



Narrative Analysis

[FISH PASSAGE OUTCOME - AUGUST 15, 2019]

The narrative analysis summarizes the findings of the logic and action plan and serves as the bridge between the logic and action plan and the quarterly progress meeting presentation. Based on what you learned over the past two years from your successes and challenges, you will describe whether the partnership should make adaptations or change course.

Use your completed pre-quarterly logic and action plan to answer the questions below. After the quarterly progress meeting, your responses to these questions will guide your updates to your logic and action plan. Additional guidance can be found on [ChesapeakeDecisions](#).

1. Examine your red/yellow/green analysis of your management actions. What lessons have you learned over the past two years of implementation?

Similar to previous years, interest by dam owners in removing their obsolete structures is still a major challenge for opening additional stream miles. Incentives for removal are needed to gain interest in dam removal. Work in ongoing with state dam safety programs to better coordinate on possible dam removal projects. One incentive being investigated by the workgroup and regulatory agencies is awarding mitigation credit for dam removal projects.

Culvert assessment and retrofit work is currently under funded for both assessment work and determining the presence of target species. The workgroup is requesting additional Bay Program funding through the habitat GIT funding to address the lack of guidance for local and state highway agencies on the proper design and implementation of fish friendly road crossings. This will allow for additional progress under Action 1 of the action plan.

2. Regardless of how successful your short-term progress has been over the past two years, indicate whether we are making progress at a rate that is necessary to achieve the outcome you are working toward. The example graph below illustrates this concept.

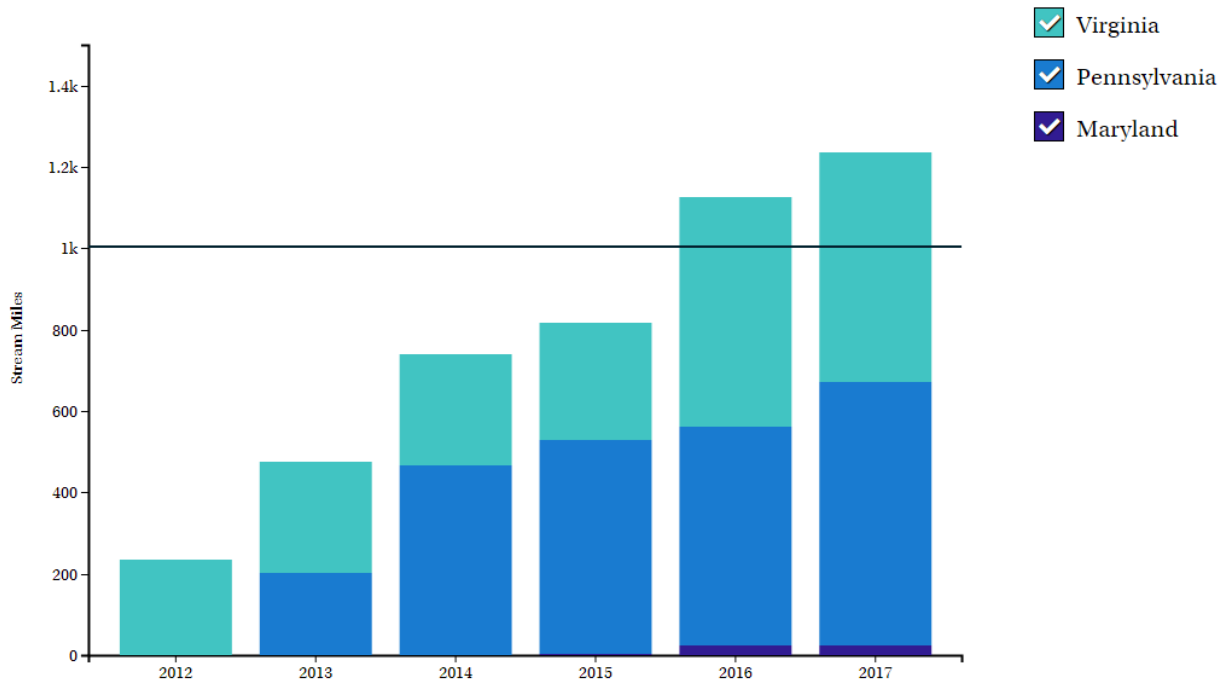
By 2016, the fish passage outcome, opening 1000 miles by 2025, was exceeded. More than 1200 stream miles have been opened for river herring, shad, American eel and brook trout. Of the miles opened to fish passage between 2012 and 2017, 52 percent (or 648 miles) are located in Pennsylvania and 46 percent (or 565 miles) are located in Virginia. The remaining 22.6 miles are located in Maryland.

Since the time that the mileage outcome was set in 2014, experts have developed a more accurate method of calculating the stream miles opened to fish passage following the removal of a dam or other barrier. This method uses the Chesapeake Fish Passage Prioritization Tool to map and count the available upstream miles located between a removed blockage and the waterway's headwaters or the next blockage that is in place.

Because this outcome's mileage target was set under a previous method of calculation, it is too low and an unfit benchmark against which to measure current progress. Despite the fact that much of

the low hanging fruit with regard to dam removal has been picked, our partners will continue to open stream miles to access by migratory fish at the same rate (132 miles every two years).

Stream Miles Opened to Fish Passage (Cumulative) (2012-2017)



3. What scientific, fiscal and policy-related developments will influence your work over the next two years?

In 1988, the workgroup began implementing fish passage structures such as denil fish ladders and fish elevators. As dam removal became a more viable and effective approach for fish passage based on the scientific literature, the focus shifted to mainly dam removal projects in the 2000-2010 timeframe. While dam removal projects remain a high priority for implementation, culvert replacement and retrofit projects have gained some attention given the sheer volume of potential projects. Over 165,000 road-stream crossings exist in the Chesapeake Bay region and many of these represent blockages for fish migrating to their historic spawning and rearing grounds. Culverts also have gained attention for their ability address impacts related climate change. Larger fish friendly culverts and bridges accommodate the higher flows expected with a changing climate resulting in less damage to roads and other transportation infrastructure during storm events. Given the focus on increasing storm events and higher river flows, addressing fish passage at the same time is a common sense approach. Given the connection to climate resilience, additional grant funding may be available for project implementation.

Under other policy related developments, U.S. Army Corps of Engineers recently released guidance on mitigation crediting for dam removals and other river obstructions (<https://www.nap.usace.army.mil/Portals/39/docs/regulatory/regs/RGL-18-01-Determination-of-Compensatory-Mitigation-Credits-for-Dams-Structures-Removal.pdf?ver=2019-02-22-140711->

787). The fish passage workgroup has been working with Federal agencies and states on how mitigation crediting will be given for dam removal and culvert retrofits in the Chesapeake Bay region. For the state of Maryland, a draft mitigation calculator has been developed and is being reviewed at the fish passage working group level. If mitigation credits can be awarded for dam removal and culvert retrofit projects, this represents an incentive program for these types of projects and may eventually lead to more interested dam owners in removing their structures.

4. Based on your response to the questions above, how will your work change over the next two years?

Opportunities to restore fish passage through the retrofitting or removal of culverts—in addition to dam removal—are being investigated and incorporated into our two year action plan. These types of projects with their linkage to climate resilience seem best suited and a high priority for funding, such as NFWF’s Chesapeake Small Watershed Grants and National Coastal Resilience Fund. Culvert related actions will be included in many of the additional items already listed in the fish passage action plan.

5. What, if any, actions can the Management Board take to help ensure success in achieving your outcome?

Bring awareness to dam safety programs that dam removal is a viable option to consider along with the usual “repair or replace” options under dam safety regulations and planning.