

MARYLAND DEPARTMENT OF THE ENVIRONMENT
 Water and Science Administration · Wetlands and Waterways Program
 1800 Washington Blvd. · Suite 430 · Baltimore Maryland 21230
 (410) 537-3837 · 1-800-633-6101 · <https://mde.maryland.gov>

Comments Received on Restoration Guidance and Summarized Responses	
Comment	Response
<i>Request for more review time; delay finalization</i>	<p>Guidance and assessment were submitted to EPA as grant deliverables.</p> <p>The assessment and guidance are always subject to revision as more information is gained. MDE would be pleased to learn of approaches which further improved stream restoration while limiting unintended consequences and achieving both nutrient/sediment goals, forest retention, and habitat improvement.</p> <p>A useful next step would be for the restoration community to begin using the assessment and recommendations, and offer suggestions to MDE regarding ease of use, clarity, and practicability.</p> <p>MDE recommends re-evaluating assessment and guidance at 6- and 12-month intervals during 2022 for revisions based upon user feedback.</p>
<i>Approach favors stream bank armoring; primarily limits work to stream channel</i>	<p>The guidance does not advocate stream bank armoring. Other practices, such as beaver dam analogs, low-level structures simulating natural features in the channel, or changes to channel geometry, can raise water levels to previous levels and restore natural patterns of hydrology and the hydroperiod. Upland treatment for quality and quantity is also highly recommended.</p> <p>The greater the level of degradation in the riparian area, the more flexibility is allowed for additional restorative work. Revisions have been made to allow for additional in- or near-channel work in more degraded sites.</p>

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<p><i>Does not support replication of high quality groundwater seepage wetlands</i></p>	<p>We support the rehabilitation of degraded seepage wetlands. As noted, these areas are primarily groundwater-driven, and may encompass entire valleys, often with a stream which is small in relation to the adjacent wetlands. Due to these characteristics, the level of degradation in the channel is not necessarily matched by the same level of degradation in the adjacent wetlands. The wetlands may still show functioning existing habitat and still be sustained by groundwater, with some lowered levels, depending on the size of the stream and its access (or lack of access) to the adjacent wetlands. It is the intent of the guidance to maintain or improve those areas which function well, despite adjacency to a degraded stream. In these cases, disturbance to the riparian area should be minimized to accomplish this goal.</p>
<p><i>Mulch mats impractical; costly; save for highly sensitive areas</i></p>	<p>These are recommended practices to protect riparian areas, which are inherently sensitive to disturbance. The construction practices are based on those in actual use. If, after reviewing assessment results and other relevant factors, MDE recommends that some trees in the vicinity of the access areas be retained, then matting is necessary to protect tree roots and prevent soil compaction, also improving the likelihood of successful revegetation after mat and most of mulch is removed. We will be pleased to review suggested alternate practices which have been demonstrated to maintain tree health and facilitate revegetation.</p>
<p><i>Legacy sediment is common in Coastal Plain</i></p>	<p>We are glad to clarify this misunderstanding. We meant that legacy sediment removal for restoration projects is not common in Maryland's Coastal Plain.</p>
<p><i>Concern that guidance recommendation about maintaining spring flow does not allow for raising of streambed</i></p>	<p>The reference to springs refers to those on adjacent slopes or toes of slopes, which contribute flow which enters the channel, not originating within an incised stream channel. Springs which are the first source of intermittent or perennial flow into what becomes a channel with bed and bank should also be maintained. The raising of the streambed is not prohibited and may be appropriate based on site conditions.</p>

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<i>Designing for groundwater hydrology to the surface of the stream valley, with saturation in virtually every precipitation event</i>	In order to maintain or improve systems for their habitat type, the sites need hydrology sources and hydroperiods reflected by the referenced soil type. Site-specific analysis will be needed for each project so that appropriate habitat types for restoration can be identified and designs developed which sustain groundwater/hydrology accordingly.
<i>Use of 2-year storm -why is it used. adequate flooding for what they want to active would be flooding several times per year (<1year recurrence interval)</i>	We used the 2-year recurrence interval because that, along with 10- and 100-year storm events, is the standard requirement in waterway reviews.
<i>Favors riparian forest over nontidal wetlands</i>	<p>The guidance allows for flexibility when both the riparian area and stream channel are highly degraded. Forest is the community type described for nontidal riparian wetlands as Key Wildlife Habitats, with the exceptions of bogs and fens, springs, and vernal pools.</p> <p>The increase in riparian forest is also a Chesapeake Bay Agreement goal. We believe that this guidance furthers other Agreement goals, including wetland gains, stream health, and fish passage.</p>
<i>How is guidance used; is it required; how does it fit in permit process</i>	<p>This is a guidance document intended for stream restoration projects which may have associated pre- and post-construction impacts to adjacent nontidal wetlands. Specific use of this assessment is not mandated for applicants, however, in 2021 MDE began requiring a formal assessment of wetland or upland floodplain, and a description of measures to avoid or reduce tree loss for MS4/Chesapeake Bay TMDL stream restoration projects. MDE will be using this assessment and guidance as tools and part of our decision process, therefore, we encourage the use of these methods and practices.</p> <p>We believe that following this guidance will help reduce delays in the permit process due to concerns about resource tradeoffs.</p> <p>The results and guidance would be part, but not all, of the decision process.</p>

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<p><i>Will guidance be used for mitigation?</i></p>	<p>There is another effort underway, led by the U.S. Army Corps of Engineers in collaboration with other State and federal agencies, to develop a stream mitigation calculator as well as a regulatory wetland assessment. These assessments will be used for mitigation, unlike this MDE assessment, which focuses specifically on restoration done at a particular site, with an intended objective of functional uplift while minimizing resource tradeoffs. MDE is attempting to make the assessment as consistent as possible given their different intended uses.</p>
<p><i>Disconnect between these proposed permit review guidance protocols and their associated restoration approaches and reconciling them with the Chesapeake Bay Program goals and the types of projects being encouraged and funded through DNR</i></p>	<p>We believe that this guidance furthers other Agreement goals, including wetland gains, stream health, and fish passage, in addition to allowing for nutrient and sediment reduction credit.</p>
<p><i>The philosophy of "how do we want to restore our waterways, manage our stormwater, manage climate change in MD needs to be answered". The answer should be based on peer reviewed science and updated when the science is updated.</i></p>	<p>MDE has followed the science, which has resulted in the guidance document.</p> <p>This guidance is subject to revision as new information becomes available and user feedback and recommendations are considered. MDE will re-evaluate the assessment and guidance 6 months and 1 year after it is released, based on user feedback, ease of use, and other new information which may become available.</p>
<p><i>Good projects delayed; bad projects permitted</i></p>	<p>MDE provides an opportunity for pre-application consultation from our dedicated restoration staff. MDE believes that using this assessment and adhering to the guidance would address delays in permitting due to missing information and concerns over resource tradeoffs. The guidance allows for flexibility in degraded stream and riparian areas.</p>
<p><i>Suggested clarification over scoring and significant plant or wildlife value</i></p>	<p>Addressed. Change from "habitat structure" to "habitat."</p> <p>Nontidal wetlands having significant plant or wildlife value are defined in COMAR 26.23.01.02B(80).</p>

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<i>Increase in review time</i>	MDE believes that using this assessment and adhering to the guidance would address delays in permitting due to missing information and concerns over resource tradeoffs. The guidance allows for flexibility in highly degraded stream and riparian areas.
<i>Increase in cost</i>	We believe that there are areas where implementation of the guidance would result in lower costs. These include: more expeditious permitting with fewer requests for additional information and justification; use of smaller equipment; less clearing and grading; and fewer and/or smaller structures.
<i>Clarify no recommendations for climate change and planting selection</i>	<p>Specific requirements have not yet been developed. MDE strongly encourages jurisdictions to use “supersized” upland treatment facilities and, for MS-4 counties, receive additional impervious surface credit reduction through the Watershed Management Credit. In addition to improving pollutant removal, these upsized stormwater control practices will capture more runoff volume to enhance climate change resilience to localized flooding.</p> <p>Another benefit besides helping to address climate change is the additional quantity treatment which benefits streams which have been degraded by urban stormwater discharges. However, over design and excessive disturbance for stream restoration within channels and floodplains is not generally justified as a basis for future climate adaptation.</p>
<i>Why were beaver ponds excluded?</i>	Beaver ponds are not specifically included as they are not a Key Wildlife Habitat type themselves, but may occur in them. The assessment does recognize that these areas can modify the metrics we included. The Maryland Wildlife Action Plan notes beaver effects, and in those areas, still recommended a semi-open canopy.
<i>Ecologically, wet wood and or downed wood is sometimes more valuable ecologically within a riparian habitat as standing live trees. Was wet or downed wood included in the guidance and recommendations?</i>	Downed wood is a metric in the assessment. Snags are habitat features which are also part of the scoring.

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<i>Tulip polar does not belong in these systems</i>	Tulip poplar (<i>Liriodendron tulipifera</i>) may occur on the higher terraces and toe slopes of floodplain forests. Tulip poplar has a wetland indicator status of facultative upland (“FACU”), which identifies plant species that “usually occur in non-wetlands, but may occur in wetlands”.
<i>Streams and their associated wetlands and floodplains are integrated systems. Restoration and enhancement of these systems should be approached in an integrated fashion.</i>	MDE agrees that restoration and enhancement should recognize the integrated nature of streams and associated wetlands and floodplains. This assessment and guidance is intended to improve site selection, design, and decision making to better achieve this consideration of an integrated resource and resulting outcomes. The assessment is the first of its kind that we are aware of which includes both substantial stream and riparian/wetland metrics. Most assessments focus on one or the other resource. The level of degradation in a stream channel is not necessarily matched by the same level of degradation in the adjacent wetlands. The wetlands may still show functioning existing habitat and still be sustained by groundwater, with some lowered levels, depending on the size of the stream and its access (or lack of access) to the adjacent wetlands. It is the intent of the guidance to maintain or improve those areas which function well, despite adjacency to a degraded stream. In these cases, disturbance to the riparian area should be minimized to accomplish this goal.
<i>Some of the directives appear to be singularly focused on maintaining channel stability or avoiding temporary impacts to the riparian area.</i>	Channel stability and degradation is a premise for qualifying as a Chesapeake Bay TMDL BMP. This is why it is an important part of the assessment and part of ranked recommendations for restoration activities. We also consider water level changes and disturbances in the riparian/wetland area based on their ecological condition, and how to maintain valued existing habitat. Temporary impacts must be done carefully, in order to ensure that they will remain temporary. MDE may require minimization in a sensitive area where practicable. The guidance considers both temporary construction and post-construction effects.
<i>When would, and in what circumstances, would these additional requirements be necessary?</i>	These are revised, rather than additional requirements. The guidance describes when the practices would most likely be appropriate, based on assessment results and other aspects

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	<p>of permit review. While MDE’s assessment is not specifically mandated, MDE does require a floodplain condition assessment for MS4/TMDL stream restoration projects. Minimization of adverse effects is typically required and activities should be justified.</p> <p>Other types of restoration not part of TMDL requirements should also minimize adverse impacts.</p> <p>An assessment and guidance applicable to the Coastal Bays will be completed in 2023.</p>
<p><i>How much additional time would this add?</i></p>	<p>MDE undertook the project with the goal of minimizing additional requirements upon applicants to complete the assessment. Metrics rely heavily on information already collected during a wetland delineation/determination, as well as what is required for engineering requirements and justification of degradation to qualify as a BMP under Chesapeake Bay TMDL protocols. It is assumed that most if not all of the information required to conduct the assessment is already collected by environmental professionals during routine fieldwork for restoration projects.</p> <p>Unfortunately, there were insufficient funds and time to create automated forms for data collections and calculations. We hope to do this as part of a comparable project for guidance in the Piedmont and lower Eastern Shore.</p> <p>MDE has dedicated staff for restoration projects who are available to meet onsite to offer recommendations, including during early planning stages. When agency recommendations are followed, applications can be reviewed more expeditiously.</p>