UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930

July 28, 2022

Daniel M. Bierly, Chief
Civil Project Development Branch
Planning Division
Baltimore District
U.S. Army Corps of Engineers
2 Hopkins Plaza
Baltimore, MD 21201

Dear Mr. Bierly:

We have reviewed the draft Integrated Feasibility Report and Environmental Assessment (DEA) available May 31, 2022, for the Metropolitan Washington, District of Columbia, Coastal Storm Risk Management Feasibility Study. The U.S. Army Corps of Engineers (USACE) and the Metropolitan Washington Council of Governments (MWCOG), have prepared this report to determine whether the implementation of coastal storm risk management (CSRM) measures would reduce coastal flood risk to critical public and private infrastructure along the west bank of the Potomac River in Northern Virginia. As part of this study, you are evaluating potential environmental effects of a suite of considered CSRM measures, in accordance with the National Environmental Policy Act of 1969 (NEPA). This DEA document includes consideration of impacts for the Tentatively Selected Plan (TSP; Alternative 8), an array of alternatives composed of various management actions that have been carried forward for this analysis, and the no-build alternative. In the DEA, USACE concludes that the proposed project would not have an adverse effect on essential fish habitat (EFH) or federally managed fishery species.

Project purpose is driven by the confluence of projected sea-level rise (SLR), anticipated storm-related precipitation, and the existence of extensive human infrastructure in flood-prone areas of the upper-tidal reaches of the Potomac River. Several alternatives were considered to address anticipated flooding for the built environment. During the initial phases of the study, several alternatives were screened from further consideration, including the construction of a coastal surge barrier across the Potomac River at two potential locations. The remaining evaluated alternatives, other than the No Action alternative, included some combination of the following actions:

- Building flood walls and/or levees around existing infrastructure with attending features (e.g., pumping station, stop log closures), including
    - Reagan National Airport
    - Arlington Water Pollution Control Plant (WPCP)
    - Four Mile Run Park
    - City of Alexandria
    - The community of Belle Haven
- Non-structural measures (e.g., floodproofing, enhancing existing elevations)

Alternative 8, the TSP, entails building two flood wall/levee structures, one along Four Mile Creek to control flooding of the Arlington WPCP and another surrounding much of the southeastern portion of the community of Belle Haven. The Arlington WPCP is proposed to be fully constructed in uplands and has no tidal wetland or waterway impacts. The project around the community of Belle Haven entails building a levee/floodwall complex with culverted crossings with self-regulating gates and associated pump station at two tributaries.

Authorities

The Magnuson-Stevens Conservation and Management Act (MSA) requires federal agencies, such as USACE, to consult with us on any action or proposed action authorized, funded, or undertaken by such agency that may adversely affect essential fish habitat (EFH). However, based on the site location (i.e., upland of the tidal freshwater portions of the Potomac River), the proposed action is unlikely to present adverse impacts to EFH.

The Fish and Wildlife Coordination Act (FWCA) requires that all federal agencies consult with us when proposed actions might result in modifications to a natural stream or body of water. It also requires that they consider the effects that these projects would have on fish and wildlife and must also provide for the improvement of these resources. Under this authority, we work to protect, conserve and enhance species and habitats for a wide range of aquatic resources such as shellfish, diadromous species, and other commercially and recreationally important species that are not managed by the federal fishery management councils and do not have designated EFH. The Potomac River and several of its tributaries in the project area are designated as anadromous fish use area by the Virginia Department of Game and Inland Fisheries (VDGIF; see: https://vafwis.dgif.virginia.gov/fwis). This includes the confluence of Hog Island Gut with the Potomac River.

Adverse Effects to Aquatic Resources

Many of the alternatives considered under this CSRM study present adverse impacts to NOAA trust resources, including migratory fish such as American shad (*Alosa sapidissima*), alewife (*A. pseudoharengus*) and blueback herring (*A. aestivalis*). Specifically, the screened coastal surge barriers (i.e., Alternative 2, Alternative 3) would have likely presented a substantial chronic barrier for fish movement throughout the mainstem Potomac River by fundamentally altering the flow of the Potomac River in these areas. These alternatives were screened out, in part, due to their anticipated impact on fish movement and migration. We agree with this reasoning and support the screening of this alternative from further consideration.

Under the TSP, the proposed in-water impacts entail 2,250 square feet of permanent impacts to two tributaries of Hog Island Gut through the construction of a culverted floodwall which will be constructed to span each of these channels. These impacts are currently proposed to be offset through the purchase of compensatory mitigation credits. Proposed culverts will include flap gates that will automatically close when adjacent water surface elevations reach flood stage and automatically re-open when water levels recede. When installed channelward of existing tidal wetlands, such restrictions have the potential to fundamentally alter the hydrology of these sensitive habitats, which can lead to degradation of quality and diminish their ability to withstand

other perturbations. Tidal gates can present particularly damaging results when they are not "self-regulating" and/or are not properly maintained due to a lack of proper tidal flushing for protracted periods of time.

Based on the information in the plan, it appears that these two stream channels upstream of the project area, termed Belle Haven "East" and "West" channels, respectively, have been historically modified (e.g., straightening) and likely have a hydrology typical of urbanized streams (e.g., highly variable flows). While these proposed culverts will likely further alter the hydrology of these small streams, it appears that such impacts to tidal wetlands associated with Hog Island Gut would be largely avoided in the currently proposed alignment. However, culverts should be designed to avoid creating barriers for fish movement and/or causing downstream scour, to the extent possible. Several guidance documents (e.g., FHWA 2007, CBP 2021) exist to inform designs of culverted stream crossings that minimize impacts to aquatic connectivity for fish. Also, erosion and sediment control measures described in the DEA should be employed during construction to prevent nutrients and sediment from entering Hog Island Gut, adversely affecting downstream water quality. Minimization of turbidity generated by in-water work should be particularly pursued during the period extending from March 1 - June 15, to avoid impacts to anadromous fish which likely spawn in tidal waters downstream of the project area.

Fish and Wildlife Coordination Act Recommendations

As proposed, the project may result in degradation of riverine habitat. To avoid and minimize these impacts, we recommend the following measures be incorporated to the extent possible, pursuant to the Fish and Wildlife Coordination Act (FWCA):

- Design proposed culverts to allow for the movement of aquatic organisms
- Incorporate measures to minimize the amount of turbidity generated by in-water work, notably during the anadromous fish spawning season (March 1 - June 15).

Endangered Species Act (ESA)

Threatened or endangered species under our jurisdiction including Atlantic sturgeon (*Acipenser oxyrhynchus*) may be present in the project area. As the lead federal action agency, you are responsible for determining the nature and extent of effects and for coordinating with our Protected Resources Division as appropriate. Guidance and tools to assist you in this endeavor are available on our website at: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultations-greater-atlantic-region. Please contact Brian Hopper of our Protected Resources Division (b) (6) if you have any questions or to discuss your project and obligations under Section 7 of the Endangered Species Act (ESA).

Conclusion

We appreciate your attention to our comments here as your study progresses. Please note that a distinct and further EFH consultation must be reinitiated pursuant to 50 CRF 600.920 (j) if new information becomes available, or if the project is revised in such a manner that affects the basis

for the EFH determination. If you have questions or would like to discuss this further, please contact Jonathan Watson in our Annapolis field office at (b) (6) or (410) 295-3152.

Sincerely,

(b) (6)

Karen M. Greene
Mid-Atlantic Branch Chief
Habitat and Ecosystem Services Division

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Literature Cited

Chesapeake Bay Program (CBP). 2021. Recommendations for aquatic organism passage at Maryland road-stream crossings. 25 pp.

Federal Highway Administration (FHWA). 2007. Design for fish passage at roadway-stream crossings: Synthesis report. FHWA-HIF-07-033. 280 pp.