Eubanks & Associates, PLLC
LAW FOR THE PUBLIC INTEREST

1629 K STREET NW, SUITE 300
WASHINGTON, DC 20006
(970) 703-6060
By appointment only

March 9, 2026

***Submitted Via E-mail*:**
Maryland Transportation Authority
Bay Crossing Study
2310 Broening Highway
Baltimore, Maryland 21224
info@baycrossingstudy.com

Federal Highway Administration
George H. Fallon Federal Building
31 Hopkins Plaza, Suite 1520
Baltimore, Maryland 21201
alexander.bienko@dot.gov

Re: Comments on the Bay Bridge Draft Environmental Impact Statement from Queen Anne's Conservation Association

Dear MDTA and FHWA Officials:

Queen Anne's Conservation Association ("QACA") submits this letter in response to Maryland Transportation Authority's ("MDTA") invitation for public comments on the Chesapeake Bay Crossing Tier 2 Draft Environmental Impact Statement ("DEIS"), which MDTA and the Federal Highway Administration ("FHWA") are soliciting as part of FHWA's compliance with the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321-4347, and other applicable laws. We respectfully request that FHWA include this comment letter in the formal administrative record for this matter.

In order to fulfill its legal obligations for the remainder of the NEPA process, FHWA must: (1) remedy deficiencies in the traffic analysis; (2) follow through on commitments to consult on protected species and implement necessary protection and mitigation measures; and (3) complete analysis of bridge construction impacts. *See* Md. Transp. Auth., Tier 2 NEPA Chesapeake Bay Crossing Study Draft Environmental Impact Statement, http://bit.ly/4qS24td (last visited Mar. 9, 2026).

Failure to adequately address these concerns will have dire consequences for Maryland's Eastern Shore. A massive new bridge, constructed without sufficient traffic and environmental analysis, will dramatically increase negative impacts to the pristine and iconic Eastern Shore landscape. The Bay Bridge project threatens to fundamentally and permanently change the character of the Eastern Shore through increased traffic, suburbanization, and severe environmental degradation; FHWA and MDTA must take a more calculated and detailed look at multiple parts of their supporting analysis and purported justification before proceeding.

Statement of Interest

QACA is the oldest conservation organization on the Eastern Shore and is dedicated to promoting smart and sustainable growth in Queen Anne's County. It supports development that will provide a viable and sustainable economic foundation for the county, while also ensuring the protection of its rural character, including the small towns, farms, waterways, and open spaces that shape the county's landscape.

QACA has been an active participant in MDTA's Bay Crossing Study since its inception. It has consistently advocated for accurate and methodologically sound traffic projections, as well as using all available travel management strategies to mitigate peak traffic congestion *before* committing to a costly, disruptive, and environmentally damaging new bridge. To this end, QACA previously submitted detailed comments on the Bay Crossing Study Tier 1 Draft Environmental Impact Statement ("Tier 1 DEIS").[1] Included in those comments was a rigorous study by independent traffic engineering firm, AKRF, commissioned by QACA to evaluate the Purpose and Need Assessment ("PNA") first published by MDTA in 2019.[2] AKRF is a nationally recognized traffic engineering firm with impeccable credentials, which FHWA and other federal and state agencies routinely retain to manage and coordinate all aspects (including preparation of Draft and Final EISs) of traffic and highway engineering projects throughout the United States. QACA also commented on an earlier step in the Tier 2 NEPA Study process and raised concerns about the adequacy of several elements of the agency's environmental and traffic analyses.[3]

BACKGROUND

Relevant background information, including the applicable legal framework and a brief summary of the Bay Bridge Crossing NEPA process, is described below.

Statutory and Regulatory Framework

NEPA was enacted in 1970 to protect human health and the environment by ensuring that "unquantified environmental amenities and values" are given "appropriate consideration in decisionmaking." 42 U.S.C. § 4332(2)(B).

---

[1] *See* Letter from QACA, April 22, 2021, to Bay Crossing Study, Re: Comments of Queen Anne's Conservation Association on Bay Crossing Study Tier 1 DEIS.

[2] *See* AKRF, *Chesapeake Bay Bridge Crossing Study Transportation Study*, December 15, 2020 (prepared for Queen Anne's Conservation Association).

[3] *See* Letter from QACA, January 13, 2025, to Bay Crossing Study, Re: Preliminary Comments on the Chesapeake Bay Bridge Crossing Tier 2 NEPA Study Process from Queen Anne's Conservation Association.

This foundational environmental law has twin aims. It establishes transparent procedures that require federal decisionmakers to consider and account for the environmental impacts of federal projects. NEPA also requires agencies to inform the public about the environmental impact of federal projects, along with reasonable alternatives, so that the public may weigh in on the decisionmaking process and ensure that the ultimate agency decision is careful and well-informed. *See* 42 U.S.C. § 4332; 23 C.F.R. § 771.105 (2025). Under NEPA, agencies have a duty to take a "hard look" at potential environmental impacts and environmentally enhancing alternatives "as part of the agency's process of deciding whether to pursue a particular federal action." *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 100 (1983).

A little over a month after QACA submitted its most recent comment in this review process, President Trump directed the Council on Environmental Quality ("CEQ") to propose rescinding its longstanding NEPA regulations. *See* E.O. 14154, Unleashing American Energy, 90 Fed. Reg. 8353 (Jan. 29, 2025). CEQ complied with this directive and promulgated an Interim Final Rule accomplishing this aim, which became effective on April 11, 2025. *See* 90 Fed. Reg. 10610 (Feb. 25, 2025). The rule states that "agencies should . . . continue to rely on the version of CEQ's regulations that was in effect at the time that the agency action under challenge was completed." *Id*. at 10614. CEQ contemporaneously published guidance endorsing that approach and has reiterated this methodology in updated guidance. *See* Memorandum for Heads of Departments and Agencies: Implementation of the National Environmental Policy Act (Feb. 19, 2025); Memorandum for Heads of Departments and Agencies: Implementation of the National Environmental Policy Act at 1 (Sept. 29, 2025), both available at https://ceq.doe.gov/guidance/guidance.html.

FHWA, in conjunction with the Federal Railroad Administration and the Federal Transit Administration, promulgated new NEPA implementing regulations in July 2025 to fill the regulatory gap left by CEQ's April 11, 2025 recission. 90 Fed. Reg. 29,426 (July 3, 2025). These regulations became effective July 3, 2025. 23 C.F.R. §§ 771.101-771.141 (2025).

Regardless of CEQ or FHWA regulations, NEPA requires agencies to prepare a "detailed statement"—i.e., an EIS—for any "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(C). An EIS must describe, among other items, the purpose and need for the proposed action, the alternatives to the action, the affected environment, and the environmental consequences of alternatives. *Id*.

The purpose and need assessment for the proposed action serves to "delimit the universe of the action's reasonable alternatives." *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 195 (D.C. Cir. 1991). However, the agency's purpose must not be too narrow. "[A]n agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency's power would accomplish the goals of the agency's action, and the EIS would become a foreordained formality." *Id*. at 196.

Once the agency has crafted a project's goals, it must turn to evaluating a reasonable range of alternatives to the proposed action. The agency must: "evaluate a reasonable range of alternatives to the action and document the reasons why other alternatives, which may have been considered, were eliminated from detailed study." 23 C.F.R. § 771.123(c). The EIS must also "summarize the studies, reviews, consultations, and coordination required by environmental laws or executive orders to the extent appropriate at this stage in the environmental process." *Id*.

Public input is a critical component at each stage of the NEPA process. To determine the scope of the issues to be addressed in the EIS and to identify significant issues related to the proposed action, an agency must engage in a "scoping" process and engage the public. *See* 23 C.F.R. § 771.123(b)(1); *see also* 23 C.F.R. § 771.111 (identifying public outreach and communication options available to agencies during the scoping process). "Utilizing information acquired during the scoping process, the agency is then to prepare an initial draft EIS, which it must make publicly available and circulate to other agencies for feedback"; "[a]fter doing so, the agency must draft a final EIS that addresses any comments." *Webster v. U.S. Dep't of Agric.,* 685 F.3d 411, 418 (4th Cir. 2012) (internal citations omitted); *see also* 23 C.F.R. § 771.138 (detailing order and time limits for each constituent part of the NEPA process).

The EIS process cannot be used to justify already-made decisions; the agency must take a sincere "hard look" at the environmental impacts when considering major federal actions. *See Nat'l Audubon Soc'y v. Dep't of Navy*, 422 F.3d 174, 199 (4th Cir. 2005) (stating that "[w]here an agency has merely engaged in post hoc rationalization, there will be evidence of this in its failure to comprehensively investigate the environmental impact of its actions and acknowledge their consequences."). Meaningfully engaging with public concerns, like those listed in this letter, is a cornerstone of the EIS process.

Factual Summary

FHWA, along with MDTA, released the Chesapeake Bay Crossing Study Tier 2 DEIS in January 2026. The Tier 2 analysis represents a single step in the environmental analysis process and follows the Tier 1 FEIS and Record of Decision ("ROD"). The Tier 1 FEIS/ROD was published in the Federal Register on April 29, 2022. See 87 Fed. Reg. 25,563 (Apr. 29, 2022).

The agencies separated the Bay Crossing Study ("BCS") into two parts. The Tier 1 NEPA Study was intended to identify "corridors for providing additional capacity and access across the Chesapeake Bay in order to improve mobility, travel reliability, and safety at the existing Bay Bridge" using a "high-level qualitative review of cost, engineering, and environmental data." Tier 1 FEIS at 1-2, 1-3. By contrast, the Tier 2 NEPA Study is intended to "result in project-level (site-specific) decisions made through evaluation of specific alignments within" the selected corridor and "would include detailed engineering design of alternative alignments and the assessment of potential environmental impacts associated with those alignments." *Id*. at 1-2.

Because the Tier 1 analysis selected Corridor 7 as the Preferred Corridor Alternative, the Tier 2 analysis is limited to reviewing project-level alternatives and environmental impacts within Corridor 7. Tier 2 DEIS at 3. Through that review, MDTA identified Alternative C as the Recommended Preferred Alternative for its new project. *Id*. at 1.

Alternative C requires one bridge span south of the existing spans and one bridge span in between the existing bridge spans as well as "higher navigational clearance of 230 feet." Tier 2 DEIS at 1, 3-13.[4] Additionally, Alternative C includes "transit and operational considerations made through a financial commitment providing a onetime investment, and removal of the existing Bay Bridge spans." *Id*. Alternative C will expand the total number of lanes across the Bay from five to eight. *Id*.

In addition to constructing new pillars in the middle of the Bay to support the new spans, the highway on either side of the Chesapeake Bay must be widened to accommodate Alternative C's expanded size. Tier 2 DEIS at 6. This widening will encroach on the Chesapeake Bay Floodplain, "primarily on the Eastern Shore," and will also require widening the bridge over Cox Creek. *Id*. at 3-13, 4-48.

The construction of Alternative C will negatively impact the Bay ecosystem, with substantial adverse effects to resources such as protected species and water quality, and it will also massively increase car traffic to the Eastern Shore. QACA's comments on the Tier 2 DEIS concern the lawful consideration, prevention, and mitigation of these impacts.

<u>Tier 2 Timeline</u>

On January 16, 2026, FHWA signed the Tier 2 DEIS as the follow-up to the Tier 1 analysis. The Tier 2 DEIS was published in the Federal Register on January 23, 2026. *See* 91 Fed. Reg. 2,930 (Jan. 23, 2026). FHWA revised its Federal Register Notice on January 26, 2026, to change the stated comment deadline from March 20, 2026, to March 9, 2026. *See* 91 Fed. Reg. 4,080 (Jan. 30, 2026).

QACA raised concerns with the Tier 1 analysis in an earlier comment letter. To briefly summarize those concerns, QACA stated the following:

> In order to fulfill its NEPA obligations in the upcoming Tier 2 Study, FHWA must: **(1)** evaluate all feasible Modal and Operational Alternatives ("MOAs") including those that have not yet been adequately analyzed, such as combinations of MOA strategies separate from the construction of a new bridge; **(2)** utilize updated baseline traffic projections—including all congestion management strategies that are either currently available or are reasonably foreseeable to be available at the conclusion of the Tier 2 NEPA process; **(3)** account for the impacts of induced traffic demand arising from any new span—including the likelihood that large stretches of US-50 would need to be widened, resulting in significant cost and disruption to surrounding communities; and **(4)** analyze all direct and indirect effects of construction on Chesapeake Bay.

---

[4] The Tier 2 DEIS Executive Summary states that Alternative C requires "two new spans south of the existing spans with eight lanes total (four in each direction)." This discrepancy should be corrected in the FEIS.

QACA hereby incorporates these concerns by reference and raises additional, new concerns below. FHWA must address all of these concerns—whether outstanding concerns from previous comments or new concerns raised herein—in order to comply with NEPA.

Discussion

The Tier 2 DEIS analysis considered some environmental effects of potential alternatives, but is not complete, as the agencies acknowledge throughout the document. To that end, the agencies must address the concerns raised later in this comment to comply with applicable environmental laws and ensure a comprehensive and lawful environmental review. MDTA and FHWA must analyze the issues discussed below as both a matter of legal compliance and as a matter of public responsibility; the "Chesapeake Bay is one of Maryland's most important natural, economic, and cultural resources and the largest estuary in the United States." Tier 2 DEIS at 2. Accordingly, it must be thoughtfully managed, especially prior to taking actions, such as this project, which will have significant, irreversible consequences.

Traffic Analysis

The Tier 2 DEIS' traffic analysis is incomplete and contradictory. The FEIS must address the following concerns in order to rectify deficiencies in the DEIS' reasoning.

General Concerns

To start, the DEIS's analysis estimates that bottlenecking will persist under Alternative C, undercutting the reasoning for the construction of a new bridge. Section 3.5.2 of the Tier 2 DEIS states that vehicle queues under summer weekend day conditions for Alternative C would still be over seven miles, far exceeding the existing queues of 4.8 miles and marginally shorter than the queues for the No Build alternative, which are estimated to be ten miles long. *See* Tier 2 DEIS Section 3.5.2. In 2045, under Alternative C, the Bay Bridge is still a bottleneck, as are the eastbound and westbound U.S. 50 split and merge areas. *Id*. Seasonal traffic delays and queues are the main justification for the replacement bridge alternative, and the DEIS demonstrates that this Alternative will not solve the very problem MDTA set out to solve. Instead, non-construction alternatives that could reduce bottlenecking should be considered.

Further, the structural life of the existing spans can be prolonged to 2065. Their premature demolition causes unnecessary negative impacts to the local community and the Chesapeake Bay. Using more of the structural life of existing bridge spans is a measured and responsible use of taxpayer dollars and allows for more time to study and test bridge congestion solutions that do not require major construction of entirely new bridge spans. QACA raises more specific concerns about MDTA's traffic analysis below.

Existing Data and Telecommuting

MDTA relies on outdated data for its analysis, building its foundation on shaky ground and potentially binding the State of Maryland to a costly construction project built on an incomplete analysis. The FEIS should use updated traffic data to ground the analysis in real-world circumstances.

Specifically, the existing condition uses 2022 traffic volumes supplemented by additional data representing summer weekends in 2022 and 2023. However, the post-COVID traffic trends for telecommuting and commuting were still in flux in 2022. Based on Figure 2-1: Annual Crossings of the Bay Bridge, the 2018, 2019, and 2024 annual crossing volumes are roughly equal, indicating that telecommuting trends have likely stabilized and that there was minimal traffic growth between 2018 and 2024. The growth of 2022 traffic volumes, without considering effects of telecommuting and without developing an accurate growth rate based on recent travel patterns, results in a flawed and misleading analysis.

Traffic Growth Projections

In addition to using outdated information to analyze traffic patterns, the Tier 2 DEIS refers to a veritable black box of unknown assumptions with the statement: "Based on regional and statewide estimates for population growth and travel demand patterns, it is projected that traffic volumes across the Bay Bridge will continue to increase over time," in Section 1.1. *See* Tier 2 DEIS at 1-1. But the Tier 2 DEIS does not provide sufficient information on how the traffic projections and growth rates were estimated. The FEIS must clarify the basis for these projections, as they are the foundation for the new bridge's purported demand. An insufficient and contradictory traffic growth model leads to an overstated purpose and need from a traffic delay and queue projection perspective and must be explained in the FEIS.

In Section 2.2.1.1, the Tier 2 DEIS states that "the bridge itself is a constraining factor to travel flow," but the analysis does not reflect the effects of this constraint. The Tier 2 DEIS states that "[t]he existing Bay Bridge carries large volumes of travelers and frequently approaches or exceeds its capacity for long durations" and that "[t]hese travel volumes have increased over time and are expected to continue increasing in the future." Tier 2 DEIS at 2-1. Additionally, "[t]he increasing volumes correlate with increases in regional population and employment, and result in greater congestion." *Id*. at 2-2. Section 2.2.1.1 states that with the No Build alternative, from existing circumstances until 2045, non-summer weekday growth would increase by 31 percent and summer weekend day growth would increase by 25 percent. *See* Table 3-5: Daily Trips Across the Bay Bridge, Tier 2 DEIS at 3-31.

This growth analysis contradicts itself. Given that the currently planned and programmed projects under the No Build alternative do not increase the capacity of the bridge, traffic growth in daily trips cannot occur at a constant rate of 1.2 percent per year (31 percent to the 2045 Build year) on non-summer weekdays and 1.0 percent per year (25 percent to the 2045 Build year) on summer weekend days because the Tier 2 DEIS affirms the bridge currently approaches or exceeds its own capacity. This logic error assumes unconstrained traffic growth when the existing bridge capacity already realistically constrains growth. This error improperly inflates the traffic demand analysis, decreasing the validity of the traffic analysis.

The FEIS must address this internal mismatch, as it goes to the very heart of Bridge demand and construction justification. Without more, this analysis lacks the rigor necessary to satisfy NEPA and inform the agencies and public prior to a final decision about the best way to proceed to satisfy any genuine needs underlying the project.

Induced Growth

The Tier 2 DEIS implicitly accepts the fact that a new bridge will increase traffic demand, but does not adequately analyze the impact of this new demand. This induced growth will negatively impact the pristine and undeveloped character of the Eastern Shore. Alternative C threatens to increase suburbanization and off-peak travel through the region, as well as increase environmental impacts through more highway widening, but the Tier 2 DEIS fails to sufficiently analyze these potential impacts.

Induced growth effects related to population were mentioned in the Tier 1 analysis but were not directly referenced in the Tier 2 DEIS except to restate that the alternative using the existing bridge corridor would have the least amount of induced growth. However, the statement in Section 4.7 of the Tier 2 DEIS lays bare the significant increases in Vehicle Miles Traveled ("VMT") projected by the new bridge alternatives: Alternative C is projected to result in a "25 to 28 percent increase in VMT from 2022 to the 2045 build scenarios."

The 25 to 28 percent increase in VMT for the build alternatives compared to existing VMT is an admission of induced traffic demand hidden in air quality modeling. An increase in capacity, like Alternative C, without an increase in demand would not increase VMT. An increase in VMT as a result of a capacity increase indicates a coupled increase in demand. This implicitly accepted induced demand traffic growth needs to be explicitly addressed in the Tier 2 FEIS, in order to satisfy NEPA's purpose of informed decisionmaking.

As a result of the induced demand, the highways leading up to the bridge will likely need to be widened beyond the scope analyzed in the DEIS. According to the AKRF March 2022 report provided to the agencies titled "Induced Traffic Demand and US 50 Highway Widening," "the widening of the Bay Bridge would temporarily relieve congestion on the bridge itself, but not on the highways leading to it unless they were also widened." As a result, "[t]he additional traffic attracted to the wider bridge would correspondingly require widening of large stretches of US 50 in the years following the bridge project to avoid new traffic bottlenecks." This additional widening is a direct consequence of the Bay Bridge project and must be analyzed in the FEIS.

Because the Tier 2 DEIS ignores the project's impact on induced growth, the Tier 2 DEIS fails to adequately analyze the impacts of increased traffic on the Eastern Shore. The Hazardous Materials Technical Report recognizes the history of development coupled with Bridge development, but the Tier 2 DEIS fails to consider this precedent. *See* Hazardous Materials Technical Report at 6-1 to 6-6. This DEIS ignores the impact on traffic using U.S. 50 from Queenstown and Wye Mills southward to and through Easton, Trappe, and Talbot Counties to the Choptank River bridge as well as through Cambridge, Vienna and ultimately Salisbury. It ignores population and traffic growth in Easton and particularly in and from Trappe, with this increased population deriving in part from the new Lakeside development, which is proposed to build 2,500 dwelling units. The Eastern Shore will receive much more incoming traffic as a result of the new bridge, and the traffic impacts must be properly considered.

In effect, using the U.S. 50/301 split as the eastern limit and failing to analyze induced growth results in an improper analysis that ignores the direct consequences of construction. As soon as the proposed improvements stimulate new traffic through the surrounding counties, similar improvements will have to be made for aggravated congestion in the affected areas. This construction will add development to an area where pristine and undeveloped nature is at the heart of the community and its culture. Ignoring these impacts risks permanently changing a treasured region without considering less damaging alternatives and mitigation measures.

Further, the induced demand will result in traffic returning to current congestion levels in a shorter time even than the construction period. The temporarily reduced summer weekend travel times during peak demand hours will relieve congestion only for 3 to 5 years, while construction of the new bridge will take 10 or more years. The FEIS must grapple with this key fact and analyze whether a new Bridge is a prudent choice, in light of the very limited time period that it would adequately address summer weekend travel times during peak demand.

Because a similar return to congestion happened in earlier iterations of the Bay Bridge, MDTA must consider the prudence of a project that is only a very short-term solution. Accounts from the 1973 completion of the second Bay Bridge span and a forecasting tool specifically developed for induced traffic demand indicate that it will only take the new Bay Bridge 3 to 5 years to return to congested traffic conditions, resulting in the same bottlenecking that already plagues the bridge, the relief of which is the purported reason for the new project.

While traffic congestion during summer weekend peak demand hours would return within 3 to 5 years from completion of a new Bay Bridge, essentially capping demand again for recreational trips, the excess traffic capacity of the bridge during non-summer weekends and most weekdays would attract substantial suburban sprawl development on the Eastern Shore. As documented in AKRFs March 2022 "Induced Traffic Demand and US 50 Highway Widening" report, it is estimated that over $1.35 billion in widening projects on nearly 70 miles of highway requiring approximately 230 acres of land and taking over 20 years of construction may be warranted by the Bay Bridge replacement. This development represents a fundamental, adverse change to the natural and rural landscape on Maryland's Eastern Shore.

The cost of additional secondary impacts and necessary roadway widenings should be considered as part of a benefit-cost analysis for the proposed bridge replacement in the FEIS. The stakes could not be higher for the Eastern Shore community; the potential effects of increased traffic growth threaten the very nature of the region and warrant a more complete analysis prior to a final decision by the agencies.

The No Build Alternative

The Tier 2 DEIS also failed to adequately consider the potential capacity improvements of congestion pricing and managed lanes. A robust No Build alternative must quantify the capacity-increasing effects of improvements readily available to the MDTA. Failing to sufficiently analyze the No Build option decreases the quality of the analysis because it creates an inorganically weak baseline and fails NEPA's hard look standard.

The Tier 2 DEIS mentions congestion pricing throughout, but does not present an adequate analysis of the impact of congestion pricing meeting the purpose and need, as well as the impact of congestion pricing on the resulting bridge project. Congestion Pricing uses variable tolls by time of day/year to manage peak period congestion. It induces some motorists with flexibility in their travel plans to shift their trip to off-peak times or to carpool or use buses more often. Based on a case study, traffic could potentially be reduced by up to 6.8 percent during a weekday peak period or 2.5 percent during a weekend peak period. *See* Dr. Kaan Ozby, *et al.*, *Evaluation Study of New Jersey Turnpike Authority's Time of Day Pricing Initiative*, RUTGERS UNIVERSITY, (2005), available at https://bit.ly/3PlFEU7.

The Tier 2 DEIS likewise fails to adequately address the use of Managed Lanes. Managed Lanes is a dynamic management tool using real-time data to allow MDTA to decide if the contraflow lane or other lanes should have higher tolls or require high-occupancy vehicles to use it during peak conditions to reduce overall traffic congestion on the Bay Bridge. Based on a case study, managed lanes at the Chesapeake Bay Bridge could potentially reduce traffic by up to 2.7 percent during summer weekends during peak hours. *See* Northern Virginia Transportation Commission, *2019 Corridor Performance Report for the I-66 Inside the Beltway and I-395 Corridors*, (2020) available at https://bit.ly/4bqWDgl.

Thoroughly considering both congestion pricing and managed lanes in the FEIS offers MDTA a way to complete their analysis of whether a new bridge is justified, which is a mandatory prerequisite to a final, well-informed decision by the agencies.

Connected and Automated Vehicles

The FEIS should also include sufficient analysis of Connected and Automated Vehicles ("CAV"). The current analysis fails to properly consider the effect of this emergent technology on future traffic demand. A proper analysis must consider the technology of the world in which this Bridge will exist.

QACA previously provided the agencies with a CAV analysis memo from trusted consultant AKRF. According to AKRF's CAV memorandum to QACA dated November 2022:

> By 2040, a CAV saturation rate of 20 percent on the Bay Bridge could provide 15 percent more traffic capacity to reduce summer weekend congestion, and a 40 percent decrease in the types of collisions experienced during congested traffic conditions. Significant increases in traffic capacity on the Bridge are also expected beyond 20 years with further implementation of CAV, which warrants a hard look by the MDTA of CAV effects in its analysis of the need for a third bridge span in the Tier 2 EIS.

The Tier 2 DEIS does not seriously consider CAV or evaluate its potential to forestall the traffic delays and queues projected by 2045. A more comprehensive analysis must be completed; the agencies must adequately consider future conditions when justifying its construction. Failure to do so risks producing an insufficient FEIS that is vulnerable to legal challenge.

Wind Screens

FHWA also failed to analyze the impact of wind screens on traffic demand. The agency acknowledges that weather conditions have a negative impact on traffic delays, increasing demand for a larger bridge with more lanes. The agency does not, however, consider whether wind screens could have an appreciable impact on the traffic issues. As QACA previously commented:

> The addition of wind barriers on the existing Bay Bridge spans—permeable screens or baffle barriers that direct winds over the bridge—could help avoid weather-related closure of the reversible lane by eliminating the impact of higher-wind weather events on high-profile vehicles, such as buses and trucks. Such measures have been demonstrated in comparable contexts to significantly reduce traffic congestion during certain inclement weather conditions; yet, FHWA to date has never considered whether such measures have the potential to reduce congestion on the Bay Bridge to acceptable levels when implemented alongside all TSM/TDM and other MOA approaches. If the reversible lane could remain open to traffic even during high-wind events, the reversible lane would be more consistently available to help improve traffic flow.

QACA reiterates these concerns after reviewing the Tier 2 DEIS. Failing to adequately analyze measures that could reduce the traffic issues driving the purpose and need for this project risks producing an insufficient FEIS that is vulnerable to legal challenge.

Commitment to Transit Improvement

FHWA and MDTA state that transit-related improvements would be made through a financial commitment from MDTA that would focus on providing a one-time investment for local transit agencies near the Bay Bridge. Tier 2 DEIS at 3-23. To the extent that this investment was invoked to diminish the potential impact of using transit as an improvement instead of building a new bridge, the failure to adequately specify how much this investment will address and improve the purpose and need of this project is in question.

This commitment, laudable in principle, lacks specificity and must be clarified in the Tier 2 FEIS. The Tier 2 DEIS and Traffic Analysis Technical Report note that "all transit-related opportunities would be determined in the future, closer to the time of construction" but fail to even estimate the amount of the investment and how such an investment would be specifically allocated. Tier 2 DEIS at 3-23, Tier 2 Traffic Analysis at 3-5. Nor is there any examination of the anticipated benefits that would be provided by this investment, and whether, in light of those potentially significant improvements, a new bridge must still be built.

Affected Species

As QACA previously commented, it is imperative that FHWA and MDTA rigorously examine and disclose to the public the foreseeable effects on regionally and nationally significant biological resources in the Chesapeake Bay. The agencies have not completed this analysis, and must continue to assess impacts and acquire necessary permits and authorizations.

General Concerns

The Tier 2 DEIS repeatedly uses indefinite and uncertain language, failing to present an accurate and complete analysis of environmental harms. The FEIS should clarify multiple vague statements made by MDTA and FHWA.

For example, MDTA committed to avoidance and minimization methods related to marine mammals, federally listed aquatic species, essential fish habitat ("EFH"), and habitat areas of particular concern. *See* Tier 2 DEIS at 4-113. FHWA and MDTA organized the proposed avoidance and minimization efforts into the following categories:

- Underwater Noise/Hydroacoustic Energy
- Turbidity and Sedimentation
- Reduced Water Quality
- Habitat Alteration
- Vessel Interaction
- Impingement and Entrainment

MDTA must commit to specific measures and explain the implementation process in order to produce a satisfactory and lawful FEIS. Throughout the Tier 2 DEIS, MDTA uses indefinite, discretionary language when discussing these measures: MDTA "intends to observe the time-of-year restrictions for aquatic biota to the greatest extent practicable"; "will coordinate additional avoidance and minimization measures for EFH with the agencies during final design and permitting"; and "will use specific construction techniques and equipment to reduce aquatic impacts" in "practicable" situations. Tier 2 DEIS at 4-112, 8-18, and 8-20. As a further demonstration, MDTA "anticipate[s] that not all time-of-year restrictions will be able to be employed," but does not sufficiently explain which restrictions will or will not be employed, and how such decisions will be made and vetted (or not) with FHWA. Without a concrete plan for minimization and avoidance measures, the environmental impacts analysis is incomplete and legally insufficient.

Similarly, the FEIS should include more accurate acreage estimates for the limits of disturbance ("LOD"). The DEIS notes that the LOD determination will be "further refined" during the "final design" stage, which is not until 2028, but does not include an adequate current estimate for public consumption in the Tier 2 DEIS. *See* Tier 2 DEIS at 6.

Further, the impacts analysis by FHWA and MDTA is deficient in multiple ways discussed below. To meet the "hard look" standard, the agencies must analyze relevant considerations. Without addressing the issues noted below, the FEIS will be incomplete and legally insufficient.

Marine Mammals

Multiple marine mammal species inhabit the Chesapeake Bay, with varying frequency. These mammals add to the vibrant biodiversity of the Bay and, in addition to their intrinsic value as living creatures, serve Maryland as part of a multi-billion-dollar outdoor economy. *Economy & Human Health*, CHESAPEAKE BAY FOUNDATION, https://www.cbf.org/issues/economy-human-health/ (last visited Mar. 9, 2026). Bottlenose dolphins are the most common marine mammal, followed by harbor seals and harbor porpoises. *See* Tier 2 DEIS at 4-100. Manatees, fin whales, minke whales, North Atlantic right whales, and humpback whales have also been found in the Bay. *Id*.

As it pertains to all marine mammals, QACA raises multiple concerns with the DEIS. The DEIS fails to fully analyze auditory harms and blasting effects. Additionally, the DEIS does not provide for visual monitoring and a marine mammal monitoring plan, which could more adequately prevent negative impacts to treasured and protected marine mammals.

Auditory Harms to Marine Mammals

Section 4.5.7.2 of the Tier 2 DEIS notes that concurrent pile driving is likely to occur, which would result in higher noise levels and increase the ensonified areas that could exceed noise thresholds for auditory injury or behavioral disturbance. The raised noise level and resulting impacts should be considered when estimating the distance to the isopleths for pile driving noise and assessing additional noise impacts on marine mammals. The FEIS must include maps with isopleths reflecting a reasonable worst-case construction scenario for concurrent pile driving.

Though other species (e.g., harbor porpoise, humpback whale) are not expected to occur commonly near the bridge, the auditory injury isopleths for these other hearing groups (e.g., very high frequency cetaceans, low frequency cetaceans) should be presented to show where these noise impacts could occur.

Failure to consider these impacts risks producing an incomplete FEIS and resulting in unanalyzed harms to some of the Chesapeake Bay's most treasured residents.

Blasting Harms to Marine Mammals

Section 4.5.7.2 of the Tier 2 DEIS notes that blasting impacts on marine mammals would be "short." Tier 2 DEIS at 4-109. However, an acute injury due to blasting would be a permanent effect for any affected individuals. The assessment should explicitly state what is meant by an "acute effect" and clarify that the duration of the activity itself, not the resulting effects, would be of short duration. These effects, depending on their severity, may give rise to additional legal requirements under other federal environmental laws.

Marine Mammal Monitoring

In addition to scheduling blasting when dolphins are unlikely to be present in the area, as discussed below, MDTA should implement visual monitoring conducted by certified Protected Species Observers prior to blasting activities to ensure the area is clear of marine mammals and following blasting to document any potential injuries.

Further, underwater noise mitigation measures should include the development of a marine mammal monitoring plan to minimize the risk of physiological injury and behavioral effects during pile driving. Tier 2 DEIS at 4-113. The monitoring plan should consider information obtained from any additional or revised isopleth maps, as suggested above.

Bottlenose Dolphin Health

Because bottlenose dolphins are the most common marine mammal, QACA raises some additional, dolphin-specific concerns.

Alternative C has the potential to "adversely impact dolphins through harassment via underwater noise impact from blasting and pile driving activities, which can disrupt dolphin communication, navigation, foraging patterns, and cause stress." Tier 2 DEIS at 4-108. To minimize harm, MDTA must follow through on its commitment to "conduct blasting when dolphins are unlikely to be present in the study area to avoid potential injuries," use scare charges prior to blasting, and coordinate with the National Marine Fisheries Service ("NMFS") to ensure the least potential impact. *Id*. at 4-109.

Relatedly, MDTA must complete its commitment to acquire an Incidental Harassment Authorization from the NOAA Permits and Conservation Division for impacts to dolphins. *Id*. at 4-113. This separate legal authorization is necessary to proceed with this project and failure to appropriately comply can result in civil penalties. 16 U.S.C. § 1375.

MDTA's analysis of harms to dolphins is also incomplete in multiple areas. Section 4.5.7.2 of the Tier 2 DEIS identifies stress and disruption of communication and navigation as potential effects of blasting and pile driving noise on dolphins, but the DEIS fails to include auditory injury as a potential effect. Tier 2 DEIS at 4-108. Similar to the concerns raised below about the effects of concurrent pile driving on fish, such activity in multiple areas would also increase the ensonified areas that could exceed noise thresholds for physiological injury or behavior related to dolphins. This should be considered when estimating the distance to the isopleths for pile driving noise and additional impact to marine mammals. The Tier 2 FEIS should include maps with isopleths reflecting a reasonable worst-case scenario for more than one concurrent pile driving location.

Benthic Species

MDTA must fully analyze the impacts of Alternative C to benthic species. To date, MDTA has not taken a sufficiently hard look at these impacts and risks damaging sensitive and valuable species without having completed a lawful analysis of effects and alternatives.

MDTA states that “nontidal benthic macroinvertebrate data was not available for the Queen Anne’s County watersheds that cross the resource review area, as these small, nontidal stream reaches have not been assessed in recent years by state or county nontidal monitoring programs.” Tier 2 DEIS at 4-97. Because nontidal stream health for the watersheds located on Kent Island is rated as “Poor” to “Fair,” additional impacts threaten to have particularly damaging effects in an already sub-optimal environment. *Id*. All build alternatives would impact benthic macroinvertebrates through dredging, which would result in direct mortality and alter aquatic habitat. *Id*. at 4-103. Agencies are not required to undertake new studies under NEPA, but they must make use of reliable, available data. *See* 42 U.S.C. § 4336(b)(3)

Further, the assessment of environmental consequences of dredging on benthic macroinvertebrates focuses on the potential for direct mortality and habitat alteration without addressing potential effects of suspended sediment associated with dredging activities, which has the potential to smother benthic communities in areas adjacent to the dredge footprint when these suspended sediments are redeposited, as noted in the Natural Environment Technical Report. The FEIS should consider accepted thresholds for benthic communities (i.e., 390 mg/L, as noted in the Natural Environment Technical Report at 15-8).

Additionally, the Tier 2 DEIS does not adequately consider the impacts of a net increase in shading that is likely to result from the additional lanes and a net larger footprint of the proposed action. Reduced light penetration from shading has been demonstrated to result in negative impacts to phytoplankton, benthos, fish species, and submerged aquatic vegetation that would occupy shallow areas where light has the potential to penetrate to the bottom. The FEIS should include an analysis that determines the net change from any additional shading after the old bridge footprint has been removed.

Fish

The FEIS must improve upon the existing Tier 2 DEIS analysis by following through on minimization measures and more fully considering the impacts of bridge construction on fish species.

First, MDTA must complete its determination of “whether it is practicable to implement a Zone of Safe Fish Passage” in the Bay during construction and follow through on EFH consultation. Tier 2 DEIS at 4-105. MDTA requested an expanded EFH consultation “due to the extent of the anticipated adverse effects to EFH,” and must include the determination in the FEIS. *Id*.

Next, the FEIS must improve the existing harm analysis in multiple ways. To start, the assessment of the effects of dredging on fish should include a quantitative assessment of sediment resuspension using accepted thresholds for fish (e.g., 1,000 mg/L, as noted in the Natural Environment Technical Report at 15-8). This assessment should acknowledge the variability in tolerance to concentrations of suspended sediment by species, or groups of fish.

Additionally, the assessment of environmental consequences of pile driving noise needs to present results for both the peak Sound Pressure Level ("SPL") threshold, which can result in injury or mortality upon exposure, and the Sound Exposure Level ("SEL") threshold, which can result in injury if exposure accumulates over a given amount of time, and clearly explain the potential effects of exposure to both of these thresholds.

Finally, the assessment of environmental consequences of pile driving noise needs to more completely consider the effects of noise exposure, including mortality, injury, and behavioral disruption, on resident fish as well as anadromous fish, such as striped bass and alosids like American shad, blueback herring, and alewife, that will need to pass through the bridge corridor region to reach spawning areas. The Tier 2 DEIS expects concurrent pile driving to occur, which will create isopleths (i.e. larger cross sections of ensonified areas that could exceed noise thresholds), resulting in mortality, physiological injury, or behavioral effects. *See* Tier 2 DEIS at 4-105. The Tier 2 DEIS should include maps with isopleths reflecting reasonable worst-case construction scenarios for concurrent pile driving and ensure that the pile driving plan always allows a large enough "quiet zone" for anadromous fish to pass through.

Oysters

Much like other sections of the DEIS, commitments for avoidance and minimization for oyster impacts are scant and incomplete. Alternative C will impact acres of Natural Oyster Bars as well as existing oyster sanctuary areas. *See* Tier 2 DEIS at 4-107. The DEIS notes that "any dredging or bottom disturbance within the boundaries of a Natural Oyster Bar would require mitigation," but does not follow through on explaining the mitigation. Tier 2 DEIS at 4-75.

In particular, the Tier 2 DEIS fails to describe what pre-construction or mitigation measures will be implemented to offset potential losses to oysters and their habitat. Such measures could include relocation of live oysters prior to dredging and pile driving, creation of oyster habitat using artificial substrates or shell material, oyster seeding, or contributions to ongoing oyster restoration projects, among other options.

Similarly, there is no estimate of the surface area to be affected by additional fill for new causeways in the shallows of Chesapeake Bay at the Kent Island shoreline, which extend some 3,900-4,700 feet from the Kent Island shoreline. *See* Natural Resources Technical Report Section 9.1. These shallows, where the substrate is mixed sand and silt and where the photic zone reaches down to the substrate, are typical of the most productive types of habitat in the Bay and must be responsibly managed. This omission is despite the fact that the Technical Report, Section 10.3.2, notes that Alternative C will involve dredging 10.2 acres of natural oyster bars, 136 acres of EFH, and 6.1 acres of public shellfisheries areas.

The FEIS should include and comprehensively evaluate this information in order to develop a lawful analysis of environmental impacts.

<u>Aquatic Habitat</u>

MDTA has yet to take a hard look at multiple impacts to aquatic habitat, particularly certain water quality impacts and modifications to the bottom of the Chesapeake Bay.

Water Quality

The Tier 2 DEIS's assessments of turbidity, suspended sediment, and contaminants are only qualitative and therefore inadequate for impact assessment. Contaminants such as metals, organic materials, and pesticides currently bound in sediments would be resuspended during pile driving or dredging, exposing fish, benthic macroinvertebrates, oysters, and other biota to toxic or sublethal effects. The DEIS acknowledges these harms in vague terms, noting that "[d]redge effects to aquatic biota will be long-term, removing existing benthic habitat in the shallows and affecting water quality and clarity during dredging." Tier 2 DEIS at 4-74.

Recognizing the damage from dredging and pile driving, Maryland regulations set guidelines for annual, and 30-day mean, limits on total suspended solids and turbidity in estuarine waters. The Tier 2 DEIS's qualitative analysis does not provide any meaningful scientific analysis as to the degree to which project activities may violate Maryland's water quality standards.

Furthermore, MDTA must follow through on its commitment to use only mechanical dredging rather than hydraulic dredging. Tier 2 DEIS at 4-75. Mechanical dredging can reduce the impacts to aquatic habitats and species. *Id*.

Chesapeake Bay Bottom

The Tier 2 DEIS performed hydrodynamic modeling to determine how build alternatives could modify the Chesapeake Bay bottom, but failed to completely analyze potential effects. The existing analysis fails to completely capture the potential impacts, which resulted in an insufficient model that does not recognize the full potential for water quality violations.

Specifically, data on sediment characteristics combined with site-specific hydrodynamic modeling, as performed in other EIS documents (e.g. the Tappan Zee Bridge Replacement Study), should also be used to determine the shapes and geographic extent of resuspended sediment plumes under different tidal conditions, thereby providing a quantitative prediction on compliance with water quality standards, and the extent of potential violations during dredging and pile driving.

Similarly, an analysis of the extent of bottom footprint gained or lost and net change in volume of fill gained or lost within the water column, after both bridge construction and old bridge removal are taken into account, needs to be calculated in order to quantify impacts to the bottom and water column habitats.

Finally, QACA recommends leaving the deeper portions of the support piers in place, so as to retain the solid substrate "reefing" effect provided to the otherwise soft bottomed Chesapeake Bay.

MDTA recognizes the "permanent impact" that dredging can have on the Chesapeake Bay bottom. Tier 2 DEIS at 4-79. Completing a comprehensive analysis of these impacts is imperative to taking a "hard look" at environmental impacts, as NEPA requires.

Rare, Threatened, and Endangered Species

Many rare, threatened, and endangered species inhabit the Chesapeake Bay. As noted previously, these creatures are cherished by the local community, as well as tourists, and must be properly considered by MDTA and FHWA during this NEPA process.

FHWA, in coordination with MDTA, prepared a Biological Assessment that determined that the action is likely to adversely affect Atlantic sturgeon, shortnose sturgeon, loggerhead sea turtle, Kemp's ridley sea turtle, green sea turtle, and leatherback sea turtle. Tier 2 DEIS at 8-20. The Biological Assessment states that FHWA, in cooperation with MDTA, will continue to coordinate with NMFS through final design of the project to ensure implementation of appropriate avoidance, minimization, and mitigation measures. In addition to including an appropriate analysis of effects to ESA-listed species in a Biological Opinion prepared by NMFS as part of the Section 7 consultation process pursuant to the Endangered Species Act, FWHA and MDTA must also evaluate those foreseeable effects in the FEIS once they come into clearer focus during the Section 7 consultation process, in order to comply with NEPA.

In particular, the FEIS should reflect an improvement in areas concerning water quality, vehicle strike, noise impacts, and species monitoring. QACA identifies specific concerns below.

Water Quality

As noted, the assessment of the effects of dredging on sturgeon and sea turtles should include a quantitative assessment of sediment resuspension using accepted thresholds (e.g., the 1,000 mg/L for fish noted in the Natural Environment Technical Report at 15-8). Failure to quantify these impacts risks causing unknown adverse impacts to aquatic creature health.

Vehicle Strikes

The FEIS must update its vehicle strike analysis for sturgeon, as it improperly dismisses the potential for shallow draft construction vessel strike on sturgeon. The Tier 2 DEIS states that the operation of shallow-draft construction vessels would eliminate vessel strike risk for sturgeon. Tier 2 DEIS at 4-130. Although utilization of shallow-draft vessels would reduce vessel strike risk, the risk would not be eliminated as there are documented sturgeon strikes by shallow-draft vessels (NMFS 2018).

Similarly, the Tier 2 DEIS improperly states the vehicle risk for vessel strikes on sea turtles. The Tier 2 DEIS mitigation measures intended to reduce risks of vessel interaction include a speed restriction of 10 knots. Tier 2 DEIS at 4-114. However, sea turtles are known to be vulnerable to vessel strikes at speeds below 10 knots (Hazel et al. 2007). The FEIS should consider further speed restrictions when transiting through an area where sea turtles are more likely to be foraging (i.e., submerged aquatic vegetation, jellyfish aggregations).

Noise

For the SEL noise thresholds for physiological injury for sturgeon and sea turtles, the "prolonged time period" required for injury to occur should be meaningfully defined. Tier 2 DEIS at 4-131. As it stands, the term is too vaguely worded in the Tier 2 DEIS to be adequately implemented and to lawfully protect affected species.

Acoustic thresholds for sea turtles have been updated since the 2024 Multi-species Pile Driving Calculator. The isopleths should be recalculated with the current Multi-species Pile Driving Calculator, which includes these updated thresholds, and the EIS figures and text should be updated accordingly.

Species Monitoring

Given the potential for sturgeon to overwinter in Chesapeake Bay, MDTA should consider conducting an acoustic survey to locate overwintering sturgeon and/or relocation trawling prior to blasting to avoid or minimize impacts to sturgeon.

As sea turtles could be present during the blasting window, there should be visual monitoring conducted by certified Protected Species Observers prior to blasting activities to ensure the area is clear of sea turtles and following blasting to document any potential injuries.

Conclusion

The FEIS must improve on the DEIS in multiple, tangible ways. In order to fulfill its legal obligations for the remainder of the NEPA process, FHWA must: (1) remedy significant deficiencies in the traffic analysis; (2) follow through on commitments to consult on protected species and implement necessary avoidance, minimization, and mitigation measures; and (3) complete a lawful analysis of bridge construction impacts. The concerns raised above greatly affect the Eastern Shore and the Bay ecosystem; responsible management demands a considered and thoughtful review of the proposed project. We look forward to reviewing what we hope will be a considerably improved analysis in the Tier 2 FEIS.

Respectfully submitted,

William S. Eubanks II

William S. Eubanks II
Riley C. Varner
EUBANKS & ASSOCIATES, PLLC

Counsel for QACA