

CAD BULLETIN



CAD Bulletin Overview

This newsletter is designed to provide timely and accurate information about Confined Aquatic Disposal (CAD). CAD is a technique which involves placing and containing dredged material underwater has been used successfully in other ports in the U.S. For general information about CAD, visit the [website](#). We hope you find this information helpful. If you have any questions, comments, or topics you'd like us to cover in upcoming issues, please contact Rachael Gilde at rgilde@marylandports.com.



LATEST NEWS

CAD Year-End Review:

Core to the mission of the Maryland Port Administration (MPA) is maintaining shipping channel depths to facilitate the safe passage of commercial vessels in and out of the Port of Baltimore. The existing development of property adjacent to the Port makes it challenging to identify additional placement capacity for materials dredged from Baltimore Harbor beyond the Masonville and Cox Creek Dredged Material Containment Facilities (DMCFs). While these facilities are active and undergoing expansion, they will be near capacity in the next 20 years, so it is essential to plan for the future. Therefore, in addition to upland placement sites, MPA is exploring innovative alternative approaches to dredged material management, like CAD.

CAD is a technique used successfully in other U.S. ports that involves placing and containing dredged material in an underwater depression, or CAD cell, made by scooping sand and gravel from the bottom of a waterway. In 2011, the Dredged Material Management Program (DMMP) Harbor Team, an advisory committee to the State of Maryland's DMMP, recommended investigating CAD as an alternative to the limited capacity available in DMCFs and as part of the DMMP's statutory mandate to provide a continuous, long-term strategic plan for dredged material management.

That team recommended that MPA consider a pilot study to determine if CAD is feasible in Baltimore Harbor based on cost-effectiveness, human and environmental health and safety, and benefits to Maryland.

MPA constructed its first CAD pilot project in 2016, completed monitoring the pilot project in 2019, and has been working to evaluate the lessons learned and determine the program's next steps. The initial change in material elevation after placement shows consolidation of the material placed in the CAD cell over the entire footprint, as expected. The initial consolidation monitoring was conducted over a 21-month period. Additional data was collected in November 2023 for an 80-month comparison. More recent surveying indicates ongoing sediment deposition within the CAD cell, providing natural cover over the placed material.

A proposed second CAD pilot project has been paused due to concerns from citizens and regulatory agencies. A CAD subcommittee has been established under the DMMP's Bay Enhancement Working Group (BEWG) to explore technical aspects of a second pilot project, including environmental impacts and benefits, location selection, associated regulations, and socioeconomic benefits and effects. Meanwhile, focused outreach is underway and will continue to ensure stakeholders are engaged throughout the process.

RECAP OF CAD SUBCOMMITTEE EFFORTS IN 2024

Established under the BEWG, the CAD Subcommittee is tasked with exploring technical aspects of a second CAD pilot project, including environmental impacts and benefits, location selection, associated regulations, and socioeconomic benefits and effects. The CAD subcommittee successfully convened three times in 2024 and reviewed and discussed the following topics:

- An overview of MPA's dredging and placement needs, long-range capacity planning, and a status update on the Innovative Reuse / Beneficial Use Program
- A review of the 2016 CAD Pilot Project's scope, timeline, site selection rationale, permitting process, studies conducted, and outcomes
- Site selection process for a subsequent pilot project
- Identification of future topics and speakers for the subcommittee to consider, such as contingency planning, gathering community input, and the consensus process
- Compilation of community input

Community Engagement Focus:

Understanding community needs and concerns is a key component of the CAD Subcommittee's work. In 2024, the committee worked closely with community members to collect feedback. In addition to hearing presentations by community members and reviewing a summary of feedback related to CAD since June 2023, the CAD Subcommittee committed to gaining greater insight into community concerns. Community members were asked to provide a succinct written summary of their questions, concerns, and prioritization in advance of the November CAD Subcommittee meeting. Community members were invited to relate their questions and concerns to the following three questions:

- What questions or concerns do you have about a second CAD pilot study?
- What additional studies do you think are required to address your questions or concerns?
- What primary questions would you like the technical CAD Subcommittee to evaluate?

The committee received a robust response to its request with 121 distinct questions and concerns. The committee developed a series of nine (9) categories to organize the input and determine its applicability to the Subcommittee.

At its January meeting, the Subcommittee reviewed the categorizations and adjusted as necessary through feedback and discussion. These categories include:

Environmental/Ecological

Human Health

Risk Management and Mitigation

Stakeholder Engagement

Design Considerations

Economic

Legal and Regulatory

Committee Structure

Project Timeline and Plan

IN DIALOGUE WITH COMMUNITIES ABOUT CAD

In 2023, the Maryland Port Administration embarked on a robust outreach and engagement program to educate, inform, and solicit community feedback about CAD. The goal was to raise awareness and foster community engagement by providing timely project information in easily accessible, interactive forums.

Communications facilitated a comprehensive exchange of information about Port dredging and needs, including its capacity planning process, and the potential CAD may offer as a dredged material management technique based on lessons learned from the previous pilot and an exploration of how a new pilot may be undertaken. In the past year, the Port created an array of communications tools including:

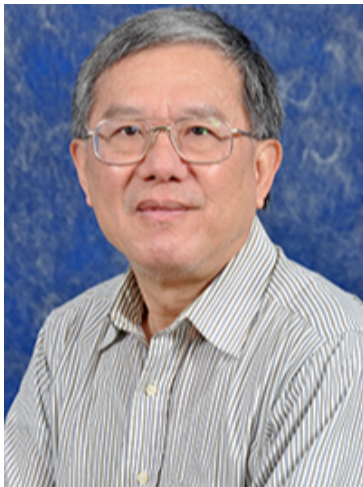
- This new newsletter, the CAD Bulletin which published three issues
- Enhanced [CAD webpages](#) to include more robust information and an online platform to provide feedback
- Updated CAD information, including a [factsheet](#) and [FAQ](#) document

Stakeholder input has long been important to the Port, and this is especially true for any new initiative under consideration like CAD. 2024 efforts successfully leveraged existing engagement infrastructure and established new mechanisms to encourage dialogue and capture stakeholder input, facilitating valuable conversations, building new relationships, and opening a path to new, mutually beneficial outcomes. Engagement activities included:

- **Community Tours:** Designed to provide opportunities for community members to experience a dredged material containment facility (DMCF), MPA facilitated an open house at Cox Creek and held a guided tour of the DMCF for a neighborhood association
- **Community Meetings:** MPA partnered with local community organizations to participate in four community meetings to share information about CAD and solicit feedback from key groups and individuals. In addition to establishing open lines of communication, it also provided an opportunity for MPA to respond to a donation request for dredged material.
- **CAD-Focused Workshops:** Five small group briefings held throughout the year introduced CAD to regulators and elected officials and provided a forum to address technical questions.
- **Dredged Material Management Program Committee Meetings:** MPA leveraged its existing nine [stakeholder oversight and advisory committees](#), maintaining transparency through regular updates and responsiveness, to encourage collaboration and input from community and environmental groups and assess CAD as a dredged material management option.

MPA is expanding its engagement efforts in 2025 to ensure it can reach more people, create opportunities for more dialogue, and incorporate all feedback into the planning process as it continues to consider using CAD as an innovative solution to dredged material management. This effort includes the work of the BEWG CAD Subcommittee. Updates to the community are also being provided through the DMMP Citizens Advisory Committee and other existing stakeholder relationships.

MEET THE SPECIALISTS



Harry Wang - Professor at William and Mary Virginia Institute of Marine Science

An industry-leading scientist and graduate of Johns Hopkins University for his post-graduate work (MS and PhD), Dr. Wang's main research interests are in coastal and estuarial physical processes and the consequences of their transport properties. Dr. Wang is currently working on projects in Baltimore, including water quality modeling in the Baltimore Harbor and Back River, sediment flux modeling in Baltimore Harbor and the adjacent Upper Chesapeake Bay. He is also working on watershed and water quality modeling projects in the Upper Western Shore of Maryland. His future goal is to use computer models as primary tools to integrate interdisciplinary research. Dr. Wang will be a guest presenter at the February 13 CAD Subcommittee meeting to provide his expertise on the hydrodynamic characteristics of the Baltimore Harbor waters to aid the subcommittee in developing considerations related to selecting a site for a potential second CAD pilot.



Jeremy Testa - Associate Professor at University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory

Dr. Testa is a graduate of the University of Maryland and an associate professor at the UMCES Chesapeake Biological Laboratory. Dr. Testa's expertise lies in the interactions between coastal ecosystems' biological, chemical, and physical processes, with an emphasis on the processes of eutrophication, nutrient cycling, dissolved oxygen dynamics, and ocean acidification. His recent research includes historical data analysis and modeling studies to examine long-term changes in the Patapsco and Back Rivers. Dr. Testa's upcoming presentation at the February 13 CAD Subcommittee meeting is a unique opportunity for us to learn from his expertise. His insights on water quality conditions in the Patapsco River will be instrumental in our considerations regarding selecting a site for a potential second CAD pilot. We look forward to the wealth of knowledge he will bring to our meeting.

LEGISLATIVE UPDATE

The Maryland General Assembly Session has begun, and MPA is aware of a legislative bill: Senate Bill 168 – Environmental Justice Confined Aquatic Disposal Act, which was introduced. The Bill proposes to prohibit the Maryland Department of the Environment from processing or making any recommendation to the Board of Public Works regarding an application for the alteration of any tidal wetland or waters of the State submitted for the purpose of constructing a CAD cell within five miles of a residential overburdened community—and prohibit the Board of Public Works from approving an application for the alteration of any tidal wetland or waters of the State for the purpose of constructing a CAD cell within five miles of an overburdened community. While the MPA is evaluating the legislation to understand the full impact on the DMMP if it were to pass and become law, its submission does not change the mission and the important work of the CAD Subcommittee.

UPCOMING EVENTS

February 13: Bay Enhancement Working Group CAD Subcommittee Meeting

March 13: Bay Enhancement Working Group CAD Subcommittee Meeting

RECENT EVENTS

December 6, 2024:

MPA Dredged Material Management Program (DMMP) Annual Meeting

The DMMP Annual Meeting featured updates on dredged material placement sites, innovative reuse projects, educational programs, plans to increase site access, and more. This important meeting afforded the opportunity to network, meet MPA leaders, and learn how the DMMP is working to benefit all Marylanders while successfully maintaining the Port's channels and honoring commitments to community partners and the environment.

December 12, 2024:

Bay Enhancement Working Group CAD Subcommittee Meeting

The third meeting of the CAD Subcommittee covered a variety of topics, including a detailed review of sediment quality, a review of community feedback categorization, a review of the committee's next steps, and an open discussion of both CAD Subcommittee and Community comments.

HOSTING AN INFORMATION SESSION

Organizations around the region can invite MPA to present information showcasing the most recent information about dredging in Maryland. If you'd like to schedule a session for your group, please complete the inquiry form [HERE](#).

For More Information

The most up-to-date information about CAD is available on the [MPA website](#).

[Stay connected and informed](#) about CAD by signing up to receive the CAD Bulletin.

[Sign up for the EcoPort Newsletter](#), the MPA newsletter describing Port initiatives, environmental accomplishments, and progress.



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