

Page/Section	Comment #	Comments/Edits	Source	Response
FINAL Draft of Guidance Document - April 2017				
General Comments				
General	1	Add paragraph addressing routine maintenance/sediment removal from stormwater conveyance and collection systems; i.e. existing regulated process in place (provide link if appropriate)	Recycled Material Task Force (RMTF) - DM Subcommittee [April 4, 2017]	Comment acknowledged. Statement added to document in "Dredged Material Sources": "This guidance does not alter the established permitting process for dredging or current practices for managing sediment from stormwater management ponds. Current dredged material placement/disposal options for stormwater management pond sediment are not affected. All questions concerning Maryland's stormwater management program should be addressed to the Sediment, Stormwater, and Dam Safety Program at (410) 537-3543."
General	2	Does MDE have a <i>de minimis</i> volume in regards to dredging that could be added to Guidance Document? <i>De minimis</i> language for sediment removal volume was removed from previous draft version as there was no existing reference (policy or COMAR) to include in document.	RMTF - DM SC [April 4, 2017]	Comment acknowledged. A default <i>de minimis</i> volume is not recommended due to the variable conditions that exist when performing dredging. Factors such as the proximity to current or historical industrial discharges can influence the particular volumes that should be characterized. The Department does issue general tidal wetlands licenses and permits for small routine maintenance activities, shoreline stabilization projects, projects that maintain protection to existing infrastructure, etc. See COMAR 26.24.02 for details.
General	3	First off, thank you all so much for going through the trouble to outline this process in a guidance document. Overall we did not feel very comfortable with our understanding post-reading the document. We felt it was not very clear in the requirements for using dredged material for innovative uses. We felt there were a few too many 'may be' and on a 'case-by-case' basis outlines. For example under Category 2 the entire statement regarding managing of material is listed as 'may be required'. We feel that we need a much clearer outline (A-Z) of the approval process including who to call, timelines & what each of those agencies wants to see. MDE has developed very thorough processes for their permitting divisions in other departments. We are not advising for MDE to create a process as stringent as a permit, but as of right now there is little direction for how a product application would move through the MDE process. Pages 34, 36 and 37 mention regulatory oversight, and also state the product must be registered under MDA 15.18.03.02, so overall we are confused as to who to call & at what point. We could also use a clearer outline of MDE Land Management- their role and when they need to be called. The fill material 'Five Example Scenarios' was very useful and much clearer. Also I know you are not yet to the point of looking at pricing of material but this will greatly impact how much companies are willing to do to attain the material. As of now we feel that soil blenders or companies using this material as an amendment will most likely only be able to use Category 1 material. Amended products tend to be utilized in residential and commercial sectors, and for many companies we imagine segregating Category 2 and greater material will be an operational challenge along with managing pre and post receiving, multiple levels of testing and also coordinating LUCs with customers.	Harvest Power - Sladjana Prozo & Justin Burch [April 26, 2017]	Comment acknowledged. Because IR fits within several existing regulatory frameworks, the process will depend on what a person is proposing to do with the dredged materials. The Draft Guidance Document seeks to make this as clear as possible by including contact information for each type of innovative reuse (See pp. 28, 33, and 35), as well as flow charts detailing the main considerations that would factor into Department approvals, where approvals are required (<i>See</i> appendices). Some uses do not involve a traditional permit process, for example use of DM as soil or fill other than at a permitted landfill. In a case like this, the document seeks to provide guidance to potential users on how to appropriately use DM in order to prevent any release of hazardous substances to the environment and avoid potential liability related to such a release. A potential user of DM in these instances may choose to consult the Department when applying the soil and fill categories, and may seek Department oversight through programs such as the Voluntary Cleanup Program or CHS Enforcement, described on p. 34 . These programs allow the Department to approve the use and give prospective users of DM assurance that the use meets regulatory requirements. As you noted, the Department provided sample scenarios to further demonstrate how the soil and fill materials categories would be applied. The Land Restoration Program can assist in answering other questions regarding the soil and fill materials categories and options for Department oversight of particular IR projects.
General	4	a. Add a preamble to the guidance document stating MDE is the regulator of the projects outlined in the document and all projects must be done in a manner that is protective of human health and the environment. ☐	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. An Executive Summary was added to the March 2017 draft document addressing comment.
General	5	b. Address concerns regarding material source for distributors and end users.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. This is out of the scope of this document. The purpose of this document is to provide technical guidance to assist prospective users of dredged materials in ensuring that innovative reuse and beneficial use occurs in a manner protective of public health and the environment.
General	6	c. Describe the process for creating the tiered categories.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. Additional information was added to Section III.D.2 for tiered categories in the March 2017 draft document. Also see the <i>Fill Material and Soil Management Fact Sheet</i> .
General	7	d. Do not detail dredging.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. Dredging section will remain for stakeholder clarity.
General	8	e. Include a marketing section.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. This is out of the scope of this document. The purpose of this document is to provide technical guidance to assist prospective users of dredged materials in ensuring that innovative reuse and beneficial use occurs in a manner protective of public health and the environment.
General	9	f. Expand on the difference between maintenance material and new work dredging.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. Language was included in the March 2017 draft document.
General	10	g. Further explain the joint permitting process.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. Language was included to Section III.B.3 in the March 2017 draft document.
General	11	h. Define salinity and pH issues on page 17 [page 19 in March version] of the guidance document.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. The statement has been changed from "Substantial processing may consist of blending or amending the dredged material to meet structural and geotechnical engineering requirements or to address salinity or pH issues. This could be necessary if the source of the material is from saline waters." to "Substantial processing may consist of blending or amending the dredged material to meet structural and geotechnical engineering requirements. If the source of the dredged material is from saline waters, blending and amending may be necessary to address salinity or pH issues." with added footnote: "Salt accumulations in soil can decrease nutrient availability and inhibit growth of many plants. pH affects the chemical properties of dredged material. The pH level can indicate what type of amending is required as a corrective action to ensure dredged material can be beneficially or innovatively used (i.e. low pH (<4.0) indicates free acids present (sulfates) and lime could be used as amendment)."
General	12	i. Define paint filter test.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. Added footnote "This method is used to determine the presence of free liquids in a representative sample. Material is placed in a paint filter (fine mesh size number 60 +/- 5%). If any portion of the material passes through and drops from the filter within the 5-minute test period, the material is considered to contain free liquids."
General	13	j. On page 22 of the guidance document explicitly state that beneficial use of Harbor dredged material in the Harbor is permitted.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. Language included in Section IV.A.2 - Authorized Uses: Baltimore Harbor Channel Dredged Material in March draft document.

Page/Section	Comment #	Comments/Edits	Source	Response
General	14	k. Define suitable as it can be subjective.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. No change to document. The word suitable is used throughout in various contexts. Generally, a suitable use of dredged material is one that meets the technical criteria and other considerations provided in this Guidance Document for the particular end use, as well having any required regulatory approvals.
General	15	l. Remind readers that the salt from some material within the dredged material containment facility (DMCF) may have already leached.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. No change to document. This will be addressed in sampling of the material.
General	16	m. Utilize the term "biosolids" in place of "sludge."	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. No change to document. The term "sludge" is used in reference to Class A and Class B Sewage Sludge, which are defined terms under COMAR 26.04.06.03 (MDE's Sewage Sludge Management Regulations). All other document references use "biosolids".
General	17	n. Create a version of the document for the general public.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. "Frequently Asked Questions" have been added to the website to answer basic questions regarding the guidance document and its purpose. The Guidance Document and <i>Fill Material and Soil Management Fact Sheet</i> are intended as technical guidance for prospective users of dredged material and their consultants.
General	18	o. Add an executive summary.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. This was included in the March 2017 Draft Guidance Document. ☐
General	19	p. Utilize the full date including day on the front page.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. No change to document.
General	20	q. Add a section on golf courses.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. The use of dredged material as soil, fill, or a soil amendment at a golf course would be covered under Section IV.B.3 of the Guidance Document and in the <i>Fill Material and Soil Management Fact Sheet</i> .
General	21	r. Edit the manufactured soil section which states material is approved based on source.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. Deleted "Depending on the source" to read "Dredged material that meets appropriate screening criteria may be used as a manufactured soil directly after dewatering, or may require blending or amending with other media, such as wood chips, lime, gypsum, compost, or biosolids."
General	22	s. Add successful beneficial use examples.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. Case studies/scenarios document were added to MDE's website and included as an appendix to the final document.
General	23	t. Include best management practices.	DMMP Stakeholders Small Group Meeting [Feb. 22,2017]	Comment acknowledged. No change to document. The technical guidance on sampling and analysis as well as screening criteria for each end use represent best practices.
General	24	At the recommendation of the Baltimore Harbor Team, consisting of citizen, industry, and agency representatives, the Dredged Material Management Program Executive Committee charged a wide group of agencies and staff to propose ways to reclassify and to reuse dredged material in a beneficial way. The goal was to preserve valuable space in existing and future sites for the placement of unusable dredged material. This Innovative Reuse and Beneficial Use of Dredged Material Guidance Document, on which I am commenting, is the result of many hours of investigation, discussion and scientific evaluation. The proposed matrix for the reuse of material based on its composition and properties and the flow process for users to get through the regulatory maze is quite the accomplishment. Those involved should be congratulated and thanked. The Maryland Port Administration has extensively been outreaching to citizens using graphics, personal contact and written documents. The presentations which I have attended demonstrated that a sincere goal of the MPA was to assure citizens that strict environmental and health standards and considerations would be followed and observed by MDE in any determination of an appropriate end use for dredged material. This document has great guidance potential to help meet the dredging needs for handling of Bay and Harbor materials. Realizing that this is a living document, I encourage that these draft policies and procedures be adopted as a tool to prioritize beneficial use and reuse of dredged material.	Francis Taylor - Chair DMMP Citizens Advisory [May 25, 2017 email]	Comment acknowledged. No change to document.
General	25	1. The Guidance Should But Fails to Clearly Explain the Difference between Innovative Use and Disposal. The technical guidance should explain that a material only becomes a solid waste if it is discarded or disposed. Materials taken out of the solid waste stream and used to make products fall outside of the Department's regulatory reach. By limiting the reach of the Maryland Solid Waste Law and regulations to "solid waste," the General Assembly adopted the goal and purpose of the federal Solid Waste Law, 42 U.S.C. §§ 6901 et. seq., to encourage recycling and beneficial use of materials that would otherwise become part of the cost and hassle of the solid waste disposal problem. Diverting materials, such as dredged material, from disposal for "innovative reuse" - "the use of dredge material in the development or manufacturing of commercial, industrial, horticultural, agricultural, or other products" Md. Code Ann., Env. Art. §5-1101(a)(8) - means that it will not be a "solid waste." This provision from the Dredge Material Management Act ("DMMA") is consistent with the definition of solid waste, which "means any garbage, refuse, sludge, or liquid from industrial, commercial, mining, or agricultural operations or from community activities," Md. Code Ann., Env. Art. §9-201(j)(1). It is also consistent with the limitations on MDE's regulatory authority over the manufacture and distribution of products which utilize materials such as dredge material, soil, or other materials as raw ingredients, which otherwise, if discarded, would be a "solid waste". See generally, Md. Code, Env. Art. Title 9, Subtitle 2. The regulations which implement the DMMA echo this in regulating only the upland "disposal" of dredge materials, not the innovative reuse of dredge materials. See COMAR 26.24.03.03.	Rich & Henderson, P.C. Attorney at Law - Timothy Henderson [May 26,2017] mail & emailed letter	Comment acknowledged. As stated on p. 15 of the Draft Guidance Document, dredged material itself is not considered a solid waste, unless it contains a solid waste. As described in Section IV.B of the Draft Guidance Document, different innovative reuses fit within different existing regulatory authorities. For example, use of dredged material as landfill cover falls within the Department's authority to regulate the construction and operation of landfills and to specify requirements for cover material under Section 9-204 of the Environment Article. Sections 7-221 and 7-222 of the Environment Article give the Department broad authority to respond to a release or substantial threat of a release of a hazardous substance into the environment, including, if necessary, to take remedial actions and seek cost recovery from a responsible person. A hazardous substance is defined by statute and regulation and is not limited to a solid waste or hazardous waste. See Environment Article, §7-201(l); COMAR 26.14.01.02B(5). Dredged material may contain hazardous substances which could be released into the environment through innovative reuse, if the material does not meet the risk-based criteria appropriate for the use. Note that a "release" includes not just disposal, but the addition or introduction of a hazardous substance into the environment. Environment Article, §7-201(s). The Draft Guidance Document does not impose new regulatory requirements for the production or use of engineered products composed of dredged material. The document provides guidance for innovative reuse to protect public health and the environment and assist prospective users in avoiding the release or threat of a release of a hazardous substance, which would be subject to regulation under Title 7, Subtitle 2 of the Environment Article. Dredged material that meets the risk-based criteria, for example, Category 2, would be able to be innovatively reused as clean fill at a non-residential property. However, if the dredged material contamination exceeds the risk-based criteria for Category 2 use, but is used on a non-residential site without a cap, then the Department would regulate that use as a release of threat of a release of hazardous substances under §7-222.

Page/Section	Comment #	Comments/Edits	Source	Response
	26	Absent a clear statement about this issue, the Guidance could give the impression to landowners or sellers that the Innovative Reuse of dredge materials requires extensive and expensive tests of the chemical constituents in the materials which are not required of other such materials, such as asphalt removed from construction sites, which is reused to make new asphalt. For the Guidance to achieve its goal of increasing the Innovation Reuse of dredged materials, it needs to clearly identify the limitations on the Department's authority to regulate engineered products used in the manner they were intended to be used by the manufacturer.	Rich & Henderson, P.C. Attorney at Law - Timothy Henderson [May 26,2017] mail & emailed letter	See response to Comment 25.
General	27	Will this guidance be restricted to dredged material or is the intent to have any soil material fall under this guidance for review?	MDOT SHA - Gregory Slater [June 1, 2017] emailed letter	Comment acknowledged. This guidance is intended for generators of dredged material, potential users of dredged material for beneficial use or innovative reuse projects, and their environmental contractors. The accompanying <i>Fill Material and Soil Management Fact Sheet</i> is intended for any person who is considering using off-site material that may be impacted by hazardous substances or oil as soil or fill, including at an industrial, commercial, or residential development site.
General	28	Based on current dredge material sampling data, what Category does Cox Creek material fall into?	MDOT SHA - Gregory Slater [June 1, 2017] emailed letter	Comment acknowledged. Samples of dredged material from Maryland Department of Transportation Maryland Port Administration's Cox Creek Dredged Material Containment Facility were tested, and the majority met MDE Category 2 screening criteria.
General	29	What specific authorization from MDE might be needed for Categories 1, 2, and/or 3 materials?	MDOT SHA - Gregory Slater [June 1, 2017] emailed letter	Comment acknowledged. The specific authorization required, if any, would depend on the proposed use of the material. Use in wetland habitat creation would require different approvals than use as landfill cover, for example. See pp. 22, 28, and 33 of the Draft Guidance Document for permit or approval requirements for beneficial uses, innovative reuse as landfill cover, and innovative reuse as soil or fill material, respectively.
General	30	Do Categories 1, 2, and 3 consider oxidation potential of dredged material or blends when used as fill? ☐	MDOT SHA - Gregory Slater [June 1, 2017] emailed letter	Comment acknowledged. Measurement of oxidation potential (for soil corrosivity) has not been included as a test for fill, however, lime loading rates may be a requirement depending on the pH, source and/or volume of the material. As stated in the Guidance Document and <i>Fill Material and Soil Management Fact Sheet</i> , the volume of material, land use, and location of placement (groundwater use area or not) must be considered prior to placement of dredged material as fill and would influence how the dredged material should be evaluated for potential impacts to waters of the State. We suggest consulting with the Department when proposing such a use.
General	31	MDOT SHA would like clarification as to the type of documentation that would be required by LMA Program if they require additional documentation from a person who transports or places the material	MDOT SHA - Gregory Slater [June 1, 2017] emailed letter	Comment acknowledged. The documentation would generally relate to the quantity and nature of the material, the location where the material will be used, and the nature of the proposed use (e.g. depth of the fill, etc.). The specific form and content of documentation would depend on whether the material will be used at a site under LMA oversight, such as a site that is in the Voluntary Cleanup Program or that is under Controlled Hazardous Substance Enforcement oversight.
General	32	How are non-groundwater use areas defined or determined and who determines non-groundwater use areas?	MDOT SHA - Gregory Slater [June 1, 2017] emailed letter	Comment acknowledged. MDE determines a groundwater use area. A property is generally considered a groundwater use area if the property is located within a ½ mile radius of a potable use well, or an area not served by a public water distribution system and reliant on groundwater for potable consumption, or an area where there is potential for future groundwater use as a potable water supply source, or a wellhead protection area for public supply wells that have been approved by MDE.
General	33	Who is performing the risk based assessment for Categories 1, 2, and 3 use?	MDOT SHA - Gregory Slater [June 1, 2017] emailed letter	Comment acknowledged. The end user of the material is ultimately responsible for ensuring dredged material has been appropriately categorized, including by conducting a risk assessment if needed. Proper assessment of dredged material for a proposed use prior to placement of the dredged material ensures that the use does not adversely impact public health or the environment or create potential liability for the user. In some cases, the prospective user may choose to seek Department oversight, such as under LMA's Controlled Hazardous Substances (CHS) Enforcement Program. In this case, the Department will provide technical review services and will either perform the assessment or review an assessment conducted by the prospective user's contractor. The process for seeking oversight under the CHS Enforcement Program is described on p. 34 of the Draft Guidance Document.
General	34	We are writing to submit The Nature Conservancy's (Conservancy) comments on the Innovative Reuse and Beneficial Use of Dredged Material Draft Guidance Document published by the Maryland Department of the Environment (MDE). We appreciate this opportunity to offer comments and commend MDE for recognizing the value of dredged material for Innovative Reuse and Beneficial Use, particularly habitat creation, restoration or enhancement. Given the climate change and sea-level-rise impacts predicted for Maryland, the Conservancy is committed to promoting natural and nature-based solutions to increase the adaptive capacity of the landscape and enhance resilience for coastal communities. We applaud MDE for working with the Maryland Department of Transportation's Port Administration to draft guidance that documents existing policies and procedures to increase transparency and efficiency in the approval process for Innovative Reuse and Beneficial Use. Furthermore, we commend MDE for viewing the guidance as a living document, with the capacity to incorporate new policies and procedures as novel uses arise. The Conservancy recommends providing in the guidance a detailed process for certifying new uses, including specific requirements for baseline and performance monitoring. The Conservancy is particularly interested in portions of the guidance that relate to the sampling and analysis of dredged material proposed for Beneficial Use, and the monitoring of Beneficial Use projects. In considering the use of dredged material for habitat creation, restoration or enhancement, it is important to minimize impacts to fish, wildlife and people from contaminants in dredged material, and to carefully evaluate habitat trade-offs. In addition, given the need for additional information on the efficacy of many habitat restoration techniques (e.g. thin-layer sediment application), monitoring is critically important to ensure the project is successful in providing the desired habitat functions while avoiding unintended impacts.	Nature Conservancy - Mark Bryer [May 31, 2017] emailed letter	Comment acknowledged. These comments are addressed more specifically under Comments 78, 81, and 87.
General	35	We [NMFS] have reviewed the Innovative Reuse and Beneficial Use of Dredged Material Draft Guidance Document. We are supportive of options for innovative reuse of dredged material, which offer alternatives to in-water uses. Even beneficial use of dredged material can result in conversion or loss of fish habitat, and we encourage the use of alternatives that minimize those impacts where possible. The guidance document provides a comprehensive framework for beneficial use and innovative reuse requirements and clarifies the regulatory processes and approvals needed. We hope that the regulated community finds this guidance helpful and uses it to determine the most appropriate uses of dredged material. Thank you for your efforts in putting this document together.	NOAA Fisheries NMFS, Habitat Conservation Division - Kristy Beard [May 26, 2017] email	Comment acknowledged.

Page/Section	Comment #	Comments/Edits	Source	Response
General	36	Please clarify the process and/or add a flow chart to help users identify how to implement the guidance in this document. Recommend adding a paragraph that details that there are 3 options (1 beneficial (Option A) and 2 innovative (Options B and C)) for dredged material and multiple end-uses within each Option and that the four risk-based 'categories' only apply to the soil and fill material end-use option. (i.e., there is no category 2 for beneficial use).	Karin Olsen, Anchor QEA	Comment acknowledged. A format change in the March 2017 draft addressed distinguishing Beneficial Use (Section IV.A) options from Innovative Reuse (Section IV.B) options. Clarification language was added when necessary to indicate that the risk-based categories are for soil and fill use only.
General	37	Because each Option (A, B, and C) have different recommendations for the number of samples to be tested, a user would not be able to evaluate multiple end-use options from a single dredged material testing program. For example, a 200,000 cy project would require 16 sampling locations and 4 composite analytical samples for Aquatic Restoration, the same material would require 30 locations and 15 composite samples for Landfill Use, and would require over 200 samples for Soil or Fill End Uses. Consider re-evaluating the requirements across the program for consistency.	Karin Olsen, Anchor QEA	Comment acknowledged. This guidance was developed with the end use determined prior to sampling. If a single end use has not been determined, MDE can assist the prospective user with determining a sampling plan that would be suitable for multiple potential uses.
General	38	SAMPLING PLANS - Will MDE approval of sampling plans be required prior to sampling and testing?	Karin Olsen, Anchor QEA	Comment acknowledged. The permit or approval processes vary for particular end uses and are described on pp. 22, 28, and 34 of the Draft Guidance Document for beneficial uses, innovative reuse as landfill cover, and innovative reuse as soil or fill, respectively. Where an MDE permit or approval is required, the sampling and analysis plan should be approved by MDE as part of that process. Where no specific MDE permit or approval is required, the prospective user may still wish to consult with MDE on a proposed sampling and analysis plan to ensure that the prospective use is properly assessed and that the placement of dredged material is protective of public health and the environment.
GLOSSARY OF TERMS				
Glossary - General	39	It is strongly recommended that the Department review all the terms identified in the Glossary of Terms to ensure that they are not restrictive and allow for the maximum potential for beneficial and innovative use or reuse of materials. Unnecessary restrictive wording should be eliminated.	Clean Earth - Trevan J Houser [May 26, 2017] emailed letter	Comment acknowledged. No change to document.
GD p. 5 "Beneficial Uses"	40	The term "Beneficial Use" should not be limited to the five (5) statutory uses described in the Maryland Environmental Code, but should be expanded to include any beneficial use of dredge material that meets applicable protectiveness requirements.	Clean Earth - Trevan J Houser [May 26, 2017] email letter	Comment acknowledged. The definition of beneficial use from the statute will be retained. However, note that additional, on-land uses of dredged material are included in the definition of innovative reuse.
GD p. 5 "Clay"	41	Clay is usually defined as less than 0.002 *milli*meters, or less than 2 micrometers.	MGS - Anna Gillmor [May 25, 2017] email	Comment acknowledged. The definition has been updated to read "Fraction of soil or dredged material whose grain-size distribution is less than 0.002 millimeters"
GD p. 6 "Dredged Material"	42	Dredge Material – The definition of dredge material is material from waters of the state, which does not include ponds. See comment for Section II Introduction for clarification.	MDOT SHA - Gregory Slater [June 1, 2017] emailed letter	Comment acknowledged. The definition has been updated to read 'waters of this State'. Definition of Waters of This State includes "...and all ponds, lakes, rivers, streams, public ditches, tax ditches, and public drainage systems within this State, other than those designed and used to collect, convey, or dispose of sanitary sewage;"
GD p. 6 "Dredging"	43	With the term dredging, why limit it to tidal wetlands?	UMD - Delvin Fanning [June 2, 2017] emailed letter	Comment acknowledged. The definition has been updated to read "The removal or displacement by any means of soil, sand, gravel, shells, or other material, whether or not of intrinsic value, from any waters of this State."
GD p. 6 "Innovative Uses"	44	The term "Innovative Reuse" should not be limited to the statutory "development or manufacturing" as set forth in the Maryland Environmental Code. The definition of "Innovative Reuse" should be expanded to include any use of the material that meets applicable protectiveness requirements.	Clean Earth - Trevan J Houser [May 26, 2017] emailed letter	Comment acknowledged. The statutory definition of innovative reuse is very broad, encompassing any use for the development or manufacturing of a product. The Department is unaware of a prospective reuse of dredged material that would be limited by this definition.
GD p. 6 "Innovative Uses"	45	Innovative Reuse - Clarification to the definition of Innovative Reuse, does it include construction products?	MDOT SHA - Gregory Slater [June 1, 2017] emailed letter	Comment acknowledged. The use of dredged material in the development or manufacturing of construction products would fit within the definition of innovative reuse. As described in the Introduction of the Guidance Document, "it is acknowledged that there may be new or existing technologies that provide an opportunity to innovatively reuse or beneficially use dredged material in addition to the uses discussed within this Document. Current guidance is provided for uses that have MDE procedural protocols for permits and approvals. MDE intends this guidance to be a living document that will be updated periodically as new processes and policies are investigated and established."
GD p. 6 "Leaching"	46	Change definition to "Infiltration and percolation of moisture, which results in the mass transfer of compounds, such as metals, within the top layers of soil into the subsoil layers and groundwater zones."	MGS - Anna Gillmor [May 25, 2017] email	Comment acknowledged. The definition has been revised to "the process whereby water from precipitation or other sources infiltrates into the ground and extracts by solution, and other mechanisms, elements, such as metals, and compounds from the soil. The liquid produced by this process can result in the mass transfer over time of extracted chemicals into subsurface layers and the groundwater flow regime."
GD p. 7 "New work dredging"	47	Regarding ". . .often includes clay bottom. . ." This can be sand as well.	Anchor QEA - Walter Dinicola	Comment acknowledged. Definition updated to include sand as well.
GD p. 7 "pH"	48	Regarding "A pH of 7.0 is. . ." It would be better to provide a range (5.5 to 7).	Anchor QEA - Walter Dinicola	Comment acknowledged. Definition updated to remove "A pH of 7.0 is neutral is generally found best for plant and animal growth."
GD p. 7 "Salinity"	49	With the term <u>salinity</u> , MDE and other agencies need to be aware that the oxidation of sulfides, when sulfides-bearing dredged materials are placed under oxidizing conditions, generate salinity as well as acidity. The salinity measured prior to dredging will increase, sometimes remarkably, upon oxidation and the salts are most likely to be ferrous (iron) sulfates that are acid-forming upon oxidation and hydrolysis of the iron.	UMD - Delvin Fanning [June 2, 2017] emailed letter	Comment acknowledged. No change to document.
GD p. 7 "Salinity"	50	Discuss brackish water.	Anchor QEA - Walter Dinicola	Comment acknowledged. The Department does not believe this is necessary.
p. 7 "Sand" & "Silt"	51	For sand and silt, again, these are actually millimeters (10 ⁻³ meters) not micrometer (10 ⁻⁶) meters	MGS - Anna Gillmor [May 25, 2017] email	Comment acknowledged. The definitions of sand and silt have been updated accordingly. Sand revised to "Fraction of soil or dredged material whose grain size distribution is 2.0 to 0.05 millimeters..." Silt revised to "Fraction of soil or dredged material whose grain-size distribution is 0.05 to 0.002 millimeters..."

Page/Section	Comment #	Comments/Edits	Source	Response
GD p. 7 "Soil"	52	With the term <u>soil</u> , whether plant growth is supported depends on the pH, which changes when previously anaerobic sediments containing sulfides are placed under aerobic condition. At very low pH from sulfuricization, pH's can sometimes go down into the 2-3 range. Only certain plant species, e.g. Phragmites australis may grow under such conditions, and they may only grow after their establishment by certain means, and	UMD - Delvin Fanning [June 2, 2017] emailed letter	Comment acknowledged. Definition revised to "Unconsolidated geologic and organic materials overlying bedrock, if present."
GD p. 7 "Soil amendment"	53	Add "other"	Anchor QEA - Walter Dinicola	Comment acknowledged. Definition revised to "A fertilizer, lime, mulch, compost, dredged material, or other blend or product added to soil to improve its quality."
GD p. 7 "Soil amendment"	54	Remove the 2nd period at the end	MGS - Anna Gillmor [May 25, 2017] email	Comment acknowledged. Period removed.
GD p. 7 "Sulfide, Sulfate"	55	With the term <u>sulfides</u> . Pyrite is an iron disulfide, FeS ₂ . It is the main iron sulfide mineral found in dredged materials, but there may also be iron monosulfides, FeS, which are extremely unstable and change color from black to gray upon exposure to air or hydrogen peroxide. They can rapidly take the oxygen out of water that they are stirred into. Iron sulfides are the main ones in most dredged materials. However, all heavy metal sulfides, e.g. those of Zn, Cd, Hg, Pb, Cu, Ni etc. are very insoluble and exist in some dredged materials, particularly those from Baltimore Harbor. Oxidation of the sulfide releases these elements into solution as sulfates. With <u>sulfate</u> , sulfate is the second most abundant anion in sea water, after chloride. It can serve as an electron acceptor for the oxidation of organic matter by bacteria, producing sulfide. Gypsum has the formula CaSO ₄ ·2H ₂ O. Just CaSO ₄ is the mineral anhydrite.	UMD - Delvin Fanning [June 2, 2017] emailed letter	Comment acknowledged. Definition revised to "...pyrite is iron disulfide, (FeS ₂). " "...CaSO ₄ ·2H ₂ O."
GD p. 7 "Sulfide, Sulfate"	56	Not convinced the last sentence is completely accurate. At least, in the older textbook understanding (Stumm and Morgan, 1970), the process of sulfide oxidation is acidity producing, but it is not the dissolved sulfates doing the acidifying, it's pyrite and ferric iron pulling apart water and generating excess protons. Consider revision to "When sulfide minerals are oxidized, acidity is produced, which can increase the solubility of other elements, such as iron, as well." $FeS_2 + 14Fe^{3+} + 8H_2O \rightarrow 15Fe^{2+} + 2SO_4^{2-} + 16H^+$	MGS - Anna Gillmor [May 25, 2017] email	Comment acknowledged. Definition revised to "When sulfide minerals are oxidized, acidity (lower pH) is produced, which can increase the solubility of other elements, such as iron, as well."
LIST OF ABBREVIATIONS				
Abbreviations - General	57	Thanks for the definitions of abbreviations and acronyms, pages 9-10. The document is difficult to read and understand without knowing what the abbreviations/acronyms stand for.	UMD - Delvin Fanning [June 2, 2017] emailed letter	Comment acknowledged. No change in document.
GD p. 9	58	Add "LEAF"	Anchor QEA - Walter Dinicola	Comment acknowledged. This has not been added since the abbreviation is not used in this document.
Section I.		Section I.		
GD p. 12 - footnote 2	59	Clarification to footnote two on page 12 is needed as the footnote implies that the guidance is for use only for MDOT MPA's dredge material and not other material.	MDOT SHA - Gregory Slater [June 1, 2017] emailed letter	Comment acknowledged. The footnote has been updated to remove MPA references.
Section II.		Section II.		
GD p. 13 - acid sulfidic soils	60	"Most dredged material derived from navigational access projects consists of naturally-occurring particulates derived from the natural erosion of rocks and soil, transported by runoff into lakes and streams, and ultimately deposited as sediment in the Chesapeake Bay and its tributaries." - This statement does not recognize that the materials, as they sediment, are affected by sulfidization (see Fanning and Fanning, 1989, Chapter 10), by which sulfate from the water, particularly where the water is sea water that contains high levels of dissolved sulfate compared to most fresh waters, is chemically reduced to sulfide, which reacts with iron that occurs as iron oxides in the sediments to form iron sulfides in the sediments. Also the dredging process may reach through the modern sediments into underlying geologic formations that contain iron sulfides that may, in addition to the sulfide in modern sediments, cause extreme acidification upon exposure to aerobic conditions at dredged material deposition sites. I think that most DM from the Chesapeake Bay and from Baltimore Harbor are what we are now calling hypersulfidic materials, meaning that, if placed under aerobic conditions, they will acidify to a pH of 4.0 or lower. However, some that contain natural calcium carbonate in the form of shells etc. may be hyposulfidic materials, meaning that although they contain iron sulfides, they may not acidify to pH's of 4.0 or less. These are the materials that are likely to be better than the hypersulfidic for innovative reuse. The DM with no sulfides are rare I think, at least in coastal places like Chesapeake Bay and Baltimore Harbor.	UMD - Delvin Fanning [June 2, 2017] emailed letter	Comment acknowledged. The following footnote has been added: "As the eroded materials in the Chesapeake Bay and Baltimore Harbor form sediment, they are affected by sulfate from the water. The dissolved sulfate in the water is chemically reduced to sulfide, which reacts with iron oxides in the sediments to form iron sulfides in the sediments. These materials, if placed under aerobic conditions, may acidify to a pH of 4.0 or lower. Some materials contain natural calcium carbonate and although they contain iron sulfides, may not acidify to pH's of 4.0 or less."
GD p. 13 - bulleted list	61	On page 13, paragraph three, included in the list of sources of dredge material are ponds however per the definition of dredge material, Maryland does not allow ponds in the waters of State.	MDOT SHA - Gregory Slater [June 1, 2017] emailed letter	Comment acknowledged. See response to comment #42. Dredged Material definition updated to read 'waters of this State'. Definition of Waters of This State includes "...and all ponds, lakes, rivers, streams, public ditches, tax ditches, and public drainage systems within this State, other than those designed and used to collect, convey, or dispose of sanitary sewage;"
Section III.		Section III.		
GD Section III - General	62	<u>2. The Guidance Should Clarify that MDE Approval of an Innovative Reuse Identified in the Application is Not a Condition of Issuance of a Permit to Dredge.</u> The Guidance should provide a simple explanation to all involved with dredging permit applications and permit approvals that identification of an innovative reuse is an alternative to upland disposal and, as a result, not subject to review and approval by the Maryland Department of the Environment ("MDE"). COMAR 26.24.03.03 applies to "disposal" of materials dredged from tidal waters. As part of the dredging permit application process, MDE requires an applicant to provide details about the "disposal" options selected by the applicant. However, neither the Dredge Material Management Act nor its implementing regulations give MDE nor the Maryland Board of Public Works ("BPW") the review and approval authorization for innovative reuse alternatives as a condition of issuing the dredging permit. The Guidance should make it clear that a specific innovative reuse of dredged material need not be identified, finalized or approved by MDE or the BPW at the time the dredging occurs, and, instead, can be implemented at a later point in time post-dredging.	Rich & Henderson, P.C. Attorney at Law - Timothy Henderson [May 26, 2017] mail & emailed letter	Comment acknowledged. Footnote has been added in Section III.D to clarify that the specific innovative reuse of dredged material need not be identified, finalized or approved by MDE at the time the dredging occurs, and, instead, can be implemented at a later point in time post-dredging. However, proposed end uses are subject to applicable permits and approvals before the end use is implemented.
GD p. 14-15 Section A	63	MDOT SHA recommends additional guidance on the last sentence of the section to clarify when dredged material is considered hazardous or solid waste.	MDOT SHA - Gregory Slater [June 1, 2017] emailed letter	Comment acknowledged. The following has been added to Section III.D: "There may be areas where solid waste or hazardous waste was released into the environment, such that solid or hazardous waste may be present in the sediment. Where material is dredged from an area in which hazardous waste has been released, it is appropriate to analyze the dredged materials using the TCLP to determine whether the material exhibits a characteristic of hazardous waste under COMAR 26.13.02.08."

Page/Section	Comment #	Comments/Edits	Source	Response
GD p. 15 Section B	64	MDOT SHA suggests greater clarification on if placement alone projects require MDE approval? For example, where dredging and placement activities are not in continuum.	MDOT SHA - Gregory Slater [June 1, 2017] emailed letter	Comment acknowledged. See response to Comment #62. The permits and approvals described for specific end uses in Section IV of the guidance document would apply even when the proposed beneficial use or innovative reuse does not occur immediately subsequent to the dredging. For example, material may be dredged and placed in a dredged materials containment facility. If the dredged material is later removed from the facility for innovative reuse as soil or fill, the guidance for soil and fill material in Section IV.B.3 would apply.
GD p. 15 Section B. 1.	65	(Last paragraph, 1st sentence) Insert: "(Lakes)" after "Non-tidal Wetlands and Waterways Permit"	Anchor QEA - Walter Dinicola	Comment acknowledged. It is not necessary to add the word lakes as they would be covered, where appropriate, under the nontidal wetlands and waterways permit.
GD p. 17 Line 12	66	"under Category A, then th an application is forwarded to the USACE for federal action,". The th an text appears to have a typo problem.	UMD - Delvin Fanning [June 2, 2017] emailed letter	Comment acknowledged. The typo has been corrected.
GD p. 17 Section B	67	MDOT SHA suggests providing MDE contact information to conclude the section, similar to air regulations in Section C on the following page (page 18).	MDOT SHA - Gregory Slater [June 1, 2017] emailed letter	Comment acknowledged. The contact information added "Denise Keehner, Program Manager, Wetlands and Waterways Program at denise.keehner@maryland.gov at 410-537-3751"
Page 18 - Section D	68	"Prior to MDE approval of a request...an applicant must identify a placement or disposal site for the dredged material." Question/Concern: At this point the material has not been vetted under a specific category? For us it would be difficult to accept any material without knowing its categorization. ☒	Harvest Power - Sladjana Prozo & Justin Burch [April 26, 2017]	Comment acknowledged. No change to document. The material may be placed in an approved containment facility, and before removing it from that facility and innovatively reusing it, the material would need to be tested and categorized. Additionally, if soil or fill material is the end use determined at point of dredging, sampling requirements as listed in the guidance document for that end use would be completed to determine the category.
GD p. 18 Section D. 1.	69	(First sentence) Insert: "federal" after ". . .can be categorized as. . ."	Anchor QEA - Walter Dinicola	Comment acknowledged. The sentence has been updated to include "federal".
GD p. 18 Section D. 1.	70	(1st paragraph) replace ". . .this annual dredging is referred to as" with "a process called"	Elizabeth McCollum	Comment acknowledged. The sentence has been updated to include "a process called".
GD p. 18 Section D. 1.	71	Comment: (2nd paragraph 2nd sentence) We should mention CAD in this statement regarding Harbor Dredged material	Anchor QEA - Walter Dinicola	Comment acknowledged. Material dredged from the Baltimore Harbor channels is currently placed in one of two MPA-owned Dredged Material Containment Facilities (DMCFs): Cox Creek DMCF and Masonville DMCF, and has been placed in a pilot Confined Aquatic Disposal (CAD) cell located within Baltimore Harbor.
GD p. 18 Section D. 1.	72	Comment: (2nd paragraph 4th sentence) We use several terms for the inner harbor dredged material in this paragraph alone: 1)Material Dredged from the Baltimore Harbor Channels 2)Dredged material from inside the legally defined Baltimore Harbor 3) Baltimore Harbor maintenance channel material We should be consistent and listed under definitions: 1) Inner Harbor Maintenance Dredged Material 2) Inner Harbor New Work Dredged Material 3) Bay Maintenance Dredged Material	Anchor QEA - Walter Dinicola	Comment acknowledged. The paragraph has been updated as follows: "The USACE and MPA work together to conduct dredging of the federal channels and to identify placement sites for the maintenance material removed from Baltimore Harbor and its approach channels. Material dredged from the Baltimore Harbor channels is currently placed in one of two MPA-owned Dredged Material Containment Facilities (DMCFs): Cox Creek DMCF and Masonville DMCF. Sediment characterization efforts focusing on the Baltimore Harbor maintenance channel material (i.e., the material currently being removed during maintenance dredging) have shown potential for this source of dredged material to be considered for innovative reuse and beneficial uses. Generally, Baltimore Harbor dredged material from outside of the regularly maintained navigation channels may require more rigorous physical and chemical sediment characterization due to a possibility of legacy industrial contamination."
GD p. 18 Section D. 1.	73	MDOT SHA request written clarification to be included in the guidance that under "Dredged Material Sources" as to the types of ponds – stormwater management or agricultural – and whether this guidance is applicable to MDOT SHA stormwater management ponds. MDOT SHA suggests either removing the term pond or clarifying as "lakes."	MDOT SHA - Gregory Slater [June 1, 2017] emailed letter	Comment acknowledged. This guidance would generally apply to sediments removed from any pond, lake, or impoundment, and is intended to help prospective users of dredged materials ensure that proposed uses are protective of public health and the environment. The sediment removed from a typical stormwater or sediment and erosion control pond is of small volume and is not the primary intended target for this guidance. However, for larger ponds, lakes, and reservoirs that would generate large quantities of sediment, or for ponds that receive runoff from commercial and industrial establishments that may contain higher concentrations of contaminants, it is strongly recommended that the material be characterized prior to the proposed use. This will ensure that the end use selected is protective of public health and the environment.
GD p. 19	74	Possible acidification of DM upon exposure to oxidizing conditions is recognized in the following quoted statement "MDE approval for innovative reuse and beneficial uses will also consider whether estuarine dredged material will be used in an oxidized environment where it is likely to acidify." This statement shows an awareness of possible acid sulfate soils issues. It could also be stated that whether acidification under oxidizing conditions may be an issue could be examined by doing a moist incubation test and monitoring the pH to see if the material in questions qualifies as <i>sulfidic materials</i> by <i>Soil Taxonomy</i> . <i>Sulfidic materials</i> are expected to acidify to a pH of 4.0 or less upon exposure to aerobic conditions within a few weeks time.	UMD - Delvin Fanning [June 2, 2017] emailed letter	Comment acknowledged. The sentence has been updated to "MDE approval and testing requirements for innovative reuse and beneficial uses will also consider whether estuarine dredged material will be used in an oxidized environment where it is likely to acidify."
Page 19 - Section D. 2.	75	"For road transportation, dredged material should pass a paint filter liquids tests to prevent spills and leaks." Question/Concern: Is this for material that is processed, unprocessed or both? Also are there limits to this test? Ie. Percentage of leakage or any leakage. I imagine that if a sample is taken while it's wet out or if it condensates in the sample bag it could leak and fail? ☒	Harvest Power - Sladjana Prozo & Justin Burch [April 26, 2017]	Comment acknowledged. The following clarification has been added: "For road transportation, dredged material (processed or unprocessed) should pass a paint filter liquids test utilizing EPA Method 9095B to prevent spills and leaks. Dredged material that is considered to contain free water, based on the paint filter test, should be transported in trucks with water-tight tailgates, liners, or other methods to prevent leakage." Also, the following footnote has been added for clarity: "This method is used to determine the presence of free liquids in a representative sample. Material is placed in a paint filter (fine mesh size number 60 +/- 5%). If any portion of the material passes through and drops from the filter within the 5-minute test period, the material is considered to contain free liquids."
Section IV.		Section IV.		
GD p. 20	76	[5th paragraph] (last sentence) re end of sentence: and end use location	Anchor QEA - Walter Dinicola	Comment acknowledged. The sentence has been updated to read "There are a range of innovative reuses and beneficial uses of dredged material depending on physical and chemical characteristics, the grain size and level of chemical concentrations, and end use location."
GD p. 21 Paragraph 2	77	The guidance states that dredged material sources may include sediment from the removal of dams. Elsewhere in the document, "dredging" is defined as removal of material from "tidal" waterways. Is this guidance intended to apply as well to sediment accumulated behind a dam on a non-tidal waterway (such as on the Susquehanna River)? Please clarify.	Clean Earth - Trevan J Houser [May 26, 2017] email letter	Comment acknowledged. See comment #43. The definition of dredging updated has been updated to state: "The removal or displacement by any means of soil, sand, gravel, shells, or other material, whether or not of intrinsic value, from any waters of this State."

Page/Section	Comment #	Comments/Edits	Source	Response
GD p. 23 Section A. 4. a) Table 1	78	In the current draft guidance, there is no requirement for sampling below 5,000 cubic yards. The Conservancy strongly favors a minimum sampling requirement, regardless of the size of the project.	Nature Conservancy - Mark Bryer [May 31, 2017] emailed letter	Comment acknowledged. Table 1 updated to "Sample numbers for projects less than 5,000 cy and greater than 500,000 cy determined on a case-by-case basis by MDE." added to table numbers as well as text.
GD p. 23 Section A. 4. a) Table 1	79	Table 1 in Section IV (A)(4)(a) is not Inland Testing Manual (ITM) Guidance. The ITM does not specify sample frequency and leaves the determination of the number of samples open-ended, based on many project considerations.	Karin Olsen, Anchor QEA	Comment acknowledged. This sentence has been updated to read "Table 1 provides general recommendations for the number of initial samples, based on the volume of proposed dredging for beneficial use. Sampling frequency may differ on a site-specific basis. MDE recommends that the locations and depth of the samples be designed to properly characterize the dredged sediment. Refer to guidance from the EPA/USACE Inland Testing Manual when developing detailed sampling plan. In the case of routine maintenance work, data from prior samplings may be available and the field samples may be reduced."
GD p. 23 Section A. 4. a) Table 1	80	The text in Section IV (A)(4)(a) states that testing is 'based on discrete and composite sample analysis'. Are both required for projects? For example, according to Table 1, (page 25) for a 200,000 cy yard are 16 individual samples + 4 composite samples = 20 samples required for analysis? Or just 4 composite samples?	Karin Olsen, Anchor QEA	Comment acknowledged. Table clarified (200,000 cy: 16 discrete/individual sample stations for 4 total composite samples)
GD p. 24 Section A. 4. b)	81	The Conservancy recommends the establishment of rigorous screening criteria and contamination thresholds for Beneficial Use, and the inclusion of specific guidance for screening methods.	Nature Conservancy - Mark Bryer [May 31, 2017] emailed letter	Comment acknowledged. As indicated in the guidance document the NOAA Sediment Quality Guidelines (SQGs) are generally used for screening beneficial reuse projects. Having said this, these criteria will not always apply and case-specific determinations may be necessary. An example would be if we are using dredged material for capping contaminated aquatic habitat. In that case it may be that some parameters are higher than the SQGs but much cleaner than the materials being capped, creating an overall aquatic habitat benefit.
GD p. 24 Section A. 4. b)	82	Section IV (A)(4)(b) does not include any screening criteria for beneficial use projects. The text states that TELs and PELs are for reference only and are likely not applicable to regional dredged material, so why are they included? If TEL/PELs are to be used for screening, then how will the constituents without TEL/PELs be screened or evaluated? If constituents can't be evaluated, then why are they included in the testing protocol? Why are the TELs/PELs being used instead of ERLs/ERMs, which are based on a much larger NOAA dataset from a wide variety of coastal systems?	Karin Olsen, Anchor QEA	Comment acknowledged. The TELs and PELs are the screening numbers. The Department selected these values as preliminary screening numbers because an independent technical review team of subject matter experts (2009 Report on "Sediment in Baltimore Harbor: Quality and Suitability for Innovative Reuse") recommended using TELs as a more "robust" set of sediment quality guidelines for determining acceptability of Harbor dredged material for beneficial uses.
GD p. 24 Section A. 4. b) Table 2.	83	In paragraph 2, Section IV (A)(4)(b) recommend replacing the word 'monitoring' with 'tested'	Karin Olsen, Anchor QEA	Comment acknowledged. The paragraph has been updated to read "Table 2 includes a broad suite of parameters that are typically tested to identify suitable sources of dredged material for beneficial use (Appendix A2). Testing should be performed based on the specific beneficial use below, but not all analyses may be applicable in all cases."
GD p. 24 Section A. 4. b) Table 2.	84	There is an USEPA Analytical Method for SEM/AVS "EPA-821-R-100" from 1991, though it doesn't look like it made it into the SW-846 Compendium. Just thinking out loud on what, if any, method to reference for AVS/SEM. You likely elected to list no reference because there is no compendium reference.	MGS - Anna Gillmor [May 25, 2017] email	Comment acknowledged. Updated to add EPA-821-R-100 method into the table for AVS/SEM.
GD p. 24 Section A. 4. b) Table 2.	85	We may get some questions on best tests for total sulfates. Trying to think of best tests for determining total sulfates from a soil/solid matrix. Nominally, 9035, 9036 (colorimetric) and 9038 (turbidimetric) are intended for liquids, but I suspect there is a modification for solids. Usually a 300 series (IC) method is a bit more accurate than a turbidimetric test. 300 series are also intended for waters, but likely have a modification for	MGS - Anna Gillmor [May 25, 2017] email	Comment acknowledged. "As appropriate" language remains.
GD p. 26 Section A. 4. c)	86	Should "Maintenance Planning" be Monitoring?	Anchor QEA - Walter Dinicola	Comment acknowledged. "Maintenance Planning" remains.
GD p. 26 Section A. 4. c)	87	The Conservancy strongly favors a requirement for pre-project baseline and long-term post-project monitoring. We encourage the development of explicit monitoring protocols to ensure consistency and the ability to pool data, and discourage the granting of monitoring waivers.	Nature Conservancy - Mark Bryer [May 31, 2017] emailed letter	Comment acknowledged. The sentence has been updated to read "MDE typically requires pre-project baseline and post-project monitoring to ensure any beneficial use project continues to function as designed per an approved maintenance and monitoring plan."
GD p. 26 Section B. 1. a)	88	The only Authorized Uses for Innovative Reuse (IR) shown on the Table of Contents and in Section IV.B.1.a., and for which guidance is provided, are for: a. Landfill - Daily, Intermediate and Final Cover, Closure Cap, and; b. Soil and fill Material, including Soil Amendments. As written, the Draft Guidance document leads the reader to believe that the only acceptable IR uses for dredged material are as cover or fill even though manufactured products have been demonstrated to provide equal and often greater environmental and economic benefits for less cost. 1. <i>Manufactured products needs to be clearly listed as an Authorized Use in the Table of Contents and detailed Guidance should be provided for this use in the body of the document.</i>	Harbor Rock Holdings, LLC - Jeffrey Otto [April 26, 2017] emailed letter	Comment acknowledged. No change to document. As noted in the introduction, "it is acknowledged that there may be new or existing technologies that provide an opportunity to innovatively reuse or beneficially use dredged material in addition to the uses discussed within this Document. Current guidance is provided for uses that have MDE procedural protocols for permits and approvals. MDE intends this guidance to be a living document that will be updated periodically as new processes and policies are investigated and established." The absence of a particular use in this first iteration of the Guidance Document should not be interpreted as a prohibition on that use or as a statement that the use will not be considered as the subject of future guidance. Ultimately, a user of dredged material is responsible for ensuring that the use of dredged material avoids the release of hazardous substances and avoids adverse environmental or public health impacts.
GD p. 27 Section B. 1. a)	89	On page 27 in Section IV.B.1.a. Authorized Uses, is the statement. "In addition, depending on the proposed innovative reuse and in conjunction with a sediment characterization analysis compared to the Technical Screening Criteria (Appendix A3) and testing requirements (Appendix A2) issued through this Document, MDE could review and approve the innovative reuse at the time of initial dredging permit/approval request" 1. The testing requirements for Innovative Reuse in Tables 2 and 3 in Appendix A2 – Sediment Analysis, are only for Landfill Cover (Table 2) and Soil and Fill (Table 3). a. <i>A Table should also be provided outlining the testing requirements for Manufactured Products.</i> 2. Appendix A3 provides Screening Criteria based on the Category of Use. Table 1 is the only table for Innovative Reuse and it only provides Screening Criteria for Category 3 (Restricted Use Soil and Fill, Cap required). a. <i>A Table should also be provided outlining the Screening criteria for Manufactured Products.</i>	HarborRock Holdings, LLC - Jeffrey Otto [April 26, 2017] emailed letter	Comment acknowledged. See response to Comment 88 above.
Page 29 - 2. d) Landfill	90	"If the dredged material is processed/amended/blended prior to final end use and placement, the required bulk, leaching and agronomic testing listed in Table 3 should be conducted on the final processed dredged material." Question/Concern: At this point the material has been tested prior to dredging, tested post dredging and then you'd like it tested a third time? If it's already gone through various levels of testing why does it have to be tested pre or post blending again? ☹️	Harvest Power - Sladjana Prozo & Justin Burch [April 26, 2017]	Comment acknowledged. No change to document. Any in-situ testing and any testing of dredged material at the dredged material containment facility prior to segregation and processing would not provide bulk, leaching, and agronomic data for the material actually proposed for innovative reuse. The purpose of the sampling guidance on p. 29 of the Draft Guidance Document and elsewhere throughout the document is to ensure that the dredged material to be used is appropriate for the particular end use proposed.

Page/Section	Comment #	Comments/Edits	Source	Response
GD p. 30 Section B. 1.	91	The discussion about the number and location of samples (e.g. page 30) describes the taking of samples "proximal to the area being dredged". <i>1. For manufacturing based IRs that recover material from a DMCF, there should be guidance provided and a sampling plan based on the size of the DMCF and extraction rates of material from the DMCF.</i>	HarborRock Holdings, LLC - Jeffrey Otto [April 26, 2017] emailed letter	Comment acknowledged. The following added as a clarification: "Note that sampling and characterization of the material that is being considered for use may be done by the generator, processor, materials broker, user, or any other party, as long as the sampling protocol, selected analytes, and analytical methods are appropriate and adequate for the intended use. Sampling of in-situ sediments may be performed by the agency conducting the dredging in order to plan efficient use of the material to be generated, but prior to use the actual material proposed for used should be characterized from material stockpiles at the dredged materials containment, processing, or brokerage facility."
GD p. 30 Section B. 2. d) Table 3.	92	If looking for sulfides, wouldn't these be 9030, 9031 and 9034?	MGS - Anna Gillmor [May 25, 2017] email	Comment acknowledged. The table has been updated to state "Total Sulfates" and include for the method "SW-846 EPA Method 9035 or other as is appropriate."
GD p. 31 Section B. 2. d) (1)	93	[2nd paragraph after last sentence] Insert: "Table 4 provides dredged material sampling guidelines for Landfill Cover of Closure Cap and is based on discrete or composite sample analysis."	Anchor QEA - Walter Dinicola	Comment acknowledged. The table has been updated to indicate composite samples.
GD p. 31 Table 3	94	Note that this is the identical table listed as Table 2 in Appendix A2 of the document. This is confusing when referring to tables. Please clarify.	Clean Earth - Trevan J Houser [May 26, 2017] emailed letter	Comment acknowledged. Language has been added to clarify that the same sampling tables are found in appendices as well.
GD p. 31 Section B. 3. a)	95	(1 sentence) Should be consistent where we refer to dredged material and fill.	Anchor QEA - Walter Dinicola	Comment acknowledged. No change in document.
GD p. 32 - 34 Section B. 3	96	The Guidance Should Clarify that the Screening Criteria for the Innovative Use of Dredged Material Applies Only to Unprocessed Dredge Materials. The discussion of 'Engineered Fill' on pgs. 32 and 34 should clearly explain that use of dredged material as an ingredient in the manufacture of a structural fill product fulfills the recycling goals of the federal and state Solid Waste laws. The Oil Operations permits for Soil Safe's two Maryland facilities, for example, authorize them to accept oil contaminated soils containing up to 25,000 mg/kg of total petroleum hydrocarbons ("TPH") for use as an ingredient to make its stabilized fill product. The permits, in accordance with the Oil Operation regulations at COMAR 26.10.13, require the Soil Safe process to create a product which has a post-treatment TPH-DRO extract level of less than 0.5 mg/kg. Dredged materials contaminated by petroleum constituents should be afforded the same opportunity for recycling and reuse as soils contaminated by leaks of fuel oil, gasoline or heating oil. The use of a structural fill product created by such a recycling process for repurpose in industrial construction applications should require no more oversight or approval by the MDE, than for other such products. For example, as indicated in the draft, compliance with the groundwater quality protection regulations, erosion and sediment controls and stormwater management controls. We recommend that the draft Guidance clarify that the categorization of dredge materials based on the screening level results, applies only to direct applications of dredge materials, without processing. The chemical constituent levels in the ingredients used to make a product are not relevant; what may be relevant is the level of constituents in the product and where and how the product is used. The point is that, as with other manufactured building products, engineered fill products created using dredge materials as an ingredient should not be subject to the reuse limitations identified in the draft Guidance. A recycling facility, for example, may be able to create a product utilizing Category 4 dredge material as an ingredient, yet the end product poses no threat to human health or the environment.	Soil Safe - Mark Smith [May 26, 2017] email letter	Comment acknowledged. No change to document. The Department agrees that reuse of dredged material is an important aspect of sustainable materials management. The comment recommends that "the draft Guidance clarify that the categorization of [dredged] materials based on the screening level results applies only to direct applications of dredge materials, without processing." However, it goes on to state that the "chemical constituent levels in the ingredients used to make a product are not relevant; what may be relevant is the level of constituents in the product and where and how the product is used." As a result, it is unclear whether the comment proposes applying sampling, screening, and categorization to a processed, dredged material-based product or not. To clarify, the guidance document provides criteria for categorizing unprocessed dredged material or a dredged material-based product that is being used as soil or fill, to ensure the material is used in an environmentally protective manner. Where dredged material is to be used without processing, the sampling and categorization would be done on the unprocessed dredged material, and the resulting category would inform the appropriate end uses for the dredged material. Where the dredged material is processed to create a soil or fill product, that end product could be sampled and categorized. This results in some additional flexibility since, as the commenter noted, in some cases the processing may result in the end product reaching a category for which more end uses are acceptable.
GD p. 33 Section B. 3. c) (1)	97	Finally, the statement in subsection (c)(1) on page 33 that the Innovative Reuse of dredged material "as a manufactured soil or amendment" is subject to §§7-222 and §7-503 of the Environment Article is misleading. Section 7-222 applies to the "release" of "hazardous substances." By law, placement of products used for engineered fill, or similar uses, in construction of buildings or highways is not a "release"; the product is not a "hazardous substance" if used for its intended purpose. For example, use of asphalt paving materials to build highways, or pave parking lots, are not subject to § 7-222 despite the fact that they contain high levels of petroleum hydrocarbons and polycyclic hydrocarbons. Section 7-503 merely introduces the fact that a Voluntary Cleanup Program has been established in Maryland.	Rich & Henderson, P.C. Attorney at Law - Timothy Henderson [May 26, 2017] mail & emailed letter	Comment acknowledged. See response to Comment 25.
GD p. 33 Section B. 3.	98	The Section of the Guidance Which Creates Four Categories for the Management of Dredged Material Requires Clarification. The idea of creating categories of innovative reuse of dredged materials is helpful as guidance. However, the categories are based on those created by the MDE as guidance for use of materials to remediate contaminated sites subject to the oversight of the agency's Land Management Administration ("LMA") ² . That fact, coupled with the way the Guidance incorporates the EPA screening criteria for Superfund cleanup sites, raises questions and concerns. Effectively, the Guidance imposes more stringent sampling requirements for Innovative Reuse of dredged materials than on Beneficial Uses for habitat creation or island restoration. This creates a potential disincentive for persons responsible for a dredging project to pursue Innovative Reuse alternatives for dredged material. First, the Guidance assumes a major role for the MDE in reviewing and approving every Innovative Reuse project. For example, it suggests that while subjecting dredge material from a specific job to the entire suite of testing parameters listed in Table 5 may not be necessary, the determination of which tests need to be performed should be based on consultation with MDE. Likely the MDE does not have the staff or resources to assume that role and, the law and regulations give MDE only a limited regulatory role over products created using dredged materials for upland projects. MDE likely will err on the side of more testing than less, which will put the party responsible for material dredged that chooses to divert the material from the solid waste stream for innovative reuses in the position of having to spend significant sums on sampling and analyzing the material.	Soil Safe - Mark Smith [May 26, 2017] email letter	Comment acknowledged. No change to document. Aquatic habitat creation and restoration represents a significant application for dredged material in Maryland and is subject to extensive sampling requirements, long-term monitoring, and engineering controls to protect aquatic and terrestrial habitats. The innovative reuse portion of the document provides additional opportunities for dredged materials reuse and includes specific requirements to achieve those uses. This recognizes the fact that regulatory approvals, sampling considerations, and criteria should be based on the particular end use being evaluated. The Department acknowledges the commenter's concerns about costs, the need to evaluate the material prior to use, and the process for consulting with the Department on prospective uses. However, the Department has extensive experience providing oversight for cleanup and redevelopment projects in which non-dredged material soil and fill are used. This experience suggests that when materials are used as engineered fill at these sites with appropriate engineering and land use controls, the assessment and characterization processes have historically not been cost- or time-prohibitive. The sampling and analysis guidance, including the four categories, is intended to assist prospective users in broadening potential options for dredged materials, while ensuring that these uses do not adversely impact public health of the environment. ☐

Page/Section	Comment #	Comments/Edits	Source	Response
		<p>Second, the discussion for Categories 1 and 2, the categories for the cleanest dredge material, suggests that “a more detailed residential risk assessment” or a “more detailed non-residential risk assessment” may be required (on page 38). Detailed risks assessments generally are reserved for determining if the soil at contaminated sites like Brownfields sites require remediation, i.e. excavation or treatment, not for soil used as engineered fill. Again, for economic and other reasons, the requirement likely will ensure that the party responsible for the dredged material will send it to traditional disposal or containment facilities, as opposed to pursuing innovative uses of the material.</p> <p>Third, the summary of the screening criteria in Appendix A3 application to petroleum hydrocarbons repeats the problem in the LMA guidance; specifically, there is no distinction between Category 2 and Category 3 levels. It raises the question of whether the dredged material which is shown to contain 620 mg/kg TPH-DRO or TPH-GRO should adhere to Category 2 or Category 3 requirements. In Soil Safe’s experience handling and recycling petroleum contaminated soils, the TPH level should not necessarily factor into the decisions about the category of engineered fill product created with raw materials diverted from the solid waste stream. It is the DRO or GRO extract levels in the recycled product that is of primary relevance.</p>		<p>As to the second point regarding the mention of residential or non-residential risk assessments, nothing in the proposed guidance requires such an assessment to be conducted. For categories 1 and 2, the guidance incorporates some additional flexibility in how to determine whether the criteria are met. The simplest option is to compare the sampling results to the preliminary screening criteria, based on the EPA Soil RSLs set at a HQ of 0.1 for non-carcinogens and a risk of 1x10⁻⁶ for carcinogens. If the material falls below all of those values, no further assessment is required and the material fits within the category. If the material does not fall below the screening criteria for all the relevant analytes, a more detailed risk assessment can be conducted, typically by an environmental contractor or other person knowledgeable about risk assessments. If the risk assessment demonstrates that the material meets a HI of 1 for non-carcinogens and a risk of 1x10⁻⁵ for carcinogens, the material fits within the category. Note that material may be used under a cap by comparing analytical results directly to the category 3 screening criteria, with no need for a full risk assessment.</p> <p>As to the third point regarding the TPH criteria, the category determination is based upon the final product, post-treatment, for all potential chemicals of concern including petroleum hydrocarbons. Primary relevance is not limited to the DRO and GRO extract levels but also the health-based exposure values stated in the guidance document as well as other Land and Materials Administration guidance. TPH-DRO or TPH-GRO at concentrations of 620 mg/kg (assuming all other potential hazardous substances meet the category designation) can be classified as category 2 material.</p>
GD p. 35 Section B. 3. c) (2)	99	This section states “In projects that use dredged material as soil or fill, this Document does not obviate the requirements under COMAR 26.08.02.09 for a groundwater discharge permit where groundwater quality standards may be adversely impacted.” However, Table 3 (Page 45) does not contain any testing requirements for leachability (TCLP or SPLP). Does the Department intend to evaluate the potential for leaching as part of its criteria for innovative reuse? If so, under what circumstances and what standards would the leachate results be compared against for different Categories of use or to determine where groundwater quality standards may be adversely impacted?	Clean Earth - Trevan J Houser [May 26, 2017] email letter	<p>Comment acknowledged.</p> <p>As stated in the referenced section of the Guidance, complying with this guidance does not remove the requirement that a groundwater discharge permit be obtained if the nature and location of the dredged material placement being considered is likely to cause a discharge of pollutants to groundwater. For example, a minor grade-and-fill using two feet of Category 2 dredged material to enhance the landscaping around a commercial building would not likely require a permit, whereas 20 feet of fill over an area may. This is an issue that the user should investigate and weigh when planning the project, and consult the Department’s Water and Science Administration as is necessary to make this determination. When a project is under consideration, the Department may request, or the applicant may wish to perform, suitable leachability tests that are appropriate to the proposed material placement. There are a variety of leaching tests such as EPA’s recent LEAF test that may be used to evaluate the potential of soluble compounds from the dredged material proposed for placement. By using these methods, where needed, the need for other controls, or alternatively a discharge permit, may be evaluated.</p>
GD p. 35 Section B. 3. d)	100	“Some of the analysis may not be applicable, and those necessary should be performed based on consultation with MDE Land Management Administration.” Question/Concern: Table 5 & the Appendix say you could require even more testing than those tables show, yet the above statement says some may not be applicable. The statements are not very clear and would lead to hesitation on my part considering how expensive testing can be.	Harvest Power - Sladjana Prozo & Justin Burch [April 26, 2017]	<p>Comment acknowledged.</p> <p>The paragraph has been updated to read "The following sampling and analysis considerations for evaluating the use of dredged material as soil or fill material are provided as guidance only. Sampling and analysis plans will be approved by MDE depending on the intended land use of the property, existing LUCs already at the site, and the source of the dredged material."</p>
GD p. 35 Section B. 3. d)	101	Recommend inclusion of a tiered testing process for Soil and Fill End-Use Option - a pre-dredging list of parameters and number of sample to determine 'eligibility' for Option C (soil & Fill) this end use, and then a secondary, focused list of analytes and number of samples to be performed on processed dredged material.	Karin Olsen, Anchor QEA	<p>Comment acknowledged.</p> <p>This breakdown could be submitted to MDE in a sampling and analysis plan for a project that included dredging, placement, and removal to an end use site.</p>
Page 36 – Table 6.	102	Question/Concern: Sample v. tests... You say for example 4 samples for first 1,000 CY and 1 sample per each additional 500 CY. Does this mean all those samples blended into one test? If not, if you mean 4 samples for 1,000 CY and require all the listed tests (as well as possibly extra) that is a very expensive evaluation of a small amount of material considering the recycling goals set out. ☹	Harvest Power - Sladjana Prozo & Justin Burch [April 26, 2017]	<p>Comment acknowledged.</p> <p>Each of the samples should be tested. For example, for 5,000 cy, 12 discrete samples would be required. This sampling frequency may be modified upon consultation with MDE if all of the fill material is derived from a common source and compounds of concern are known.</p>
Page 36 – Tables 5&6.	103	The testing described for Soil or Fill (Section B, Table 5&6), are most applicable to processed dredged material. Is the guidance recommending that testing for dredged material being considered for Soil or Fill only be tested after processing (ie, no pre-dredging sampling is required)?	Karin Olsen, Anchor QEA	<p>Comment acknowledged.</p> <p>Sampling and analysis are end use-based. An approved sampling and analysis plan could incorporate sampling for pre-dredging to indicate that the material could meet one of the soil and fill categories if that was the determined end use. Upon processing the material, it could be sampled and analyzed again if processing would likely change the category of the material. Any in-situ testing and any testing of dredged material at the dredged material containment facility prior to segregation and processing would not provide bulk, leaching, and agronomic data for the material actually proposed for innovative reuse. The purpose of the sampling guidance throughout the document is to ensure that the dredged material to be used is appropriate for the particular end use proposed.</p>
Page 37 & 38 – Section B. 3. d) (2) Category 1	104	“A person may send soil or fill material that meets the Category 1... to any offsite location for use as soil or fill material.” Question/Concern: This is contradicted multiple times in your document starting with the ‘approval of a request... identify a placement or disposal site’. Also a sentence later “a more detailed residential risk assessment may be performed.” If we are going to work so hard to categorize this material why is the material still scrutinized post categorization? Also for the ‘more detailed residential risk assessment’ what does this apply to? Who would perform this assessment? And what does an assessment like this entail?	Harvest Power - Sladjana Prozo & Justin Burch [April 26, 2017]	<p>Comment acknowledged.</p> <p>The comment references the following statement earlier in the Guidance Document: "Prior to MDE approval of a request for any federal, state, local, or private dredging activities, and the issuance of an authorization to proceed, an applicant must identify a placement or disposal site for the dredged material." This statement applies to the MDE approval for the in-water dredging activity.</p> <p>If dredged material testing indicates it meets <u>Category 1 (residential) screening criteria</u>, then the material can be used for Category 1 Soil and Fill use with no restrictions. The screening criteria are general guidance, without taking into account specific site factors/exposures. If a material does not meet Category 1 screening criteria, an end user may perform a risk assessment if the specific final end use site/location is known. A risk assessment is a more detailed process that accounts for site-specific factors (intended property use) and allows for a more flexible risk standard than the general screening criteria. Performing a risk assessment may determine that the material is acceptable for the proposed Category 1 use even though it did not meet the initial screening criteria. Risk assessments can be performed using the EPA Risk Assessment Guidance document for a property specific risk assessment and are performed by a qualified risk assessor. Also, see response to second point under Comment #98.</p>
Page 37 & 39 – Section B. 3. d) (2) Category 1 - 3	105	MDOT SHA would like clarification on who would perform the risk based assessment for Categories 1, 2, and 3 use? Would MDE LMA Program review the risk assessment, concur, then authorize (authorize with letter or permit) placement?	MDOT SHA - Gregory Slater [June 1, 2017] emailed letter	<p>Comment acknowledged.</p> <p>See Comment 33. If dredged material meets Category 2 screening criteria it could be used by the SHA without restrictions in Category 2 uses (within a SHA roadway or ROW). MDE does not differentiate SHA use of dredged material as fill from any other sources of fill.</p>
Page 39 – Section B. 3. d) (2) Category 2	106	States: “A receiving site <i>may</i> <emphasis added> be required to submit written acknowledgement regarding the volume and nature of such soil or fill material to the LMA prior to the transporting of the material to the receiving location.” Based on past experience in other jurisdictions, we recommend the Department make this a requirement in all instances for innovative and beneficial use of material, including Categories 1 through 3.	Clean Earth - Trevan J Houser [May 26, 2017] email letter	<p>Comment acknowledged.</p> <p>No change to document.</p>

Page/Section	Comment #	Comments/Edits	Source	Response
Page 39 – Section B. 3. d) (2) Category 3	107	“...placement beneath an engineered cap” Question/Concern: How big is this cap? How specific is the engineer soil used to cap it? Are there some kind of guidelines to be followed?	Harvest Power - Sladjana Prozo & Justin Burch [April 26, 2017]	Comment acknowledged. In general, an engineered cap is a layered structure of natural earth materials and/or synthetic materials designed to limit the infiltration of water into the subsurface. The purpose of the engineered cap is to prevent exposure of humans to buried materials. The Department seeks to encourage a certain degree of flexibility in the engineered cap’s design; therefore the design is specific to the material used and the proposed use. Examples of engineered caps range from a landfill cap, to an asphalt parking lot, to a box store on a slab, to a layer of clean soil with a capillary break between the clean earth and the underlying material, depending on what the material is and what the proposed use will be. Caps of various designs are routinely used in Brownfields redevelopments, and are typically included in the design of the site as it is planned. For Category 3 material placed under a cap, the site should use a Land Use Control (environmental covenant) to ensure that the integrity of the cap as a barrier is maintained.
GD p. 39/40 "Category 4"	108	Are there any circumstances under which the Department would permit blending of Category 4 dredged material (under solid waste permits, recycling permits, etc.) to make a product that then complies with Category 3 requirements for use or reuse?	Clean Earth - Trevan J Houser [May 26, 2017] email letter	Comment acknowledged. Potentially yes. A decision would need to consider the nature of the chemicals that resulted in the material falling into category 4. If the dredged material, after treatment, is demonstrated to be capable of being used safely in the proposed application, that use may be approved. Depending on the circumstances, additional protections, such as a warning layer, other engineering controls, or a deed restriction or similar land use control may be required.
GD p. 39/40 "Category 4" & p. 45 "Category 4"	109	The Guidance also gives the impression that there are no soil or fill materials which could be manufactured using dredged material which fall into Category 4. (See p. 45) The legally supportable statement would be that unprocessed Category 4 dredge material is "ineligible soil and fill material."	Rich & Henderson, P.C. Attorney at Law - Timothy Henderson [May 26, 2017] mail & emailed letter	Comment acknowledged. See the response to Comment 108.
Appendices				
GD Appendix A1	110	2. The Guidance Should Clarify that MDE Approval of an Innovative Reuse Identified in the Application is Not a Condition of Issuance of a Permit to Dredge. This section is missing citation to or incorporation of a primary statutory authority governing dredge material in Maryland-specifically, the Dredge Material Management Act ("DMMA"), codified at Environment Article § 5-1101 <i>et. seq.</i> That law creates the distinctions critical for the user of the technical guidance by editing the terms "redeposit," "beneficial use of dredged material," and "innovative reuse." The technical guidance should clearly state that beneficial uses are those involving placement into waters or bottomlands, while innovative uses would cover all those activities on uplands which divert the dredge materials from placement in the waterways, whether through disposal or recycling. Further, the Guidance should explain in more detail the limits on each statutory section listed. For example, Title 5, Subtitle 9 grants MDE authority over regulated activities within non-tidal wetlands; Title 5, Subtitle 5 grants MDE authority over the appropriation of surface water or groundwater (the waters of the State); the selected Subtitles of Title 9 grants MDE authority over solid waste materials that are disposed or discarded; and the selected subtitles of Title 7 grant MDE authority over sites contaminated with hazardous substances. The guidance fails to clearly delineate the boundaries of MDE's regulatory authority with respect to the use of dredged material.	Rich & Henderson, P.C. Attorney at Law - Timothy Henderson [May 26, 2017] mail & emailed letter	Comment acknowledged. A citation to 5-1101 has been added to Appendix 1. In addition both, the Innovative Reuse and Beneficial Use sections include subsections that describe the Department's regulatory authority, associated permit/approval requirements and the application process. Those subsections include all necessary citations so that entities wishing to further explore statutory or regulatory details can do so. It is outside the guidance document's scope to provide extensive descriptions of MDE's regulatory authority. Rather the purpose of the guidance is to promote Innovative Reuse and Beneficial Uses of dredged material by clearly explaining the permitting/approval process.
GD p. 44/45 Appendix 2, Tables	111	Consider bringing consistency to the required analytical testing programs to make it easier to evaluate multiple end-use options (applicable to Tables 2, 3, and 5, plus Appendix A2). Examples - can all the end-use Options (A, B, and C) have the same testing list for PAHs, chlorinated pesticides, VOCs, and SVOCs. How should total PCBs be analyzed / calculated for Soil or Fill (Table 5) - using an Aroclor method? using congeners? How will the agronomic parameters be screening / evaluated?	Karin Olsen, Anchor QEA	Comment acknowledged. Given the diversity of potential uses that each Table includes, MDE does not recommend changes to the Tables to evaluate potential multiple end-use options. For clarification, in Table 2. Beneficial Use - Aquatic habitat restoration, the B/N/A Semivolatile Organic Compounds row and the Polycyclic Aromatic Hydrocarbons row will be merged to read like the Tables 3 and 5 Semivolatile Compounds (SVOCs) row to avoid any confusion. PCBs should be analyzed using an Aroclor method initially. Additional analysis for congeners may be necessary on specific projects that are proximal to aquatic habitats and consultation with MDE is recommended for entities performing such work in or near aquatic habitats. Agronomic parameters will typically be utilized by soil scientists and agronomists to determine whether the material in question can support plant growth.
GD p. 44/45 Appendix 2, Tables 2 and 3	112	If dredged material or soil or fill material is to be used for redevelopment of a landfill that is a VCP site, it should be made clear the process an entity would follow to gain approvals for use of category 2 and category 3 soil or fill material, because the Table 2 (Page 44) and Table 3 (Page 45) requirements are different.	Clean Earth - Trevan J Houser [May 26, 2017] email letter	Comment acknowledged. The sampling guidance is based on how the material is being used. Table 2 (p. 43) is for dredged material being used as cover material or a closure cap on a permitted landfill, while Table 3 (p.44) is for other uses as soil or fill. In terms of the process for approval, where dredged material use is to take place at a site within the VCP, the user should consult with the Land Restoration Program and follow the process for approval through the VCP. In making approvals, the Land Restoration Program will consult with the Solid Waste Program as necessary. This is the process currently employed for historic landfill sites that are redeveloped through the VCP Program.
GD p. 46 Appendix 3, Screening Criteria	113	For Appendix A3, clarify that analytical testing should follow the Tables in Appendix A2 and do not have to be inclusive of every analyte listed in Appendix A3. Recommend adding a column that identifies the major analytical group of each constituents (VOC or SVOC or PAH or Dioxin, etc)	Karin Olsen, Anchor QEA	Comment acknowledged. Characterization requirements do not have to include all analytes listed in Appendix 3 and should be based upon chemicals of potential concern. Additional chemicals of concern not present in Appendix 3 may be necessary if the dredged material originates from a site proximal to a current or historical discharger. For questions related to identifying the potential chemicals of concern for sampling, please contact the Land Restoration Program or, for use as landfill cover material, the Solid Waste Program.
GD p. 46 Appendix 3, Screening Criteria	114	The EPA Regional Screening Levels (used as the basis for classifying fill material) include levels for Total Petroleum Hydrocarbons (TPH). Soil that has been treated at an oil contaminated soil treatment facility operating in good standing under a permit issued by the MDE Oil Control Program should not be subject to these TPH RSLs. As a condition of their permit the treatment facilities demonstrate that their end product meets the requirements at COMAR 26.10.13.09 that petroleum contamination is “physically and chemically bound in the end product or the end product does not leach contaminants.” The EPA RSLs for Total Petroleum Hydrocarbons are defined in six classes: aliphatic high, aliphatic medium, aliphatic low, aromatic high, aromatic medium, and aromatic low. Nowhere in MD regulations and guidelines regarding petroleum are hydrocarbons measured in these classes. The parameters that are used to regulate petroleum in fill material should be the same as the parameters used to regulate oil contaminated soil in MD.	Clean Earth - Trevan J Houser [May 26, 2017] email letter	Comment acknowledged. The Department will use the TPH-DRO and TPH-GRO values represented in this guidance document (230 mg/kg residential and 620 mg/kg non-residential) and the 2008 VCP Soil and Groundwater Cleanup Standards document to guide petroleum-impacted materials. The numbers within these documents are risk-based concentrations that are protective considering direct exposure, which is not the same as the leachability of the end product. Petroleum-impacted dredged material considered for reuse must meet the above stated criteria for TPH as well as the risk-based criteria for other potential constituents of potential concern present in the dredged material.

Page/Section	Comment #	Comments/Edits	Source	Response
GD p. 47 Appendix 3, Screening Criteria Bulleled List of Category 1-3 TPH Screening criteria	115	The list is worded as "230 (620) mg/kg for TPH, DRO and GRO." Does the applicable numeric standard refer to the sum total of the DRO and GRO numbers (i.e., a total of 230 mg/kg for DRO plus GRO), or does the given numeric standard (230/620 mg/kg) apply to the TPH concentration for each of DRO and GRO.	Clean Earth - Trevan J Houser [May 26, 2017] email letter	Comment acknowledged. The values apply to each of TPH, DRO and TPH, GRO, and are not totals of the two. The following clarification will be made: Category 1 TPH screening criteria: 230 mg/kg for TPH, DRO and 230 mg/kg for TPH, GRO Category 2 TPH screening criteria: 620 mg/kg TPH, DRO and 620 mg/kg TPH, GRO Category 3 TPH screening criteria: 620 mg/kg TPH, DRO and 620 mg/kg TPH, GRO
GD p. 73-74 Appendix 3, Screening Criteria - Beneficial Use	116	The SQUIRT tables provided in Appendix A3 are incomplete and missing multiple pages of sediment screening values for organics.	Karin Olsen, Anchor QEA	Comment acknowledged. The full tables have been added.