BIENNIAL STRATEGY REVIEW SYSTEM
Chesapeake Bay Program

Narrative Analysis

[FISH PASSAGE OUTCOME – AUGUST 2021]

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 habitat. Aside from project implementation activities, the workgroup focused on ways to incentivize dam removal projects. Dam removal mitigation crediting is a method that could generate high priority projects with specific benefits to our target species (more credits for high priority dam removal projects).

Workgroup members also have continued working with state dam safety programs to highlights the benefits of dam removal that include increased public safety and reduced liability for the dam owner.

There is a funding need to continue road-stream crossing assessments and determining presence of target species. Over the past 2 years, the USFWS led an effort to develop "Recommendations for Aquatic Organism Passage at Maryland Road-Stream Crossings (2021)" with funding by the habitat GIT. This document addressed the lack of guidance for local and state highway agencies on the proper design and implementation of aquatic passage at road crossings under Action 1. The workgroup plans to introduce this new guidance document to state and county road transportation agencies over the next several months. The document is a living document with plans for updated in the future as the fish passage workgroup and its partners learn more about implementing road-stream crossings.

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 met. Since the start of the workgroup in 1989, over **30,000 miles of habitat** are now open for target species.

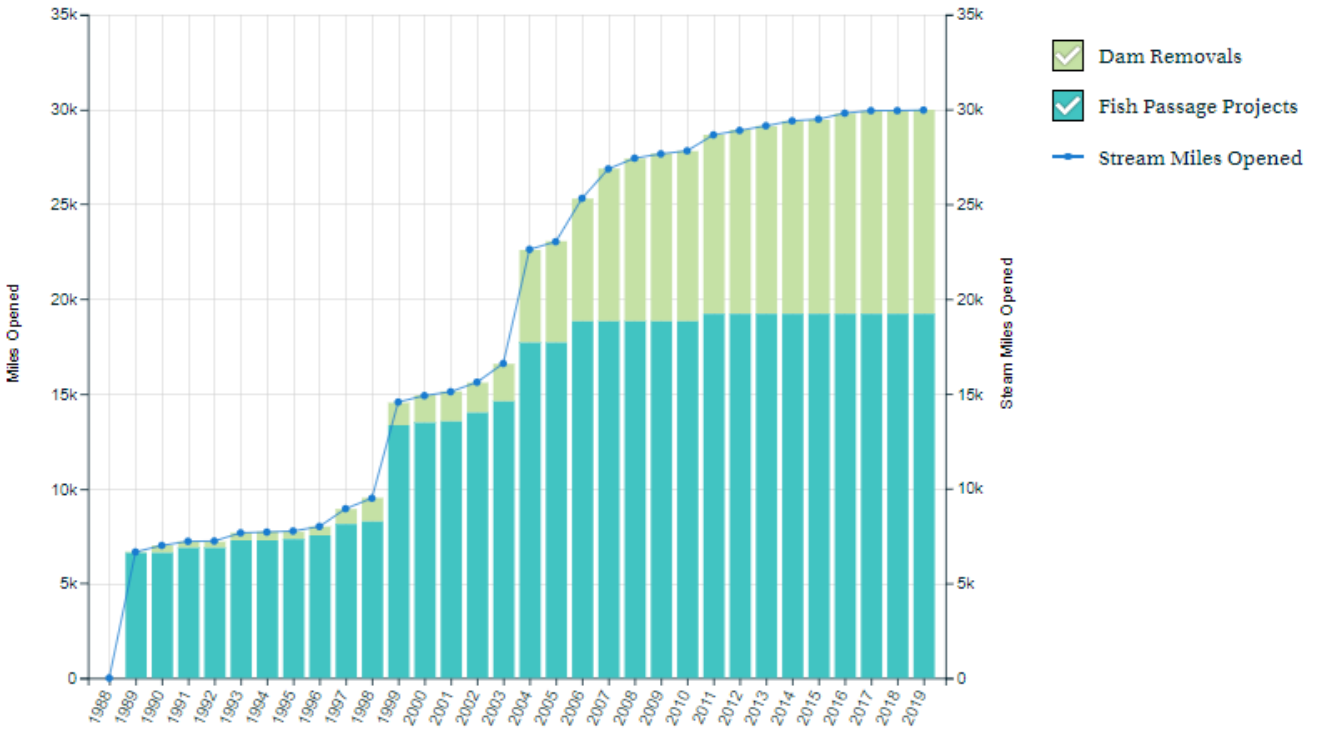
In 2020, 2 dams were removed in the Virginia and account for very few miles (approximately 1 mile opened). Data collection is not complete for 2020 and 2021. Fish passage coordinators will not report 2021 numbers until January of 2022.

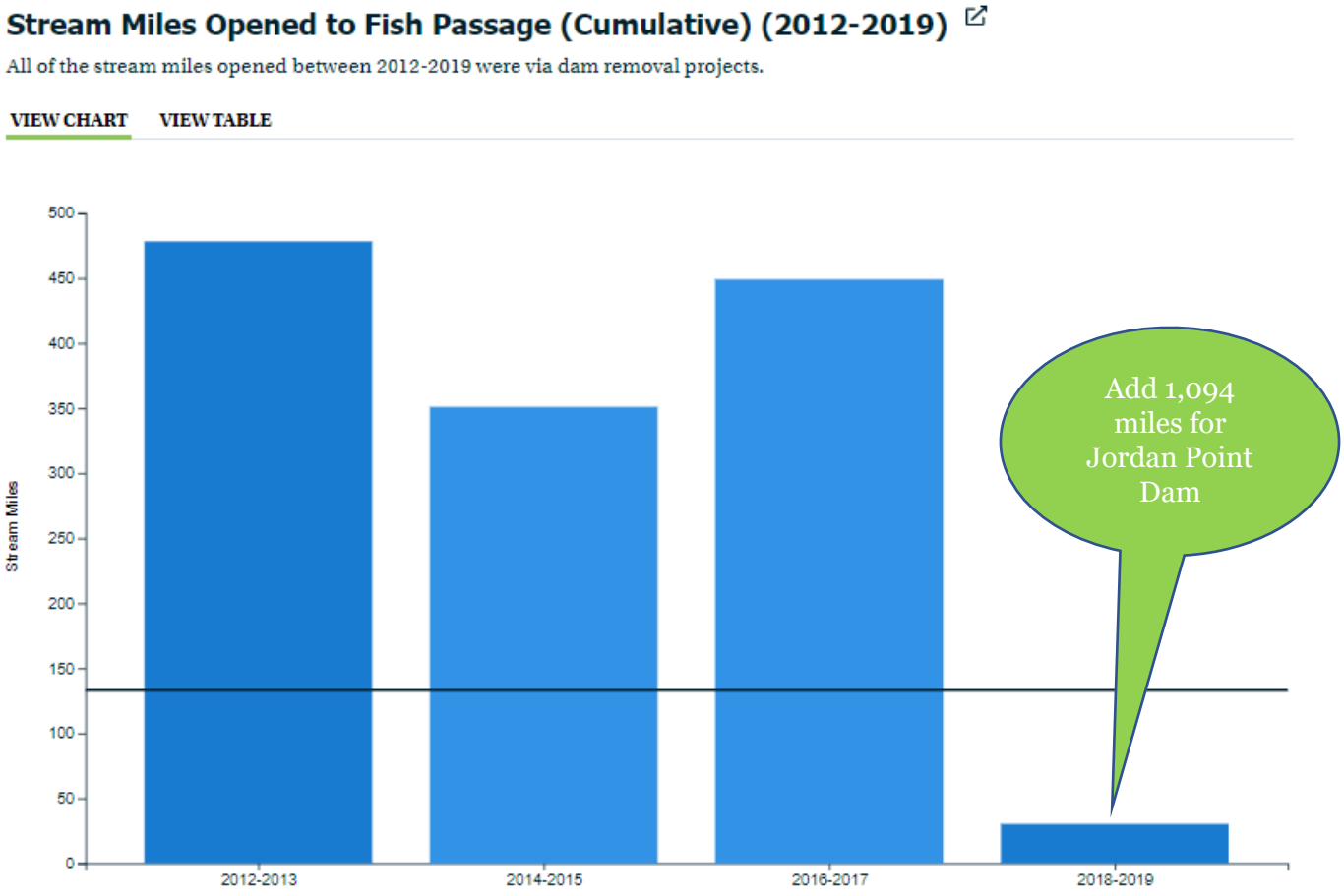
In January 2020, the management board accepted a new method for calculating stream miles opened and approved a new outcome. The miles opened calculation uses the Chesapeake Fish Passage Prioritization Tool to map and count the available upstream miles located between a removed blockage and the waterway's headwaters or the next blockage. The new outcome is: By 2025, restore historical fish migration routes by opening an additional 132 miles every two years to fish passage. Restoration success will be indicated by the presence of Alewife, Blueback Herring, American Shad, Hickory Shad, American Eel and Brook Trout, to be monitored in accordance with available agency resources and collaboratively developed methods. Chesapeake Progress is being updated with a new miles opened database and graphics to show more detailed information on fish passage efforts in the watershed. *Currently the 2018-2019 data on Chesapeake Progress does not include the Jordan Point Dam Removal which opened 1.094 miles in 2019.

Stream Miles Opened 1988-2019 (Cumulative)

Stream Miles Opened to Fish Passage via Dam Removals and Fish Passage Projects.

VIEW CHART VIEW TABLE





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 fish ladders and fish elevators. As dam removal became a more viable and effective approach for fish passage, the focus shifted to 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. The fish passage workgroup developed the guidance document "Recommendations for Aquatic Organism Passage at Maryland Road-Stream Crossings" during our previous two-year workplan. This document will be used to guide future road-stream crossing designs for the remaining

Under other policy related developments, U.S. Army Corps of Engineers 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, state of Maryland and Federal partners on mitigation crediting for dam removal projects in the Chesapeake Bay region. For the state of Maryland, members of the fish passage workgroup drafted a mitigation calculator for crediting dam removal projects. The draft calculator is being modified by the USACE and the process is slow moving. If mitigation credits are awarded for dam removal 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— were new additions to our two-year action plan. These types of projects with their linkage to climate resilience are a high priority for funding, such as NFWF's Chesapeake Small Watershed Grants and National Coastal Resilience Fund, as well as any potential infrastructure funding into the future. As more road-stream crossings are determined to be impassable to aquatic species, more potential projects are on the horizon in need of future funding.

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

At this time, the Fish Passage Workgroup has no pressing need for any action from the Management Board. The fish passage goal is consistently being met. Given momentum on infrastructure, we hope to see additional resources for fish passage and dam removal work into the future.