**How to use the map:**

On this web page, you will find a map of the lower 48 states in the US at the center. Above the map, a set of filters is provided to help customize the data displayed. Circle markers on the map show watermilfoil strains present within a given lake. When you click on any marker, a pop-up appears, revealing additional information about the selected strain such as its location and herbicide response data.

To refine your search, filers are available at the top of the screen, just above the map. These filters enable you to narrow down your results by state, county, lake, waterbody ID and taxa. Moreover, you can filter by an individual strain of interest, making it easier to identify its occurrences in other locations.

Clicking on any of the purple circle markers on the map will trigger a pop-up box that provides comprehensive information about the corresponding lake. This information encompasses the state, county, lake name, waterbody ID, and the specific strain(s) present within the lake. For strains with available herbicide response data, a clickable button is provided within the pop-up box. This button, when clicked, will display further details regarding the strain's response to tested herbicides. This supplementary information will be displayed below the filters, positioned to the left of the map. Alongside the strain's herbicide response data, relevant citations are also incorporated for reference.

It’s important to note that only a fraction of the lakes in the United States have been genetically surveyed, with a greater concentration of surveying in the Midwest, due to funding and collaborative projects. As a result, certain strains or taxa may be present in more lakes than shown on this map. If your lake isn’t represented, and you’re curious about the watermilfoil strains present there, please don’t hesitate to contact us or visit the Thum Lab’s website for more information!

<https://www.montana.edu/thumlab/>

Lastly, if you want a refresher of any of this information, please click on this button to re-open this pop-up.

**Strain ID nomenclature:**

The first letter in the strain ID referrers to the taxon, distinguishing between Eurasian (Myriophyllum spicatum), northern (M. sibiricum) or hybrid (M. spicatum × M. sibiricum) watermilfoil.

Additionally, ‘MISGP’ or ‘MYR’ in the ID represents the original database this sample is from, primarily for in-house purposes, but it is included for cross referencing convenience.

Lastly, the number at the end of the ID signifies the sample number it was initially assigned in the given database.

**Footer**

Questions, suggestions or bugs? Please email them to Ashley at [ashley.wolfe3@montana.edu](mailto:ashley.wolfe3@montana.edu)

The data on this website was last updated 7/1/2023 and will be updated annually.

If you want to know more about the research that created this app as well as a useful guide on watermilfoil genetic surveying and monitoring, please see this paper. Doi link here