The fragmentation of river habitats through dams and other aquatic barriers is one of the primary threats to aquatic species in the United States. In the Chesapeake Bay watershed, these barriers limit the ability of sea-run fish species to reach preferred freshwater spawning habitats from the sea and prevent brook trout populations from reaching thermal refuges. To address this problem, Chesapeake Bay Agreements were signed by state and federal agencies within the Chesapeake Bay region in 1987 and 2000 which included commitments to “to provide for fish passage at dams and remove stream blockages wherever necessary to restore passage for migratory fish.” The 2009 Executive Order on Chesapeake Bay Protection and Restoration further emphasized the importance of restoring aquatic connectivity in the Chesapeake watershed.

Working with partners at the Chesapeake Bay Program’s Fish Passage Workgroup, The Nature Conservancy first developed the Chesapeake Fish Passage Prioritization (CFPP) tool in 2013 to help identify dams where improved fish passage or removal could most benefit migratory and resident fish species. In 2019, updates to the tool were performed to incorporate additional data and functionality. Now, in 2023, a new round of updates, funded by the Chesapeake Bay Trust, has been completed to update and refresh the tool to ensure its relevance in the coming years.
Methods:
The updates undertaken in this project include:

- Refreshing the user-interface of the tool to leverage modern web development frameworks and the latest Esri web mapping API
- Developing functionality to track miles opened by dam removals or other fish passage projects on a species-specific basis
- Updating prioritization data and metrics
- Coordinating with the Southeast Aquatic Resources Partnership (SARP) on data hosting and integration with their new national aquatic barrier prioritization tool to ensure data consistency
- Integrating data extraction and revisions to enable frequent updates

Results:
The updated tool is designed to support the fish passage restoration community in the Chesapeake Bay watershed. It can be used proactively to help identify potential dam removals, culvert upgrades, or other fish passage improvement projects. It can also be used to better understand the potential ecological benefits of implementing a fish passage project and by providing a common touchstone for practitioners and funders.

Reflection/ Recommendations:
Decision support tools, like the Chesapeake Fish Passage Prioritization (CFPP) tool can be effective vehicles for translating science and supporting its application by the conservation community. While the CFPP tool is not a replacement for site-specific knowledge and investigation, it can be used to help:

- Identify and help prioritize potential fish passage projects
- Inform watershed plans
- Support advocacy for projects
- Aid in acquisition of project funding
- Help with communication regarding removal projects
- As a database of measures

Resources:
The tool is accessible at: [https://maps.tnc.org/chesfpp](https://maps.tnc.org/chesfpp)