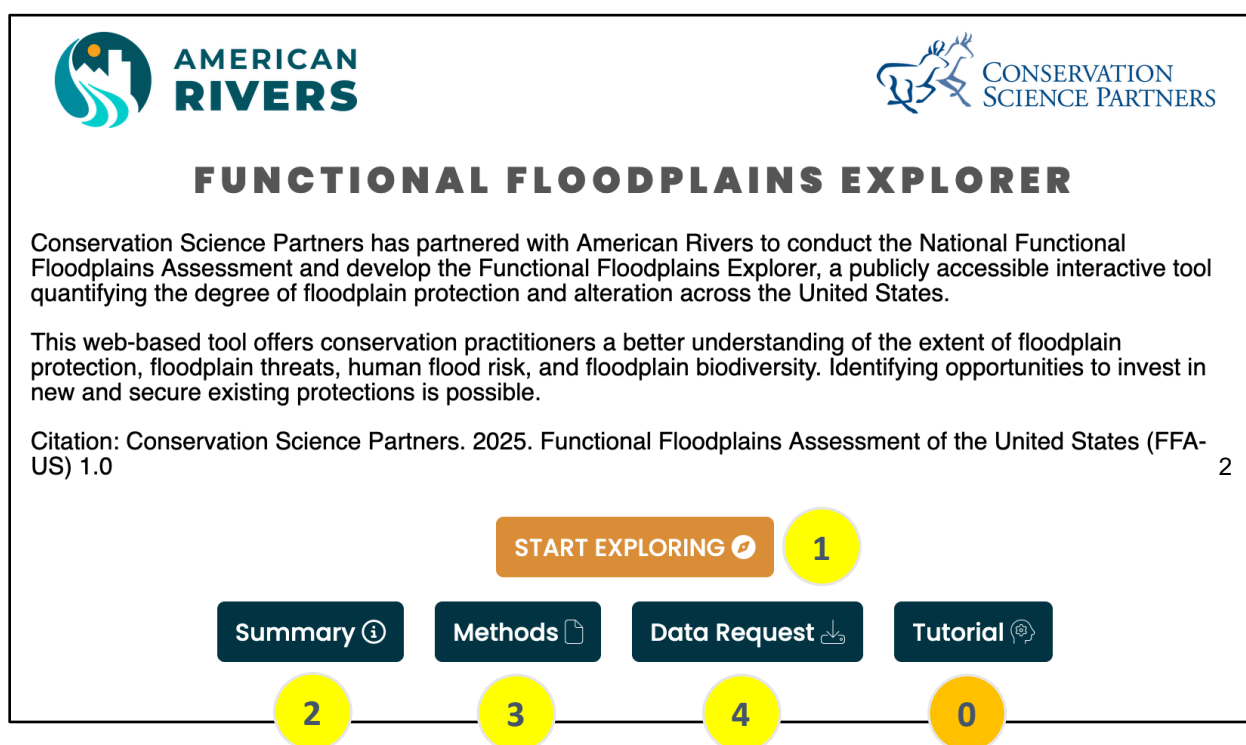

Figure 1. Welcome screen.

Basic controls

After the welcome screen closes, the mapping tool will display the contiguous United States and watersheds (HUC 12), with colors indicating the percentage of total protection considering all the mechanisms (which can be changed as described in detail below) (Fig. 2). A legend for these colors is

shown on the bottom left of the mapping tool (5). The user can change the focal geographical area (6), as well as the floodplain protection class or mechanism to display (7), and the indices capturing the extent of floodplain threat and overall alteration (8). Hovering your pointer over any text will reveal a pop-up menu with more information (upper left corner).

The web-tool also offers the possibility to search (and automatically zoom) to particular places (states, counties or river basins) (9), change the basemap (10), display categories of land ownership in the background (11), display the floodplain extent (12), and rivers/streams (13), take a screenshot (14), save a custom link that can be shared, saved and reopened (15) and filter the display of the watersheds based on a series of river value variables represented as sliders (16) (which are described below). The "?" button (0) brings the user back to the welcome screen.
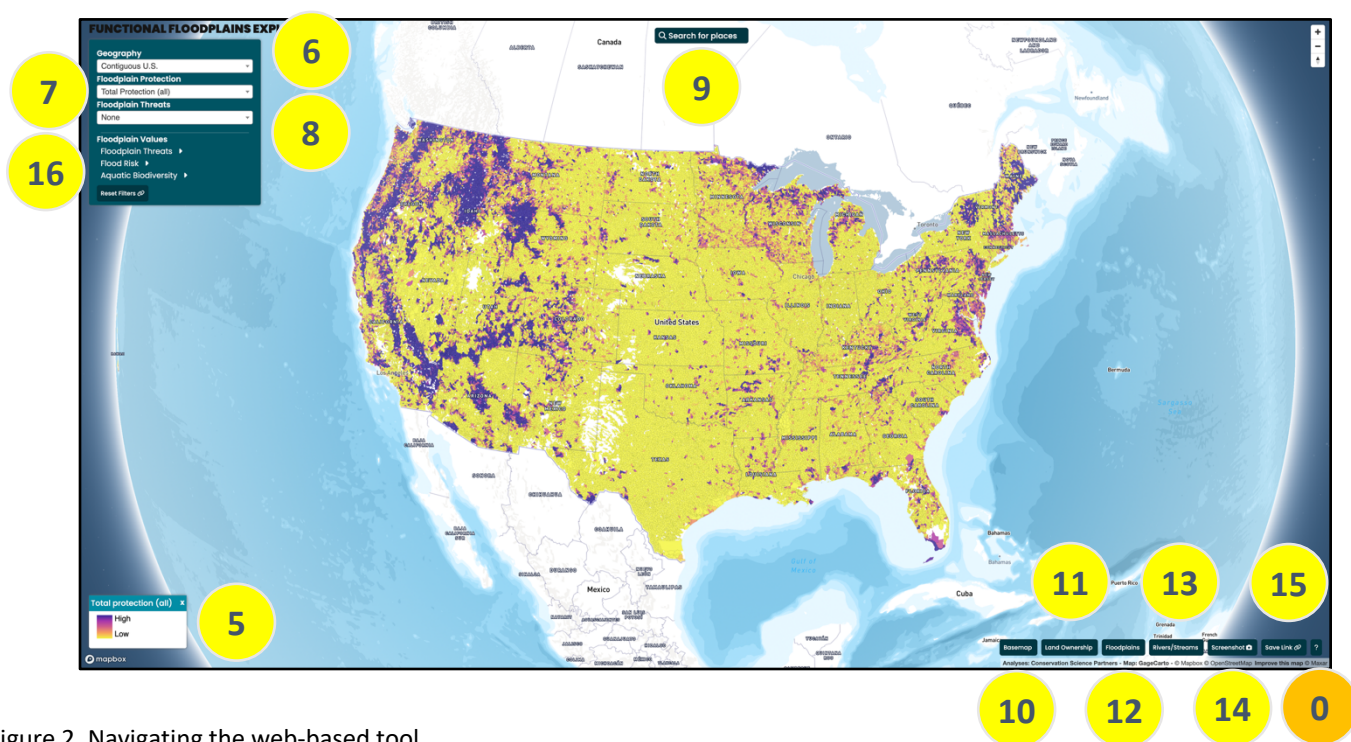

Figure 2. Navigating the web-based tool.

Watershed summary panel
Clicking on a particular watershed on the map will open a summary panel on the right side containing watershed information (Fig. 3) on the total floodplain acreage (17), overall extent of protection (%) (18), protection according to each mechanism of protection (%) (19), floodplain threats (20) and contextual variables related to flood risk (21), aquatic biodiversity (22), and river protection (23). Clicking on "Protected Rivers App" will open the Protected Rivers Explorer that allow to explore the degree of protection of rivers across the nation (24). Selecting a state from the "Search for places" (9) will open a similar panel on the right side containing State information.
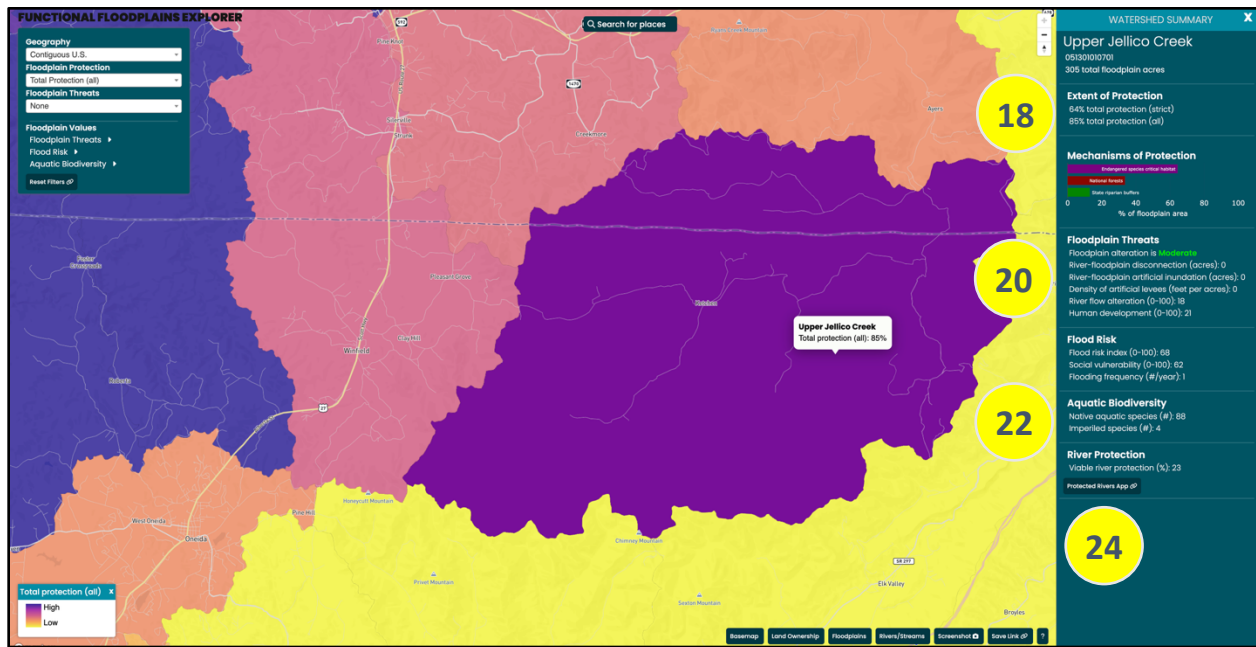
Figure 3. Watershed summary panel.

Floodplain Value Sliders

Zoom back out, and then click on the headers ▶ to the right of each "Floodplain Values" section on the left control panel (25) to reveal the sliders that can be used to perform custom selection of the watersheds (Fig. 4). The sliders can be used to select (display) watersheds according to their values. Multiple selections can be performed, such as what is shown in the example below where only those watersheds with high flood risk (> 50) and high degree of floodplain alteration (>50) are selected, using Total Protection (all) (% of floodplain area) status as the displayed layer (26). The user can reset the filters by clicking on "Reset Filters" (27) and get a summary of the selection in the "SELECTION DETAILS" box at the bottom of the screen (28).

Figure 4. Slider panel to select watersheds based on a combination of river values and threats.

State summary panel

The web-tool offers the possibility to search (and automatically zoom) to particular states. Clicking on "Search for places" (9) and entering a state name will zoom the map and open a summary panel on the right side (29) containing state level statistics for river protection (Fig. 5).
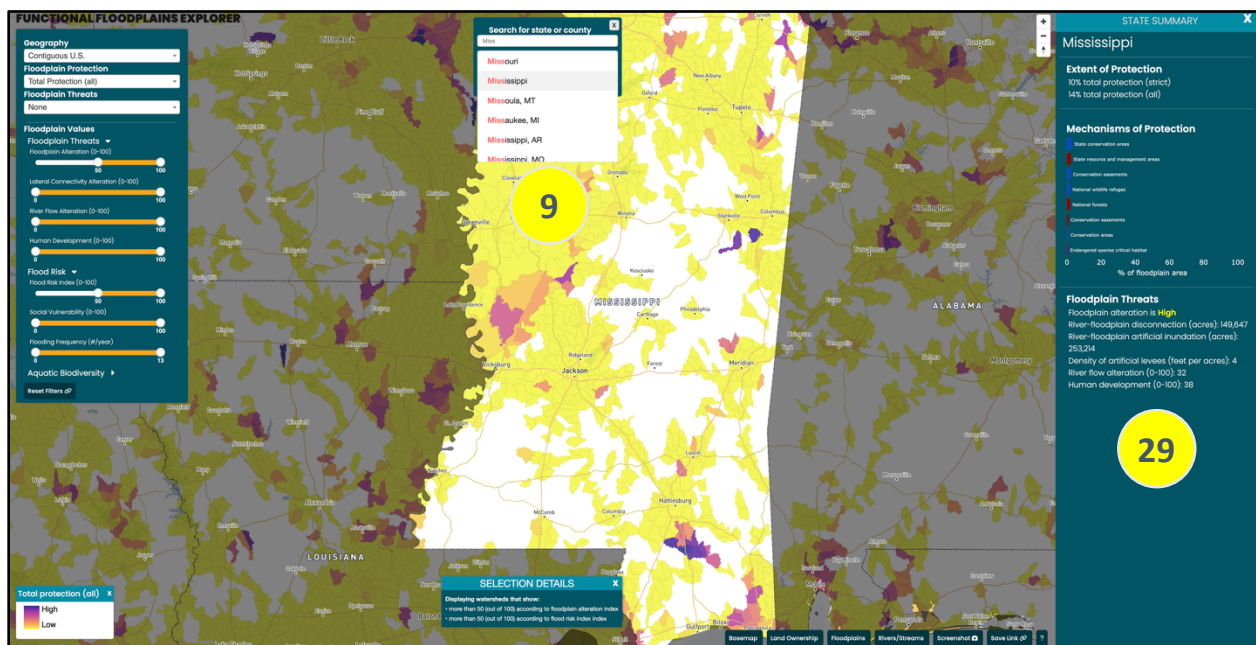

Figure 5. State summary panel.

Additional updates and documents are forthcoming.

This web-based explorer allows floodplain conservation practitioners and policy makers to understand the current state of floodplain protection and alteration, celebrate the successes of past protection efforts, and identify opportunities to invest in floodplain restoration in the years to come.

We look forward to seeing the diversity of ways in which you use the Functional Floodplains Explorer in your work.