



Testimony

GARY C. RASICOT

Acting Assistant Secretary for Countering Weapons of Mass Destruction

U.S. Department of Homeland Security

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INTRODUCTION

Chairman Peters, Ranking Member Portman, and distinguished Members of the Committee, thank you for inviting me to speak with you today about the reauthorization of the Department of Homeland Security's (DHS) Countering Weapons of Mass Destruction Office (CWMD).

I have been the Acting Assistant Secretary for CWMD collectively for more than two years, most recently since January 2021, and previously serving in this same role from October 2019 through July 2020. Prior to my time at CWMD, I served in various leadership roles with the U.S. Coast Guard (USCG) and the Transportation Security Administration (TSA).

CWMD was established to elevate, consolidate, and streamline the Department's efforts to protect the homeland from chemical, biological, radiological, and nuclear (CBRN) threats. CWMD brought together vast scientific, technical, acquisition, and operational expertise and functions from five distinct DHS elements into one unified headquarters office.

In 2018, CWMD's authorization merged legacy offices with vastly different missions and cultures with the goal of creating synergy and greater focus on critical CBRN missions. The transition was not always easy, but today I am proud to ask you to reauthorize a fully functional office with clear focus, strategic intent, and strong forward momentum that makes the Nation safer while meeting Congress's original intent.

CBRN threats are real and evolving. The COVID-19 pandemic has demonstrated the devastating impacts of a biological incident, including loss of life and extreme economic and social disruption. Over the past few years the international community has experienced the most sustained use of chemical weapons in recent history and the degradation of international norms. Nuclear threats endure, and an act of nuclear terrorism could have a catastrophic impact on the United States.

Today, CWMD serves as a focal point in the counter-weapons of mass destruction (WMD) mission space, strengthening DHS-wide coordination and federal interagency cooperation and providing direct support to DHS, federal interagency, and state, local, tribal, and territorial (SLTT) partners. Within DHS, CWMD maintains a dedicated focus and strategy on CBRN threats to ensure we do not lose sight of this core Department responsibility among the range of threats DHS components face every day.

Readiness for threats from WMD requires specialized expertise, skills, and equipment that are not easily bought off the shelf or taught overnight. We help ensure the full spectrum of federal and SLTT first responders and decision-makers are aware of CBRN threats and have the capabilities to protect against them. In direct support of federal, state, and local frontline responders in communities across the United States, CWMD addresses enduring and emerging threats by analyzing threat and risk, identifying gaps and requirements, developing and deploying technologies, and providing expertise, guidance, and training and exercises.

SAFEGUARDING THE NATION BY SUPPORTING STATE AND LOCAL PARTNERS

In the event of a CBRN threat or incident, SLTT first responders are nearly always first on the scene. CWMD partners with, and directly funds, high-risk urban areas throughout the Nation to prevent, detect, and mitigate the impacts of CBRN threats and incidents. Through flagship programs in over 30 jurisdictions, like BioWatch and Securing the Cities (STC), we work closely with front-line operators to detect CBRN threats early and enable quick action to save lives. With the easing of COVID-19 related restrictions over the past several months, we have re-energized our in-person engagements with our STC and BioWatch SLTT partners. This will continue.

STC helps detect and prevent radiological or nuclear terrorist attacks in high-risk urban areas through a cooperative agreement grant process. Since its authorization in December 2018, CWMD expanded the STC program from 6 to 14 cities. CWMD provides radiological and nuclear detection, training, technical support, and sustainment funding, which provides equipment recapitalization, continued training and exercise support, and is responsive to the feedback most commonly received from SLTT partners.

To date for Fiscal Year 2022 (FY22), STC facilitated 45 separate training events, providing classroom instruction and practical applications to an average of 100 law enforcement and first responder personnel per month. Training events ensure SLTT officers and responders are proficient with operating STC equipment while understanding basic protocols for evaluating alarms and secondary screenings. In FY22, the CWMD STC program team established a monthly seminar series for the STC region stakeholders. Seminars provide information on current and future initiatives and establish a key forum for regional stakeholders to network, share information, and collaborate on future projects in response to feedback received.

CWMD's BioWatch Program is designed to give warning of an airborne bioterrorism attack in over 30 major metropolitan areas across the United States in time to save lives. Already in FY22, CWMD has supported 59 exercises and drills in BioWatch jurisdictions, including full scale exercises with Seattle, Austin, Jacksonville, and Phoenix. These exercises and drills help test, evaluate, and improve coordination, communication, and decision making in the event of a bioterrorist attack.

On July 7, 2022, I chaired the inaugural meeting of the Stakeholder Environmental Biodetection Effort (SEBE) with senior officials from BioWatch jurisdictions and CWMD leadership to gain additional perspective about the current biological threat posture and any capability gaps. The SEBE is the mechanism by which key SLTT partners can provide individual input and advice to CWMD leadership on biothreat and biodetection capabilities, including preparedness efforts and future technology enhancements. For example, during this first meeting, the Cleveland BioWatch lead provided an implementation concept for how we can use BioWatch to achieve nationwide biodefense readiness priorities. Our SLTT partners not only provide world class technical expertise, but also best understand operational realities in their jurisdictions. It is vital to have their perspective and best practices inform our work to safeguard the Nation.

CWMD ensures first responders have access to information, tools, and training to help recognize and safely respond to CBRN threats. For example, CWMD partners with FEMA to bring accredited, on-demand CBRN training to SLTT stakeholders through the Center for Domestic

Preparedness in Alabama. “Recognizing and Responding to Toxic Gas Release” is available through the FEMA center. Another training related to biothreat sampling and response coordination is currently in development.

CWMD published its SLTT Engagement Strategy in September 2021, building on CWMD’s discrete programs and activities to articulate an integrated vision for support to our SLTT partners in preventing and responding to CBRN threats. CWMD is finalizing an accompanying Implementation Plan for fiscal years 2022-2025 that articulates specific actions and milestones across the full spectrum of the chemical, biological, radiological, and nuclear threat mission area with SLTT partners. CWMD programs worked with state and local partners to help shape milestones, such as the frequency with which CWMD SLTT convening bodies will meet.

We continue to work closely with our colleagues in the Office of Health Security (OHS) as they provide expert medical and public health guidance to these efforts and ensure appropriate SLTT stakeholders from medical and public health organizations remain key partners in our CBRN programs.

The enacted FY 2022 budget included approximately \$143.9 million of CWMD funding in support of SLTT partners. The FY23 budget request carries this forward with \$150.8 million funds requested. This is a \$6.8 million increase over the prior year, including increases of \$1.3M for BioWatch, \$4.6M for STC, and \$300k for Training, Exercises, and Readiness. This funding ensures robust programs for SLTTs.

RAISING AWARENESS OF CBRN THREATS ENABLES PLANNING AND RESPONSE

CWMD, in coordination with the FBI and other federal partners, provides actionable information, intelligence, and analysis on CBRN threats to federal and SLTT stakeholders, enhancing their awareness and informing planning and response. In continuous coordination and collaboration with the DHS Office of Intelligence and Analysis, CWMD serves as DHS’s intelligence lead for CBRN threats. Through our centers and programs, CWMD develops and distributes products, such as the CWMD Homeland Threat Assessment, intelligence bulletins, briefings, daily biosurveillance reports, and unclassified pamphlets and fact sheets on key CBRN threats.

Since January 2022, CWMD produced over 100 products for federal and SLTT officials. These products were disseminated via appropriate classified or secure channels, reaching upwards of 40,000 potential recipients. For example, in May 2022, CWMD developed and disseminated five “Threat Reference Aids,” which characterized threats first responders might face from specific chemical and biological agents. These products were shared with federal and SLTT partners through secure information sharing channels such as the Homeland Security Information Sharing Network, or HSIN. CWMD also distributed these resources directly to all state and major urban area fusion centers nationwide.

Additionally, in FY22, the National Biosurveillance Integration Center (NBIC) produced over 350 biosurveillance reports on significant biothreats, including COVID-19, Monkeypox, and Highly Pathogenic Avian Influenza. The reports are distributed to more than 425 SLTT agencies

and over 40 federal departments or agencies.

In March 2021, NBIC reestablished the NBIC Interagency Working Group, a collaborative body focused on developing interagency biosurveillance information integration capabilities. Key topics include new joint interagency projects and increasing NBIC's SLTT outreach and engagement efforts. The working group met eight times since the kickoff in March 2021 and will meet at least quarterly. This past October, I hosted the first meeting of a reconstituted NBIC Advisory Board. The advisory board consists of senior leaders at the Assistant Secretary or equivalent level from 15 departments and agencies and serves as a steering committee for the NBIC Interagency Working Group.

CBRN and other health security threats present dynamic challenges to U.S. national and homeland security, whether from nation states, terrorists, lone actors, or groups of domestic violent extremists. In our increasingly complex world, risks are evolving with the convergence of technologies, spillover of animal pathogens to human populations, access to dual use material and information, and the degradation of WMD norms.

Therefore, we must employ a range of other tools to help us defend the Homeland against CBRN threats effectively and efficiently. To help us do this, CWMD continues our strong partnership with the DHS Science and Technology Directorate and has reinvigorated a strategic CBRN risk assessment that integrates the findings of the intelligence and law enforcement communities with input from the scientific, medical, and public health communities. This rigorous, repeatable, and transparent process helps prioritize where the Office, and the Department, should focus resources to have the greatest impact and can assist other federal and SLTT partners with similar planning and prioritization decisions. Our use of risk information to inform our budget requests demonstrates one key aspect of the maturation of CWMD's work.

DETECTING CBRN THREATS IN TIME TO SAVE LIVES

CWMD's programs enable responders across the country to detect CBRN threats in time to act and save lives. CWMD develops and deploys specialized CBRN detection technologies and equipment to federal, state, and local operators across the United States as part of a layered defense against these threats.

At our borders, CWMD supports operational partners in detecting and reporting on CBRN weapons or related material so these threats can be safely interdicted, attributed, and destroyed. We provide DHS partners such as U.S. Customs and Border Protection (CBP), the TSA, and USCG with the equipment, tools, and training they need to carry out this mission, whether the material is coming in via land, air, or maritime pathways.

On a national scale, CWMD provides stewardship over the radiation portal monitors operated by CBP at all U.S. ports of entry to detect materials and prevent nuclear terrorist attacks. CWMD also develops and procures portable handheld devices used by specialized federal first responders such as the TSA Visible Intermodal Prevention and Response--or VIPR-- teams. From 2019 to 2022, CWMD procured approximately 39,000 personal radiation detectors for federal partners, including CBP, USCG, TSA, and ICE and nearly 10,000 for state and local partners. To date, CWMD has delivered detection devices through the STC program to 10 jurisdictions across the country.

Several programs support surge operations, incident response, National Special Security Events, and other special events. For example, the Mobile Detection Deployment Program supports state and local partners with detection assets in law enforcement operations. To date in FY22, MDDP deployed 147 times to 30 states and 3 U.S. territories, providing detection equipment, technical support, and personnel support to federal and SLTT law enforcement partners with both steady-state and special event monitoring for chemical, biological, radiological, and nuclear materials. Of the 147 deployments, 61 directly supported state and local law enforcement partners such as state, county, and city police departments and 88 supported federal law enforcement partners. Of the 88 federal deployments, more than 90 percent included participation from state and local agencies.

A key part of CWMD work involves developing and deploying technologies to operational partners at all levels of government. CWMD's R&D program manages efforts to identify, research, explore, develop, and demonstrate science and technologies that address gaps in the detection architecture, improve performance of CBRN detection and analysis, and reduce the operational burden of detection systems in the field. In addition to developing new CBRN sensors for our partners, the R&D program also works to improve detection through data analytics involving advanced algorithms employing machine learning or artificial intelligence. CWMD closely works with first responders and other operators to ensure transition of technologies to the field.

CHARTING A PATH FORWARD FOR BIODEFENSE

CWMD's largest biodefense programs provide warning of biological attacks or incidents with the goal of enabling a rapid response to save lives. Working closely with our FSLTT partners, we are reassessing the strategic direction of our programs and associated technology development efforts to ensure they can detect current and emerging threats and contribute to an effective, layered biodefense architecture for the homeland.

NBIC is housed within CWMD. NBIC integrates, analyzes, and distributes information about ongoing and emerging biological incidents to help ensure the Nation's responses at all levels of government are well-informed and minimize public health and economic impact. NBIC is unique in the biosurveillance community looking across all biological threats—naturally occurring, accidental, and deliberate use—across multiple sectors—wildlife, human, agriculture, and the environment. The Center also provides deep analysis on the impact of these biological threats to homeland security. Tools and portals developed by NBIC alongside its private sector and academic partners are shared with federal, state, and local partners—allowing for data aggregation and integration across organizations and leading to improved early warning.

While NBIC deals primarily in information and analytics, the BioWatch program focuses on environmental biodetection. Managed by CWMD, BioWatch is locally operated in over 30 U.S. cities and supports coordination among scientists, laboratory technicians, emergency managers, law enforcement officers, and public health officials. Although labor intensive, the BioWatch technology is proven and reliable – it is the same technology, Polymerase Chain Reaction (PCR), that is used in the most sensitive COVID-19 and other diagnostic testing. DHS modeling indicates BioWatch warning can reduce casualties by 75 percent by enabling faster

administration of medical countermeasures.

Spanning the entire local collection and testing cycle is a rigorous quality assurance program that ensures overall reliability and accuracy of test results for the BioWatch program. This allows decision-makers to respond with confidence in the event of a positive test result. Additionally, BioWatch preparedness programs support coordination of federal, state, and local responders across disciplines and municipal, city, and state boundaries.

CWMD remains steadfast in its commitment to ensure its biodetection technology is modern and capable of detecting current and emerging threats. For example, shortening the detection timeline would give responders more time to deploy lifesaving countermeasures. CWMD, with strong congressional support, has undertaken technology development efforts as part of the Biological Detection for the 21st Century (BD21) program to design, develop, and deploy networked detection systems that continuously monitor the air, collect real-time data, and employ data analytics to detect anomalies that may indicate the presence of biological agents in near real time. BD21 is currently in the Analyze/Select phase of the DHS acquisition lifecycle, which is focused on solution analysis and program planning. Key program activities underway include developing operational requirements, maturing system technology options, and conducting technology readiness assessments to prepare the program for follow-on system acquisitions.

While CWMD continues to pursue technology advancements, we are taking time to further examine strategic requirements for environmental biodetection. CWMD's vision for the next generation of biological threat detection is to expand beyond a specific list of traditional agents to address a broader range of risks. CWMD is developing an updated biodefense research and development roadmap toward this end. As we develop new technology, including agent-agnostic methods, we must ensure detection still occurs within a timeframe appropriate to advise treatment action, warn public health officials, and inform a response. Additionally, any new technology must be extremely reliable. The bar for community response officials to act on environmental detection is high, with little-to-no tolerance for false alarms.

While it is important to meet emerging threats with innovative technology, it is critical to reiterate that BioWatch works, is extremely reliable now, and should continue until suitable replacements are in place. The system sets a high bar for sensitivity with zero false positives over the past decade. Although there are some new biodetection technologies, CWMD and federal partners have yet to find a scalable, affordable, and deployable technology that meets the same or improved diagnostic standards as current capabilities. We continue to conduct extensive stakeholder engagement with federal, state, and local partners to maximize the impact of BioWatch and ensure any future technology developments are informed by local requirements and operational constraints.

The Office has also recently initiated a strategic review of DHS's biodefense posture to re-assess the Department's role in the broader biodefense enterprise and ensure alignment with national biodefense policy. This review will incorporate the lessons learned from COVID-19 and will be conducted in close coordination with DHS Components and incorporate the views of our federal, state, and local partners. Among other topics, the review will include an evaluation of how environmental biodetection fits into the broader national biodefense architecture.

ENSURING A COORDINATED APPROACH TO COUNTER CBRN THREATS

Under existing law and in this committee's critically necessary reauthorization bill, S.4465, CWMD is uniquely positioned to look across the CBRN mission space due, in part, to its authorities and ability to convene and coordinate with federal and SLTT partners through signature programs and interagency centers such as the National Technical Nuclear Forensics Center and NBIC. Through these efforts, CWMD helps to drive and support national level decision-making in response to CBRN threats.

CWMD leads interagency development of the Global Nuclear Detection Architecture – coordinating with the Departments of Energy, Defense, State, Justice, the Office of the Director of National Intelligence, the Nuclear Regulatory Commission, and other relevant agencies, to prevent and deter radiological and nuclear terrorism. CWMD is drafting the updated five-year GNDA Strategy in close coordination with the federal interagency that includes high level goals and objectives to help guide all GNDA partners in optimizing the use of R/N detection technologies, in collaboration with intelligence and law enforcement information. This effort is well underway with planned delivery this year. Consistent with GAO audit recommendations, CWMD is working to reconstitute a capability gap analysis function to help ensure GNDA-related programs most effectively reduce risk.

CWMD is energetically pushing federal efforts to safeguard the homeland from chemical threats through activities such as an upcoming classified workshop on Fourth Generation Agents. The upcoming August meeting will bring together 175 speakers and participants from the U.S. federal, state, and local interagency community to develop a whole-of-government common understanding of the threat and the state of the science and identify solutions to achieve readiness. Additionally, CWMD's new Countering Emerging and Enduring Biological and Chemical Threats program, funded by Congress at \$2.7 million in FY22, seeks to help ensure the U.S. Government is countering enduring and emerging biological and chemical threats in a cohesive, comprehensive, and effective manner through studies and workshops for SLTT and other partners.

Within DHS, CWMD drives coordinated action to counter CBRN threats. We recently finalized a Department-wide directive clarifying DHS responsibilities related to response to terrorist incidents in the United States and overseas and have met with senior leadership from Operating and Support Components to ensure continued focus on this issue.

Working closely with DHS Components, CWMD leads development of DHS-wide strategies and policies on CBRN issues and serves as the central DHS touchpoint for our federal partners in this mission space, including DOD, FBI, DOE, HHS, and others.

CWMD also leads development and prioritization of Department operational requirements to counter CBRN threats through the WMD Requirements Oversight Council, a coordination body composed of senior level representatives from all DHS Operating and relevant Support Components. This body shapes coordinated departmental decisions regarding counter-CBRN capabilities, from research and development through acquisition and sustainment.

CONCLUSION

Given the potentially devastating nature of CBRN threats, reauthorization of CWMD, supported in S. 4465, is vital to continue the unique roles above and ensure continuity of critical programs supporting frontline operators and local communities. CWMD's reauthorization is also considered a key morale and retention issue for the office's highly skilled and highly in-demand workforce.

We are fully engaged with HSGAC staff on the bill, S. 4465, introduced by Chairman Peters and Ranking Member Portman. We are grateful for this strong and long tie to the Committee to ensure the Nation's security in CBRN. The CWMD reauthorization makes a difference across the federal interagency, the Department, and to our many SLTT partners.

We particularly appreciate the Committee's addition of delineated responsibilities for chemical and biological detection and reporting, as well as the proposed codification of our "end-to-end" CBRN-related support roles within DHS.

On behalf of the CWMD staff who work tirelessly to keep the United States and the American people safe from CBRN and other health security threats, I look forward to your continued support and stand ready to assist in the ongoing CWMD reauthorization process.

Chairman Peters, Ranking Member Portman, and distinguished Members of the Committee, thank you again for your attention to this important mission and for the opportunity to discuss CWMD's work.

I look forward to answering your questions.