

Beneficial Use of Dredged Material



MARYLAND

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
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Background

Maryland's strong connection to the water is undeniable, with 70 percent of residents living in the coastal zone, and boating contributing approximately \$2 billion per year to the state economy. To maintain access to Maryland's waterways, navigational channels are frequently dredged and the sediment is transported to upland placement sites, reducing the already limited upland capacity. At the same time, coastal communities and economies are experiencing increasing vulnerability to climate change impacts such as storm surge, erosion, flooding and sea level rise. The Maryland Department of Natural Resources addresses these impacts and supports coastal communities and economies by maintaining navigable waterways and building resilient coasts through the Waterway Improvement Fund and the Resiliency through Restoration Initiative. Though these programs were originally set up as unique funding streams, the department is working to further the goals of both by evaluating dredging and restoration projects for beneficial use of dredged material opportunities. More information can be found at:

<http://dnr.maryland.gov/ccs/Pages/Beneficial-Use.aspx>

Opportunity

Dredged material is a sediment, and therefore a resource. The department is capitalizing on dredged material as fill in restoration projects by aligning restoration and dredging projects. Doing so allows planners to save on costs that would otherwise be incurred to transport dredged material to upland placement sites or to bring fill material to restoration sites. Further, placement of dredged material in restoration projects can enhance environmental habitats, provide resilience to coastal communities, and preserve upland placement capacity for future dredging projects.

Challenge

Beneficially using dredged material must meet the health standards outlined by the Maryland Department of the Environment in the Innovative Reuse and Beneficial Use Guidance Document. Further, the dredge and restoration projects must be aligned in space, time, and quality. Such alignment requires a minimum of 1-2 years of advanced planning. To achieve alignment and to proactively identify beneficial use opportunities, the Maryland Department of Natural Resources is using BUILD.

Beneficial Uses

Beneficial Use is the practice of using dredged material to enhance environmental resources. Examples of beneficial uses can be seen below:

Living Shorelines
Ferry Point Park (2014)



Photo Credit: DNR

Thin-Layer Placement
Blackwater National Wildlife Refuge (2016)



Photo Credit: USFWS

Island Restoration
Skimmer Island (2011-2014)



Photo Credit: DNR

Beach Nourishment
Eastern Neck National Wildlife Refuge (2018)

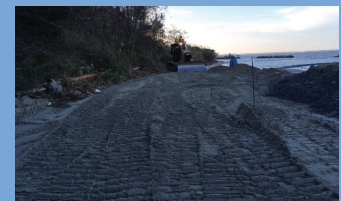


Photo Credit: DNR

CHESAPEAKE AND COASTAL SERVICE

Beneficial Use of Dredge Material

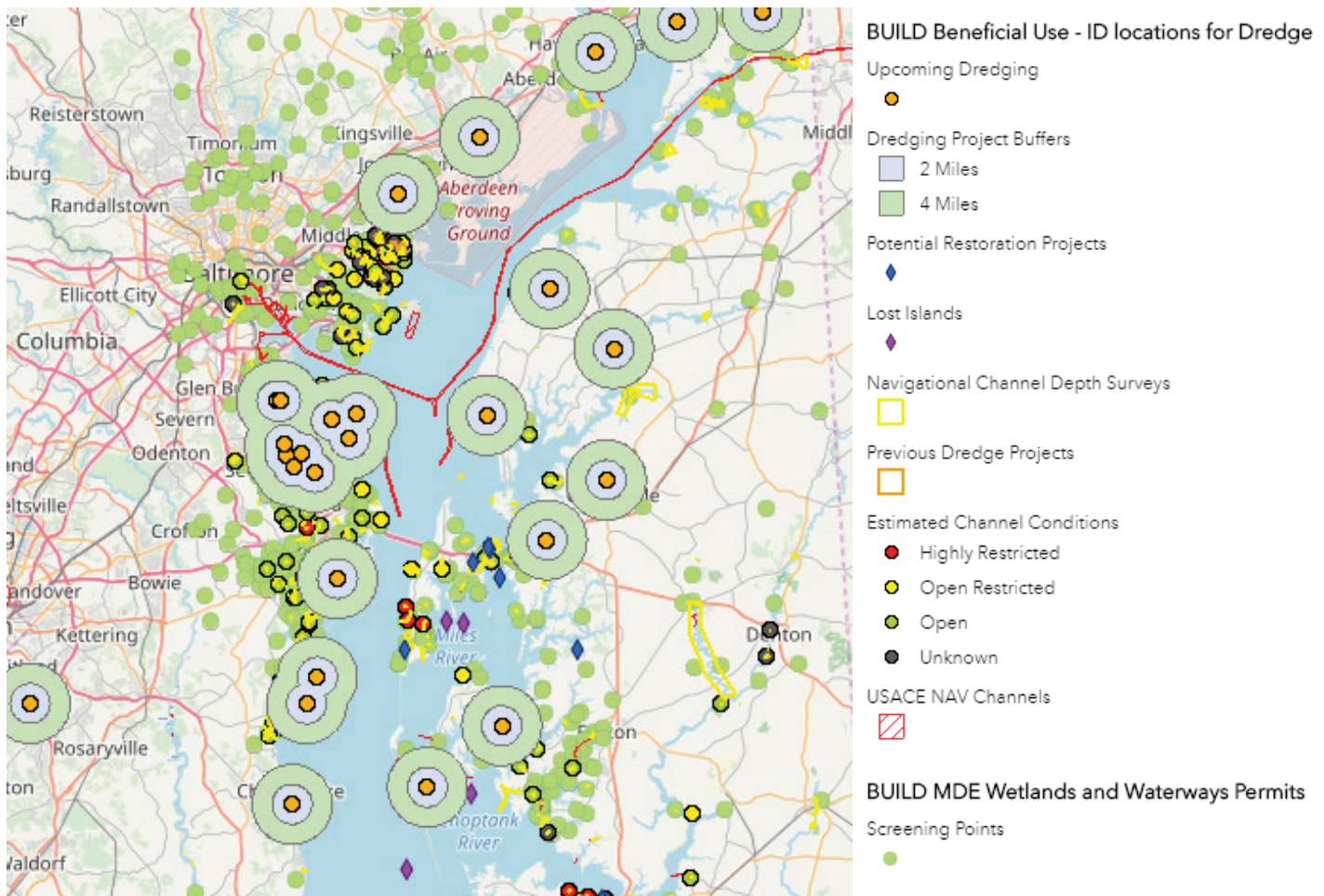
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Identifying Beneficial Use Opportunities

BUILD, Beneficial Use - Identifying Locations for Dredge, is a collection of online mapping layers in the Maryland Coastal Atlas. Through the use of ten layers, BUILD enables spatial, temporal, and qualitative evaluation of dredging and restoration projects to proactively identify beneficial use opportunities. By beneficially using dredged material, planners can achieve environmental and resiliency benefits, while simultaneously reducing material transportation and fill costs.

BUILD in Action

Beneficial use opportunities are identified by using Distance Buffers or the Measure Tool to gauge the distance between a restoration and dredging project. If there is a potential match, further information is provided about the expected implementation timelines, and dredged material grain size and restoration type to determine if the dredged sediment is appropriate for the intended beneficial use. Planners can then contact the Maryland Department of Natural Resources to pursue an identified project.



To learn more about how BUILD is used to identify beneficial use projects, visit the BUILDing Resilience story map: <https://arcgis.com/1KPjv9>.