

# Department of Homeland Security

## *Countering Weapons of Mass Destruction*

### *Budget Overview*



**Fiscal Year 2025**

**Congressional Justification**

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**Countering Weapons of Mass Destruction  
Appropriation Organization Structure**

	<b>Level</b>	<b>Fund Type (* Includes Defense Funding)</b>
<b>Countering Weapons of Mass Destruction</b>	<b>Component</b>	
<b>Operations and Support</b>	<b>Appropriation</b>	
Mission Support	PPA	Discretionary - Appropriation
Capability and Operational Support	PPA	Discretionary - Appropriation
<b>Procurement, Construction, and Improvements</b>	<b>Appropriation</b>	
Large Scale Detection Systems	PPA	
Radiation Portal Monitor Program (RPMP)	Investment,PPA Level II	Discretionary - Appropriation
Radiation Portal Monitor Replacement Program (RPM RP)	Investment,PPA Level II	Discretionary - Appropriation
International Rail (IRAIL)	Investment,PPA Level II	Discretionary - Appropriation
Common Viewer	Investment,PPA Level II	Discretionary - Appropriation
Radiation Portal Technology Enhancement and Replacement Program (RAPTER)	Investment,PPA Level II	Discretionary - Appropriation
Next Generation Mobile	Investment,PPA Level II	Discretionary - Appropriation
Border Patrol Checkpoint Program	Investment,PPA Level II	Discretionary - Appropriation
Portable Detection Systems	PPA	
Personal Radiation Detector	Investment,PPA Level II	Discretionary - Appropriation
Basic Handheld RIIDs	Investment,PPA Level II	Discretionary - Appropriation
Rapid CBRN Equipping	Investment,PPA Level II	Discretionary - Appropriation
Portable Detection Equipment End Items	Investment,PPA Level II	Discretionary - Appropriation
Backpack SLEP	Investment,PPA Level II	Discretionary - Appropriation
Biological Detection for the 21st Century (BD-21)	Investment,PPA Level II	Discretionary - Appropriation
Integrated Operations Assets and Infrastructure	PPA	
Medical Information Exchange (MIX)	Investment,PPA Level II	Discretionary - Appropriation
<b>Research and Development</b>	<b>Appropriation</b>	
Transformational Research and Development	PPA	
Transformational Research and Development	R&D Project,PPA Level II	Discretionary - Appropriation
Technical Forensics	PPA	

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Technical Forensics	R&D Project,PPA Level II	Discretionary - Appropriation
Detection Capability Development	PPA	
Detection Capability Development	R&D Project,PPA Level II	Discretionary - Appropriation
Rapid Capabilities	PPA	
Rapid Capabilities	R&D Project,PPA Level II	Discretionary - Appropriation
<b>Federal Assistance</b>	<b>Appropriation</b>	
Training, Exercises, and Readiness	PPA	Discretionary - Appropriation
Securing the Cities	PPA	Discretionary - Appropriation
Biological Support	PPA	Discretionary - Appropriation

**Countering Weapons of Mass Destruction  
Budget Comparison and Adjustments**

**Appropriation and PPA Summary**

*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>
<b>Operations and Support</b>	<b>\$151,970</b>	<b>\$151,970</b>	<b>\$160,163</b>
Mission Support	\$85,570	\$85,570	\$85,588
Capability and Operational Support	\$66,400	\$66,400	\$74,575
<b>Procurement, Construction, and Improvements</b>	<b>\$75,204</b>	<b>\$75,204</b>	<b>\$33,397</b>
Large Scale Detection Systems	\$66,137	\$66,137	\$33,397
Radiation Portal Monitor Program (RPMP)	\$21,942	\$21,942	\$13,197
Radiation Portal Monitor Replacement Program (RPM RP)	\$34,530	\$34,530	\$16,700
International Rail (IRAIL)	\$9,665	\$9,665	\$3,500
Portable Detection Systems	\$9,067	\$9,067	-
Basic Handheld RIIDs	\$3,000	\$3,000	-
Portable Detection Equipment End Items	\$6,067	\$6,067	-
<b>Research and Development</b>	<b>\$64,615</b>	<b>\$64,615</b>	<b>\$60,938</b>
Transformational Research and Development	\$37,004	\$37,004	\$33,820
Transformational Research and Development	\$37,004	\$37,004	\$33,820
Technical Forensics	\$2,000	\$2,000	\$6,530
Technical Forensics	\$2,000	\$2,000	\$6,530
Detection Capability Development	\$25,611	\$25,611	\$20,588
Detection Capability Development	\$25,611	\$25,611	\$20,588
<b>Federal Assistance</b>	<b>\$139,183</b>	<b>\$139,183</b>	<b>\$163,524</b>
Training, Exercises, and Readiness	\$19,559	\$19,559	\$23,261
Securing the Cities	\$34,628	\$34,628	\$36,366
Biological Support	\$84,996	\$84,996	\$103,897
<b>Total</b>	<b>\$430,972</b>	<b>\$430,972</b>	<b>\$418,022</b>

## Countering Weapons of Mass Destruction Comparison of Budget Authority and Request

*(Dollars in Thousands)*

	FY 2023 Enacted			FY 2024 Annualized CR			FY 2025 President's Budget			FY 2024 to FY 2025 Total Changes		
	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount
Operations and Support	269	252	\$151,970	269	252	\$151,970	259	243	\$160,163	(10)	(9)	\$8,193
Procurement, Construction, and Improvements	-	-	\$75,204	-	-	\$75,204	-	-	\$33,397	-	-	(\$41,807)
Research and Development	-	-	\$64,615	-	-	\$64,615	-	-	\$60,938	-	-	(\$3,677)
Federal Assistance	-	-	\$139,183	-	-	\$139,183	-	-	\$163,524	-	-	\$24,341
<b>Total</b>	<b>269</b>	<b>252</b>	<b>\$430,972</b>	<b>269</b>	<b>252</b>	<b>\$430,972</b>	<b>259</b>	<b>243</b>	<b>\$418,022</b>	<b>(10)</b>	<b>(9)</b>	<b>(\$12,950)</b>
Subtotal Discretionary - Appropriation	269	252	\$430,972	269	252	\$430,972	259	243	\$418,022	(10)	(9)	(\$12,950)

### Component Budget Overview

The FY 2025 President’s Budget includes \$418.0M; 259 positions; and 243 full-time equivalents (FTE) for the Countering Weapons of Mass Destruction Office (CWMD). This funding level represents a decrease of 10 positions and 9 FTE, and an overall decrease of \$12.9M below the FY 2024 Annualized CR.

CWMD was established by the *Homeland Security Act of 2002* (P.L. 107-296) as amended by the *Countering Weapons of Mass Destruction Act of 2018* (CWMD Act) (P.L. 115-387) to elevate and focus counter-weapon of mass destruction (WMD) missions for the Department and to provide a focal point for the interagency. CWMD’s mission is to enhance and coordinate DHS strategic and policy efforts with Federal, State, local, tribal, and territorial (FSLTT) governments and the private sector to prevent WMD use against the Homeland and promote readiness against chemical, biological, radiological, and nuclear (CBRN) threats. CWMD enhances the ability of high-risk urban areas across the United States to detect and prevent terrorist attacks using nuclear or other radiological material. CWMD is responsible for the development and implementation of the Global Nuclear Detection Architecture (GNDA), as well as coordination and support for DHS chemical and biological defense activities.

The FY 2025 President’s Budget balances the requirements of DHS Components, SLTT partners, and the CWMD foundational activities that coordinate, strengthen, and deliver capabilities to reduce the threat posed by WMDs and CBRN threats. CWMD will continue the Securing the Cities, the National Biosurveillance Integration Center (NBIC), Environmental Biodetection, and the Radiation Portal Monitor Enterprise.

**Countering Weapons of Mass Destruction  
Budget Authority and Obligations**

*(Dollars in Thousands)*

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Enacted/Request</b>	<b>\$430,972</b>	<b>\$430,972</b>	<b>\$418,022</b>
Carryover - Start of Year	\$116,108	\$120,473	\$84,158
Recoveries	\$6,849	-	-
Rescissions to Current Year/Budget Year	(\$350)	-	-
Net Sequestered Resources	-	-	-
Reprogramming/Transfers	(\$2,422)	-	-
Supplementals	-	-	-
<b>Total Budget Authority</b>	<b>\$551,157</b>	<b>\$551,445</b>	<b>\$502,180</b>
Collections - Reimbursable Resources	\$221	\$225	\$228
Collections - Other Sources	-	-	-
<b>Total Budget Resources</b>	<b>\$551,378</b>	<b>\$551,670</b>	<b>\$502,408</b>
Obligations (Actual/Estimates/Projections)	\$430,681	\$467,512	\$502,408
<b>Personnel: Positions and FTE</b>			
Enacted/Request Positions	269	269	259
Enacted/Request FTE	252	252	243
<b>Onboard and Actual FTE</b>			
Onboard (Actual/Estimates/Projections)	236	269	259
FTE (Actual/Estimates/Projections)	221	248	243

**Countering Weapons of Mass Destruction  
Collections – Reimbursable Resources**

*(Dollars in Thousands)*

	FY 2023 Enacted			FY 2024 Annualized CR			FY 2025 President's Budget		
	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount
Department of Homeland Security - Management Directorate	-	-	\$221	-	-	\$225	-	-	\$228
<b>Total Collections</b>	-	-	\$221	-	-	\$225	-	-	\$228



**Countering Weapons of Mass Destruction  
Personnel Compensation and Benefits**

**Pay Summary**  
*(Dollars in Thousands)*

	FY 2023 Enacted				FY 2024 Annualized CR				FY 2025 President's Budget				FY 2024 to FY 2025 Total			
	Pos.	FTE	Amount	Rate	Pos.	FTE	Amount	Rate	Pos.	FTE	Amount	Rate	Pos.	FTE	Amount	Rate
Operations and Support	269	252	\$56,851	\$205.33	269	252	\$56,851	\$205.33	259	243	\$59,572	\$222.44	(10)	(9)	\$2,721	\$17.11
<b>Total</b>	<b>269</b>	<b>252</b>	<b>\$56,851</b>	<b>\$205.33</b>	<b>269</b>	<b>252</b>	<b>\$56,851</b>	<b>\$205.33</b>	<b>259</b>	<b>243</b>	<b>\$59,572</b>	<b>\$222.44</b>	<b>(10)</b>	<b>(9)</b>	<b>\$2,721</b>	<b>\$17.11</b>
Subtotal Discretionary - Appropriation	269	252	\$56,851	\$205.33	269	252	\$56,851	\$205.33	259	243	\$59,572	\$222.44	(10)	(9)	\$2,721	\$17.11

**Pay by Object Class**  
*(Dollars in Thousands)*

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget	FY 2024 to FY 2025 Change
11.1 Full-time Permanent	\$37,518	\$37,518	\$39,142	\$1,624
11.3 Other than Full-time Permanent	\$197	\$197	\$178	(\$19)
11.5 Other Personnel Compensation	\$750	\$750	\$815	\$65
11.8 Special Personal Services Payments	\$5,107	\$5,107	\$5,519	\$412
12.1 Civilian Personnel Benefits	\$13,279	\$13,279	\$13,918	\$639
<b>Total - Personnel Compensation and Benefits</b>	<b>\$56,851</b>	<b>\$56,851</b>	<b>\$59,572</b>	<b>\$2,721</b>
<b>Positions and FTE</b>				
Positions - Civilian	269	269	259	(10)
FTE - Civilian	252	252	243	(9)

**Countering Weapons of Mass Destruction  
Non Pay Budget Exhibits**

**Non Pay Summary**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
Operations and Support	\$95,119	\$95,119	\$100,591	\$5,472
Procurement, Construction, and Improvements	\$75,204	\$75,204	\$33,397	(\$41,807)
Research and Development	\$64,615	\$64,615	\$60,938	(\$3,677)
Federal Assistance	\$139,183	\$139,183	\$163,524	\$24,341
<b>Total</b>	<b>\$374,121</b>	<b>\$374,121</b>	<b>\$358,450</b>	<b>(\$15,671)</b>
Subtotal Discretionary - Appropriation	\$374,121	\$374,121	\$358,450	(\$15,671)

**Non Pay by Object Class**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
21.0 Travel and Transportation of Persons	\$2,280	\$2,280	\$3,653	\$1,373
23.3 Communications, Utilities, & Miscellaneous	\$92	\$92	\$4,331	\$4,239
24.0 Printing and Reproduction	\$48	\$48	\$48	-
25.1 Advisory & Assistance Services	\$99,546	\$99,546	\$112,513	\$12,967
25.2 Other Services from Non-Federal Sources	\$51,315	\$51,315	\$36,874	(\$14,441)
25.3 Other Purchases of goods and services	\$31,727	\$31,727	\$37,259	\$5,532
25.4 Operations & Maintenance of Facilities	\$150	\$150	\$150	-
25.5 Research & Development Contracts	\$39,955	\$39,955	\$38,178	(\$1,777)
25.7 Operation & Maintenance of Equipment	\$19,769	\$19,769	\$25,865	\$6,096
26.0 Supplies & Materials	\$24,266	\$24,266	\$38,425	\$14,159
31.0 Equipment	\$53,703	\$53,703	\$14,519	(\$39,184)
41.0 Grants, Subsidies, and Contributions	\$51,270	\$51,270	\$46,635	(\$4,635)
<b>Total - Non Pay Budget Object Class</b>	<b>\$374,121</b>	<b>\$374,121</b>	<b>\$358,450</b>	<b>(\$15,671)</b>

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**Countering Weapons of Mass Destruction  
Supplemental Budget Justification Exhibits**

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**FY 2025 Counter Unmanned Aerial Systems (CUAS) Funding**

The FY 2025 President's Budget for CWMD does not include any dedicated resources for Counter Unmanned Aerial Systems programs.

**Countering Weapons of Mass Destruction  
 FY 2023 – FY2025 Cyber Security Funding**  
*(Dollars in Thousands)*

<b>NIST Framework</b>	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President’s Budget</b>
Detect	\$256	\$256	\$324
Identify	\$7,097	\$7,097	\$7,109
Protect	\$11,264	\$11,264	\$14,322
Recover	\$0	\$0	\$200
Respond	\$585	\$585	\$750
<b>Grand Total</b>	<b>\$19,202</b>	<b>\$19,202</b>	<b>\$22,705</b>

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**Countering Weapons of Mass Destruction  
Status of Congressionally Requested Studies, Reports and Evaluations**

The FY 2025 President's Budget for CWMD does not include any Congressionally Requested Studies, Reports and Evaluations.

## Countering Weapons of Mass Destruction Authorized/Unauthorized Appropriations

Budget Activity <i>(Dollars in Thousands)</i>	Last year of Authorization	Authorized Level	Appropriation in Last Year of Authorization	FY 2025 President's Budget
	Fiscal Year	Amount	Amount	Amount
<b>Operations and Support</b>	N/A	N/A	N/A	<b>\$160,163</b>
Mission Support	N/A	N/A	N/A	\$85,588
Capability and Operational Support	N/A	N/A	N/A	\$74,575
<b>Procurement, Construction, and Improvements</b>	N/A	N/A	N/A	<b>\$33,397</b>
Portable Detection Systems	N/A	N/A	N/A	0
Large Scale Detection Systems	N/A	N/A	N/A	\$33,397
<b>Research and Development</b>	N/A	N/A	N/A	<b>\$60,938</b>
Transformational Research and Development	N/A	N/A	N/A	\$33,820
Technical Forensics	N/A	N/A	N/A	\$6,530
Detection Capability Development	N/A	N/A	N/A	\$20,588
<b>Federal Assistance</b>	N/A	N/A	N/A	<b>\$163,524</b>
Training, Exercises, and Readiness	N/A	N/A	N/A	\$23,261
Securing the Cities	N/A	N/A	N/A	\$36,366
Biological Support	N/A	N/A	N/A	\$103,897
<b>Total Direct Authorization/Appropriation</b>	N/A	N/A	N/A	<b>\$418,022</b>

The Countering Weapons of Mass Destruction Act of 2018 (P.L. 115-387) (Dec. 21, 2018) authorizing the creation of the CWMD Office did not specify funding levels for the CWMD Office.

## Countering Weapons of Mass Destruction Proposed Legislative Language

### Operations and Support

For necessary expenses of the Countering Weapons of Mass Destruction Office for operations and support, [\$64,163,000] *\$160,163,000*, of which [\$50,446,000] *\$50,446,000* shall remain available until September 30, [2025] *2026*: Provided, that not to exceed \$2,250 shall be for official reception and representation expenses.

Language Provision	Explanation
...[\$160,163,000] <i>\$160,163,000</i> ,...	Dollar and fiscal year change only. No substantial change proposed.
.... [2025] <i>2026</i> ...	Fiscal year change only. No substantial change proposed. Two-year period of availability for the Capability and Operational Support PPA. The two-year funding is required because of the extended time needed for proper procurement and deployment of portable detection systems, as well as of investment and support activities for data integration, developing complex strategies for capability building across the chemical, biological, radiological, and nuclear security threat spectrum, biosurveillance activities, partnership coordination, and supporting test and evaluation of major equipment procurements.

### Procurement, Construction, and Improvements

For necessary expenses of the Countering Weapons of Mass Destruction Office for procurement, construction, and improvements, [\$42,338,000] *\$33,397,000*, to remain available until September 30, [2026] *2027*.

Language Provision	Explanation
...[\$42,338,000] <i>\$33,397,000</i> ...	Dollar change only. No substantial change proposed.
...[2026] <i>2027</i> .	Fiscal year change only. No substantial change proposed.

### Research and Development

For necessary expenses of the Countering Weapons of Mass Destruction Office for research and development, [\$60,938,000] *\$60,938,000*, to remain available until September 30, [2026] *2027*.

Language Provision	Explanation
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...[\$60,938,000] \$60,938,000...	Dollar change only. No substantial change proposed.
...[2026] 2027.	Fiscal year change only. No substantial change proposed. Based on average time to identify and complete the scope of work for R&D projects, the FY 2025 CWMD R&D account is three-year funding. Three-year funding allows for sufficient time to define research topics, solicit for performer(s), conduct source selection, award contract(s), initiate research, identify technology approaches, conduct repeated refinement of the technological approaches and demonstrate the technology in the relevant operational environment.

**Federal Assistance**

For necessary expenses of the Countering Weapons of Mass Destruction Office for Federal assistance through grants, contracts, cooperative agreements, and other activities, [\$160,470,000] \$163,524,000, to remain available until September 30, [2026] 2027; *Provided further, That of the amounts made available under this heading, \$2,000,000 is designated by the Congress as being for an emergency requirement pursuant to section 251(b)(2)(A)(i) of the Balanced Budget and Emergency Deficit Control Act of 1985: Provided further, That such amount shall be available only if the President designates such amount as an emergency requirement pursuant to such section 251(b)(2)(A)(i).*

Language Provision	Explanation
...[\$139,183,000] \$163,524,000...	Dollar change only. No substantial change proposed.
...[2026] 2027.	Fiscal year change only. No substantial change proposed.
... <i>Provided further, That of the amounts made available under this heading, \$2,000,000 is designated by the Congress as being for an emergency requirement pursuant to section 251(b)(2)(A)(i) of the Balanced Budget and Emergency Deficit Control Act of 1985: Provided further, That such amount shall be available only if the President designates such amount as an emergency requirement pursuant to such section 251(b)(2)(A)(i).</i>	This provision designates a portion of funding in this account as an emergency requirement. This "shifted base" funding concept was included in 2023 appropriations and was also part of an agreement associated with the Fiscal Responsibility Act (FRA).



# Department of Homeland Security

## *Countering Weapons of Mass Destruction*

### *Strategic Context*



**Fiscal Year 2025**

**Congressional Justification**

## Countering Weapons of Mass Destruction Strategic Context

### Component Overview

The Countering Weapons of Mass Destruction Office (CWMD) leads DHS efforts and coordinates with domestic and international partners to safeguard the United States against CBRN threats.

The strategic context presents the performance budget by tying together programs with performance measures that gauge the delivery of results to our stakeholders. DHS has integrated a mission and mission support programmatic view into a significant portion of the Level 1 Program, Project, or Activities (PPAs) in the budget. A mission program is a group of activities acting together to accomplish a specific high-level outcome external to DHS, and includes operational processes, skills, technology, human capital, and other resources. Mission support programs are those that are cross-cutting in nature and support multiple mission programs. Performance measures associated with CWMD's mission support program are presented in two measure sets, strategic and management measures. Strategic measures communicate results delivered for our agency mission and are considered our Government Performance and Results Act Modernization Act (GPRAMA) measures. Additional supporting measures, known as management measures, are displayed to enhance connections to resource requests.

**Capability and Operational Support:** Through its Capability and Operational Support Activities, CWMD analyzes sensor data, defines requirements, provides test and evaluation capabilities, and procures chemical, biological, radiological, and nuclear detection equipment that can be carried, worn, or easily moved to support operational end-users. CWMD manages and supports national biosurveillance and detection capabilities, coordination, and preparedness for biological and chemical events to help communities build capabilities to detect, identify, prevent, and protect against attacks using illicit materials.

#### Strategic Measures

<b>Measure Name:</b>	Number of High Risk Urban Areas that have achieved Full Operational Capability to combat radiological/nuclear threats through the Securing the Cities Program						
<b>Strategic Alignment:</b>	1.4 : Identify and Counter Emerging and Chemical, Biological, Radiological, and Nuclear Threats						
<b>Description:</b>	This measure assesses the number of High-Risk Urban Areas that have achieved Full Operational Capability through the Securing the Cities (STC) program. The STC program seeks to give State and local agencies the ability to detect and deter nuclear terrorism. The program provides funding for equipment, such as radiation detectors, and training during an initial five-year capability development period. Funding for sustainment beyond five years is available to participating high risk urban areas contingent upon satisfying criteria specified in the STC Implementation Plan; includes a region’s ongoing commitment to the mission and successful completion of a series of validation exercises that include one Tabletop Exercise (TTX) and one Full Scale Exercise (FSE). This performance measure aligns with the CWMD Office mission as defined in Public Law 115-387, Countering Weapons of Mass Destruction Act of 2018.						
<b>Fiscal Year:</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Targets:</b>	---	---	FOUO	FOUO	FOUO	FOUO	FOUO
<b>Results:</b>	---	---	FOUO	FOUO	FOUO	FOUO	FOUO
<b>Explanation of Result:</b>	The Securing the Cities program provides financial and non-financial assistance to State, local, and tribal organizations in high-risk major metropolitan areas to be better prepared against radiological and nuclear threats to help protect U.S. citizens. Due to the sensitivity of the information, the results are FOUO.						

**Countering Weapons of Mass Destruction**

**Strategic Context**

<b>Measure Name:</b>	Percent of Acquisition programs to counter chemical, biological, radiological, and nuclear (CBRN) threats that meet their Acquisition Program Baseline (APB) schedule, cost, and performance thresholds						
<b>Strategic Alignment:</b>	1.4 : Identify and Counter Emerging and Chemical, Biological, Radiological, and Nuclear Threats						
<b>Description:</b>	This metric will assess two things: (1) programs having APB schedule thresholds which remain to be achieved, and programs that have completed their final baselined key event during the current annual evaluation period and (2) programs that have not yet reached FOC and those that have reached FOC during the current annual evaluation period, defined as CWMD and all supported Component(s) having signed an FOC Achievement Memorandum.						
<b>Fiscal Year:</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Targets:</b>	---	---	---	---	100%	100%	100%
<b>Results:</b>	---	---	---	---	86%	TBD	TBD
<b>Explanation of Result:</b>	CWMD has seven acquisition programs with baselines against which to assess cost, schedule, and performance. All are meeting their performance thresholds, but only six out of seven (86 percent) are meeting their schedule and cost thresholds. Due to contractual protest and technical risks, the RPM RP program is currently in breach of both cost and schedule thresholds.						
<b>Corrective Action:</b>	The RPM RP program is in the process of re-baselining. Once updates to the program’s IMS and LCCE are completed, the program will submit an updated APB and all required documentation to leadership for review/required approvals to release the program from breach status. The program is targeting completion of the breach remediation activities in 2024.						

*Management Measures*

<b>Measure Name:</b>	Number of Biowatch exercises to increase the number of exercises conducted each fiscal year in Biowatch jurisdictions						
<b>Strategic Alignment:</b>	1.4 : Identify and Counter Emerging and Chemical, Biological, Radiological, and Nuclear Threats						
<b>Description:</b>	The measure quantifies the number of Homeland Security Exercise and Evaluation Program (HSEEP) exercises that CWMD conducts in BioWatch jurisdictions. The range in the measure target is the number of HSEEP events conducted throughout all the BioWatch jurisdictions visited, rather than the number of jurisdictions visited. The numbers in the target indicate the number of jurisdictions conducting exercises broken down by size (small, medium, and large). Small jurisdictions are defined as having a Metropolitan Statistical Area (MSA) population less than 500,000 people, medium jurisdictions are defined as having an MSA population between 500,000 and 1,000,000 people, and large jurisdictions are defined as an MSA population greater than 1,000,000 people. These numbers are based upon estimates as of 1 April 2020 from <a href="https://www2.census.gov/programs-surveys/popest/tables/2020-2021/cities/totals/SUB-IP-EST2021-ANNRNL.xlsx">https://www2.census.gov/programs-surveys/popest/tables/2020-2021/cities/totals/SUB-IP-EST2021-ANNRNL.xlsx</a>						
<b>Fiscal Year:</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Targets:</b>	---	---	---	---	FOUO	FOUO	FOUO
<b>Results:</b>	---	---	---	---	FOUO	FOUO	FOUO
<b>Explanation of Result:</b>	Due to the sensitivity of the information, the results are FOUO.						

<b>Measure Name:</b>	Number of Federal, State, local, tribal, and territorial (FSLTT) stakeholders receiving the National Biosurveillance Integration Center’s reports						
<b>Strategic Alignment:</b>	1.4 : Identify and Counter Emerging and Chemical, Biological, Radiological, and Nuclear Threats						
<b>Description:</b>							

**Countering Weapons of Mass Destruction**

**Strategic Context**

	This measure assesses growth of Federal, State, local, tribal, and territorial (FSLTT) stakeholders receiving the National Biosurveillance Integration Center’s reports. Stakeholder growth includes new individuals or groups receiving NBIC reports as well as removal of any recipients electing not to receive future reports or for which the email address is no longer valid. Only active stakeholder accounts are measured as the total recipient population. Assessing the percentage of growth also results in a greater annual effort even if the measure target percentage remains unchanged. This is due to having achieved an annual target of growth, the base is now larger, and the following year will have to achieve a greater number of active accounts than the year prior although the target percentage goal did not change.						
<b>Fiscal Year:</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Targets:</b>	---	---	---	---	4	4	4
<b>Results:</b>	---	---	---	---	2,356	TBD	TBD
<b>Explanation of Result:</b>	Based off of new accounts only, NBIC was on track to exceed the target measure, however we have been experiencing issues with our email delivery system that resulted in more accounts being removed than expected. NBIC is reviewing its systems and processes for distributing the Integration Center’s reports. If based upon this review NBIC determines the FY 2023 result is a system issue (e.g., email distribution error), NBIC will update this figure (as needed). Alternatively, if the FY 2023 result is not the product of a system issue, then NBIC and DHS will coordinate further to reevaluate targets.						

<b>Measure Name:</b>	Percent of BioWatch laboratories meeting expectation for scored proficiency tests to ensure they can identify known microorganisms of interest						
<b>Strategic Alignment:</b>	1.2 : Prevent and Disrupt Terrorist and Nation State Threats						
<b>Description:</b>	This measure gauges whether BioWatch laboratories evaluating environmental samples for biological agents meet program quality assurance (QA) expectations to ensure they can identify known microorganisms of interest. It is essential that Federal, State, and local agencies have high confidence in the specificity and sensitivity of a BioWatch detection to allow them to make critical decisions in a timely manner to ensure public safety. A robust and respected quality assurance process provides that assurance and when discrepancies are found, aides the lab in correcting deficiencies. The total number of proficiencies may also vary annually by laboratory.						
<b>Fiscal Year:</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Targets:</b>	---	---	96%	96%	96%	96%	96%
<b>Results:</b>	---	---	99%	96%	98%	TBD	TBD
<b>Explanation of Result:</b>	In FY 2023, 98 percent of BioWatch laboratories met the expectation for scored proficiency tests to ensure they are able to identify known microorganisms of interest.						

**Countering Weapons of Mass Destruction**

**Strategic Context**

<b>Measure Name:</b>	Percent of intelligence requirements answered in the annual program of analysis						
<b>Strategic Alignment:</b>	1.4 : Identify and Counter Emerging and Chemical, Biological, Radiological, and Nuclear Threats						
<b>Description:</b>	This measure assesses consistency of program responsiveness to customer requirements. Intelligence customer requirements fall into one of three categories: (1) Directed Production: Products directed and/or endorsed by DHS-CWMD Front Office leadership for the purpose of informing upcoming strategic initiatives; (2) Planned Production: Customer requested products that have been vetted and slotted for production during the upcoming FY; and (3) ADHOC Production: Products generated as the result of new and/or evolving threat information that informs an Intelligence Priority or mission relevant key intelligence question. Additionally, ADHOC requirements also refer to Products generated as result of emerging need reflected from a specific customer request.						
<b>Fiscal Year:</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Targets:</b>	---	---	---	---	75%	75%	75%
<b>Results:</b>	---	---	---	---	75%	TBD	TBD
<b>Explanation of Result:</b>	In FY 2023, this measure met its target.						

# Department of Homeland Security

## *Countering Weapons of Mass Destruction*

### *Operations and Support*



**Fiscal Year 2025**

**Congressional Justification**

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**Operations and Support**

**Budget Comparison and Adjustments**

**Comparison of Budget Authority and Request**

*(Dollars in Thousands)*

	FY 2023 Enacted			FY 2024 Annualized CR			FY 2025 President's Budget			FY 2024 to FY 2025 Total Changes		
	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount
Mission Support	269	252	\$85,570	269	252	\$85,570	259	243	\$85,588	(10)	(9)	\$18
Capability and Operational Support	-	-	\$66,400	-	-	\$66,400	-	-	\$74,575	-	-	\$8,175
<b>Total</b>	<b>269</b>	<b>252</b>	<b>\$151,970</b>	<b>269</b>	<b>252</b>	<b>\$151,970</b>	<b>259</b>	<b>243</b>	<b>\$160,163</b>	<b>(10)</b>	<b>(9)</b>	<b>\$8,193</b>
Subtotal Discretionary - Appropriation	269	252	\$151,970	269	252	\$151,970	259	243	\$160,163	(10)	(9)	\$8,193

The Countering Weapons of Mass Destruction Office (CWMD) Operations and Support (O&S) appropriation funds activities to counter weapons of mass destruction (WMD) and chemical, biological, radiological, and nuclear (CBRN) threats, provide situational awareness, and support decision making for DHS leadership and Federal, State, local, tribal, and territorial (FSLTT) partners. O&S also funds the procurement of CBRN portable detection devices for DHS operational components and special mission units as well as day-to-day operation of the organization, including salaries, travel, and enterprise services.

The appropriation is broken out into the following Programs, Projects, and Activities (PPA):

**Mission Support:** The Mission Support PPA funds the Office of the Assistant Secretary and Enterprise Services. This PPA funds support compensation and benefits for CWMD employees; maintains enterprise leadership, management, and business administration for daily operations; and supports CWMD regional personnel. Key capabilities include workforce management, financial management, physical and personnel security, goods and services acquisition, information technology, compliance monitoring, property and assets management, communications, and general management and administration.

**Capability & Operational Support (C&OS):** The C&OS PPA funds programs and activities that provide situational awareness and decision support for DHS leadership and Federal partners, the National Biosurveillance Integration Center (NBIC), the CWMD test and evaluation infrastructure, and procurement of portable detection systems. Additionally, it supports CWMD capabilities through the development of strategies, plans, and policy, requirements, acquisition expertise, capability and threat analysis, and provides outreach to, and operational support for, FSLTT partners.



**Operations and Support**  
**Budget Authority and Obligations**  
*(Dollars in Thousands)*

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Enacted/Request</b>	<b>\$151,970</b>	<b>\$151,970</b>	<b>\$160,163</b>
Carryover - Start of Year	\$24,219	\$5,983	-
Recoveries	\$666	-	-
Rescissions to Current Year/Budget Year	(\$350)	-	-
Net Sequestered Resources	-	-	-
Reprogramming/Transfers	\$351	-	-
Supplementals	-	-	-
<b>Total Budget Authority</b>	<b>\$176,856</b>	<b>\$157,953</b>	<b>\$160,163</b>
Collections - Reimbursable Resources	-	-	-
Collections - Other Sources	-	-	-
<b>Total Budget Resources</b>	<b>\$176,856</b>	<b>\$157,953</b>	<b>\$160,163</b>
Obligations (Actual/Estimates/Projections)	\$170,649	\$157,953	\$160,163
<b>Personnel: Positions and FTE</b>			
Enacted/Request Positions	269	269	259
Enacted/Request FTE	252	252	243
<b>Onboard and Actual FTE</b>			
Onboard (Actual/Estimates/Projections)	236	269	259
FTE (Actual/Estimates/Projections)	221	248	243

The Reprogrammings/Transfers line is offset by the Rescission line. The delta is due to rounding.

**Operations and Support  
Summary of Budget Changes**

*(Dollars in Thousands)*

	Positions	FTE	Pay Amount	Non-Pay Amount	Amount
<b>FY 2023 Enacted</b>	<b>269</b>	<b>252</b>	<b>\$56,851</b>	<b>\$95,119</b>	<b>\$151,970</b>
<b>FY 2024 Annualized CR</b>	<b>269</b>	<b>252</b>	<b>\$56,851</b>	<b>\$95,119</b>	<b>\$151,970</b>
<b>FY 2025 Base Budget</b>	<b>269</b>	<b>252</b>	<b>\$56,851</b>	<b>\$95,119</b>	<b>\$151,970</b>
<b>Total Technical Changes</b>	-	-	-	-	-
Annualization of FY 2023 Enacted Program Changes	-	1	\$182	-	\$182
<b>Total Annualizations and Non-Recurs</b>	-	<b>1</b>	<b>\$182</b>	-	<b>\$182</b>
2025 Civilian Pay Raise	-	-	\$911	-	\$911
2024 Civilian Pay Raise	-	-	\$3,003	-	\$3,003
2023 Civilian Pay Raise Annualization	-	-	\$696	-	\$696
<b>Total Pricing Changes</b>	-	-	<b>\$4,610</b>	-	<b>\$4,610</b>
<b>Total Adjustments-to-Base</b>	-	<b>1</b>	<b>\$4,792</b>	-	<b>\$4,792</b>
<b>FY 2025 Current Services</b>	<b>269</b>	<b>253</b>	<b>\$61,643</b>	<b>\$95,119</b>	<b>\$156,762</b>
<b>Total Transfers</b>	-	-	-	-	-
Advisory and Assistance Services & Travel Decrease	-	-	-	(\$4,528)	(\$4,528)
Countering Emerging Bio Chem Threats	-	-	-	(\$800)	(\$800)
Financial Management Systems	-	-	-	(\$876)	(\$876)
Funded Vacancies Reduction	(10)	(10)	(\$2,071)	-	(\$2,071)
Portable Detection Systems	-	-	-	\$9,676	\$9,676
Test & Evaluation of CBRN Detection Equipment	-	-	-	\$2,000	\$2,000
<b>Total Program Changes</b>	<b>(10)</b>	<b>(10)</b>	<b>(\$2,071)</b>	<b>\$5,472</b>	<b>\$3,401</b>
<b>FY 2025 Request</b>	<b>259</b>	<b>243</b>	<b>\$59,572</b>	<b>\$100,591</b>	<b>\$160,163</b>
<b>FY 2024 TO FY 2025 Change</b>	<b>(10)</b>	<b>(9)</b>	<b>\$2,721</b>	<b>\$5,472</b>	<b>\$8,193</b>

**Operations and Support  
Justification of Pricing Changes**  
*(Dollars in Thousands)*

	FY 2025 President's Budget				
	Positions	FTE	Pay Amount	Non-Pay Amount	Amount
<b>Pricing Change 1 - 2025 Civilian Pay Raise</b>	-	-	<b>\$911</b>	-	<b>\$911</b>
Mission Support	-	-	\$911	-	\$911
<b>Pricing Change 2 - 2024 Civilian Pay Raise</b>	-	-	<b>\$3,003</b>	-	<b>\$3,003</b>
Mission Support	-	-	\$3,003	-	\$3,003
<b>Pricing Change 3 - 2023 Civilian Pay Raise Annualization</b>	-	-	<b>\$696</b>	-	<b>\$696</b>
Mission Support	-	-	\$696	-	\$696
<b>Total Pricing Changes</b>	-	-	<b>\$4,610</b>	-	<b>\$4,610</b>

**Pricing Change 1– 2025 Civilian Pay Raise:**

Base Activity Funding: This pricing change impacts civilian pay funding in the Base and the Annualization of Prior Year Pay Raise, which totals \$60.7M.

Pricing Change Explanation: This pricing change represents the costs of the first three quarters of the calendar year 2025 2.0 percent civilian pay increase. It is calculated by adding Base pay, Pay Base of the Annualization of FY 2024 Program Changes and the Annualization of Prior Year Pay Raise pricing change, multiplying by the pay rate increase (2 percent) and then by three-fourths to account for nine months of the 2025 calendar year.

**Pricing Change 2 - 2024 Civilian Pay Raise**

Base Activity Funding: This pricing change impacts FY 2024 civilian pay funding in Base and Annualizations, which total \$57.7M.

Pricing Change Explanation: This pricing change represents the costs of the full FY 2024 5.2 percent civilian pay increase. It is calculated by adding the FY 2023 Enacted Base Pay, Pay base of the Annualization of FY 2023 Enacted Program Changes, and the Annualization of Prior Year Pay Raise pricing change, and multiplying by the pay rate increase (5.2 percent).

**Pricing Change 3 – 2023 Civilian Pay Raise Annualization:**

Base Activity Funding: This pricing change accounts for the last quarter of civilian pay funding in the Base and Annualizations.

Pricing Change Explanation: This pricing change represents the costs of the fourth quarter of the calendar year 2023 4.6 percent civilian pay increase. It is calculated by adding the FY 2022 Enacted Base pay, the pay funding from the FY 2023 Enacted program changes, and the FY 2023 enacted civilian inflation and multiplying by the pay rate increase (4.6 percent) and then by one-fourth to account for three months of the 2024 calendar year.

**Operations and Support  
Justification of Program Changes**

*(Dollars in Thousands)*

	FY 2025 President's Budget				
	Positions	FTE	Pay Amount	Non-Pay Amount	Amount
<b>Program Change 1 - Advisory and Assistance Services &amp; Travel Decrease</b>	-	-	-	<b>(\$4,528)</b>	<b>(\$4,528)</b>
Mission Support	-	-	-	(\$1,827)	(\$1,827)
Capability and Operational Support	-	-	-	(\$2,701)	(\$2,701)
<b>Program Change 2 - Countering Emerging Bio Chem Threats</b>	-	-	-	<b>(\$800)</b>	<b>(\$800)</b>
Capability and Operational Support	-	-	-	(\$800)	(\$800)
<b>Program Change 3 - Financial Management Systems</b>	-	-	-	<b>(\$876)</b>	<b>(\$876)</b>
Mission Support	-	-	-	(\$876)	(\$876)
<b>Program Change 4 - Funded Vacancies Reduction</b>	<b>(10)</b>	<b>(10)</b>	<b>(\$2,071)</b>	-	<b>(\$2,071)</b>
Mission Support	(10)	(10)	(\$2,071)	-	(\$2,071)
<b>Program Change 5 - Portable Detection Systems</b>	-	-	-	<b>\$9,676</b>	<b>\$9,676</b>
Capability and Operational Support	-	-	-	\$9,676	\$9,676
<b>Program Change 6 - Test &amp; Evaluation of CBRN Detection Equipment</b>	-	-	-	<b>\$2,000</b>	<b>\$2,000</b>
Capability and Operational Support	-	-	-	\$2,000	\$2,000
<b>Total Program Changes</b>	<b>(10)</b>	<b>(10)</b>	<b>(\$2,071)</b>	<b>\$5,472</b>	<b>\$3,401</b>

**Program Change 1 – Advisory and Assistance Services & Travel Decrease:**

<i>(\$ in thousands)</i>	Pos	FTE	Amount
Base: Current Services & Transfers	-	-	\$38,570
Program Change	-	-	(\$4,528)

**Description**

FY 2025 Budget includes a \$4.5M decrease to Advisory and Assistance Services and Travel funding.

**Justification**

CWMD uses Advisory and Assistive Services to meet the operational requirements throughout multiple mission areas of the agency. The reduction will occur through effective contract efficiencies created within the CWMD enterprise. A reduction of vacant positions, 10 POS / 10 FTE detailed in program change 4, creates associated travel efficiencies without operational impact.

**Performance**

CWMD will manage contract efficiencies in the year of execution to ensure the lowest level of impact to operations. The contract efficiency reduction will envelope streamlined execution to reduce inefficiencies without hindering CWMD’s speed of mission

**Program Change 2 – Countering Emerging Bio Chem Threats:**

<i>(\$ in thousands)</i>	<b>Pos</b>	<b>FTE</b>	<b>Amount</b>
Base: Current Services & Transfers	-	-	\$2,700
Program Change	-	-	(\$800)

**Description**

The FY 2025 Budget includes a \$0.8M decrease for the Countering Emerging and Enduring Biological Chemical activity within the Strategic Planning and Analysis project. This decrease reflects the repurposing of funding from O&S to support Environmental BioDetection (EBD) work in the Research and Development appropriation.

**Justification**

Reduction in funding will allow the activity to continue to support implementation of the National Biodefense Strategy and the DHS Chemical Defense Strategy by 1) aligning DHS Component actions to counter chemical and biological threats; 2) convening interagency stakeholders to advance identified actions to counter chemical and biological, threats; and 3) supporting studies to better understand novel threats. This reduction reflects completion of earlier studies funded by this activity.

**Performance**

No degradation of performance is expected. The activity will continue to coordinate activities, convene stakeholders, and perform studies.

**Program Change 3 – Financial Management Systems:**

<i>(\$ in thousands)</i>	<b>Pos</b>	<b>FTE</b>	<b>Amount</b>
Base: Current Services & Transfers	-	-	\$6,524
Program Change	-	-	(\$876)

**Description**

The FY 2025 Budget includes a \$0.9M decrease to for Financial Systems. The reduction is due to maturation of the CWMD’s financial execution system Financial Systems Modernization Solution (FSMS), the Programming and Budgeting system, and the decreased activity in the historical financial system utilized by legacy Office of Health Affairs (OHA). The base of the Financial Management Systems includes the CWMD PBBE OneStream Solution.

**Justification**

When CWMD was created, it inherited two Financial Systems. The decrease in funding reflects the CWMD close out of activities under the legacy OHA system and its status for records maintenance only.

**Performance**

No performance impacts.

**Program Change 4 – Funded Vacancies Reduction:**

<i>(\$ in thousands)</i>	<b>Pos</b>	<b>FTE</b>	<b>Amount</b>
Base: Current Services & Transfers	269	253	\$61,643
Program Change	(10)	(10)	(\$2,071)

**Description**

FY 2025 Budget includes a decrease of \$2.1M, 10 positions, and 10 Full Time Equivalents (FTE) to address unfilled positions that were funded in the FY 2023 Enacted appropriation.

**Justification**

This reduction aligns funding with current CWMD onboard staffing, which remains below the current authorized level.

**Performance**

To support the reduction, CWMD is implementing efficiencies by consolidating inherently governmental functions into fewer positions, and utilize contract staff for essential non-governmental functions. CWMD has made concerted efforts to increase recruiting, security processes, and onboarding capacity. Additionally, CWMD is taking steps to improve retention throughout the enterprise.

**Program Change 5 – Portable Detection Systems:**

<i>(\$ in thousands)</i>	<b>Pos</b>	<b>FTE</b>	<b>Amount</b>
Base: Current Services & Transfers	-	-	\$0
Program Change	-	-	\$9,676

**Description**

The FY 2025 Budget includes \$9.7M to procure and support portable CBRN detection equipment for DHS Component operational personnel. This activity was funded in FY 2024 and prior years in the CWMD Procurement, Construction, and Improvements (PC&I) appropriation under the Portable Detection Systems PPA. The small-scale portable detection programs are funded in the CWMD Operations & Support (O&S) Appropriation as minor procurements to better align with funding thresholds with DHS financial policy.

**Justification**

This project supports the procurement of CBRN detection equipment that can be carried, worn, or easily moved to support the needs of operational end-users and Special Mission Units. This project also includes limited sustainment of sensors, detectors and/or equipment that CWMD provides to support DHS Components and other first responders. Activities such as conducting Reliability, Availability, and Maintainability (RAM) data collection and analysis, Operational Assessments (OAs), and Integrated Life Cycle Management Reviews (ILCMRs) are part of these limited sustainment activities.

**Performance**

With this funding, CWMD will be able to make procurements to keep pace with a dynamic threat environment and equipment needs of DHS Operational Personnel.

**Program Change 6 – Test & Evaluation of CBRN Detection Equipment:**

<i>(\$ in thousands)</i>	<b>Pos</b>	<b>FTE</b>	<b>Amount</b>
Base: Current Services & Transfers	-	-	\$16,666
Program Change	-	-	\$2,000

**Description**

The FY 2025 Budget increases Test and Evaluation (T&E) capability by \$2.0M to support operational analysis and technical assessment of CBRN detection equipment, including mature, commercially available CBRN systems in operational scenarios faced by FSLTT end-users.



**Justification**

Additional funding is required to support T&E Operations, and Operational Analysis and Technical Assessment activities, the characterization of CBRN detection equipment, and additional contractor staff support. The additional funds will support System Performance Evaluations (evaluates the system against the threat, primarily through modeling and simulation), Model and Simulation Verification, Validation, and Accreditation (enables the use of models that have been accredited to reduce the cost of testing and lowers the risk to the program), Cyber Resiliency Testing (assesses a systems vulnerability to cyber-attacks so that the necessary steps can be taken to decrease the impact to operations), and operational analyses for currently deployed systems (supports the end user by analyzing the performance of the system after it has been deployed to ensure that the performance has not degraded). In addition, through the characterization of CBRN detection equipment, CWMD conducts test campaigns using mature, commercially available CBRN detection systems in operational scenarios faced by FSLTT end-users. These tests produce independent assessments of equipment to confirm vendor performance claims and can help with development and/or refinement of the end-users' concepts of operations and can help identify training needs. This testing also provides an opportunity for end users to report anomalous behavior of an instrument or class of instruments that could be resolved using these testing resources.

**Performance**

This program provides the Homeland Security enterprise community as a whole with data to ensure that selected CBRN equipment has been shown to fulfill the missions' criteria and that they are used properly. The data collected also provide cost benefit information to support acquisition decisions at the Federal and SLTT levels. The data are also shareable with the proper protection with the commercial and international community to support the global architecture. The body of data collected during these tests can be used to inform systems threat reviews, acquisition programs, and research and development programs. The data will be archived for later re-use by other programs and activities.

**Operations and Support  
Personnel Compensation and Benefits**

**Pay Summary**

*(Dollars in Thousands)*

	FY 2023 Enacted				FY 2024 Annualized CR				FY 2025 President's Budget				FY 2024 to FY 2025 Total			
	Pos.	FTE	Amount	Rate	Pos.	FTE	Amount	Rate	Pos.	FTE	Amount	Rate	Pos.	FTE	Amount	Rate
Mission Support	269	252	\$56,851	\$205.33	269	252	\$56,851	\$205.33	259	243	\$59,572	\$222.44	(10)	(9)	\$2,721	\$17.11
<b>Total</b>	<b>269</b>	<b>252</b>	<b>\$56,851</b>	<b>\$205.33</b>	<b>269</b>	<b>252</b>	<b>\$56,851</b>	<b>\$205.33</b>	<b>259</b>	<b>243</b>	<b>\$59,572</b>	<b>\$222.44</b>	<b>(10)</b>	<b>(9)</b>	<b>\$2,721</b>	<b>\$17.11</b>
Subtotal Discretionary - Appropriation	269	252	\$56,851	\$205.33	269	252	\$56,851	\$205.33	259	243	\$59,572	\$222.44	(10)	(9)	\$2,721	\$17.11

**Pay by Object Class**

*(Dollars in Thousands)*

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget	FY 2024 to FY 2025 Change
11.1 Full-time Permanent	\$37,518	\$37,518	\$39,142	\$1,624
11.3 Other than Full-time Permanent	\$197	\$197	\$178	(\$19)
11.5 Other Personnel Compensation	\$750	\$750	\$815	\$65
11.8 Special Personal Services Payments	\$5,107	\$5,107	\$5,519	\$412
12.1 Civilian Personnel Benefits	\$13,279	\$13,279	\$13,918	\$639
<b>Total - Personnel Compensation and Benefits</b>	<b>\$56,851</b>	<b>\$56,851</b>	<b>\$59,572</b>	<b>\$2,721</b>
<b>Positions and FTE</b>				
Positions - Civilian	269	269	259	(10)
FTE - Civilian	252	252	243	(9)

**Operations and Support**  
**Permanent Positions by Grade – Appropriation**  
*(Dollars in Thousands)*

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget	FY 2024 to FY 2025 Change
SES	13	13	13	-
EX	1	1	1	-
GS-15	77	77	74	(3)
GS-14	100	100	95	(5)
GS-13	48	48	46	(2)
GS-12	15	15	15	-
GS-11	4	4	4	-
GS-9	4	4	4	-
Other Grade Positions	7	7	7	-
<b>Total Permanent Positions</b>	<b>269</b>	<b>269</b>	<b>259</b>	<b>(10)</b>
Total Perm. Employment (Filled Positions) EOY	236	269	259	(10)
Unfilled Positions EOY	33	-	-	-
<b>Position Locations</b>				
Headquarters Civilian	243	243	237	(6)
U.S. Field Civilian	26	26	22	(4)
<b>Averages</b>				
Average Personnel Costs, ES Positions	\$205,779	\$216,068	\$220,389	\$4,321
Average Personnel Costs, GS Positions	\$151,655	\$159,238	\$162,423	\$3,185
Average Grade, GS Positions	14	14	14	-

**Operations and Support  
Non Pay Budget Exhibits**

**Non Pay Summary**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
Mission Support	\$28,719	\$28,719	\$26,016	(\$2,703)
Capability and Operational Support	\$66,400	\$66,400	\$74,575	\$8,175
<b>Total</b>	<b>\$95,119</b>	<b>\$95,119</b>	<b>\$100,591</b>	<b>\$5,472</b>
Subtotal Discretionary - Appropriation	\$95,119	\$95,119	\$100,591	\$5,472

**Non Pay by Object Class**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
21.0 Travel and Transportation of Persons	\$1,551	\$1,551	\$1,365	(\$186)
23.3 Communications, Utilities, & Miscellaneous	\$85	\$85	\$85	-
24.0 Printing and Reproduction	\$48	\$48	\$48	-
25.1 Advisory & Assistance Services	\$37,019	\$37,019	\$34,224	(\$2,795)
25.2 Other Services from Non-Federal Sources	\$13,395	\$13,395	\$14,573	\$1,178
25.3 Other Purchases of goods and services	\$19,503	\$19,503	\$19,569	\$66
25.4 Operations & Maintenance of Facilities	\$150	\$150	\$150	-
25.5 Research & Development Contracts	\$1,000	\$1,000	\$1,000	-
25.7 Operation & Maintenance of Equipment	\$15,796	\$15,796	\$14,779	(\$1,017)
26.0 Supplies & Materials	\$2,372	\$2,372	\$2,372	-
31.0 Equipment	\$2,806	\$2,806	\$11,032	\$8,226
41.0 Grants, Subsidies, and Contributions	\$1,394	\$1,394	\$1,394	-
<b>Total - Non Pay Budget Object Class</b>	<b>\$95,119</b>	<b>\$95,119</b>	<b>\$100,591</b>	<b>\$5,472</b>

*Mission Support – PPA*

**Budget Comparison and Adjustments**

**Comparison of Budget Authority and Request**

*(Dollars in Thousands)*

	FY 2023 Enacted			FY 2024 Annualized CR			FY 2025 President's Budget			FY 2024 to FY 2025 Total Changes		
	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount
Mission Support	269	252	\$85,570	269	252	\$85,570	259	243	\$85,588	(10)	(9)	\$18
<b>Total</b>	<b>269</b>	<b>252</b>	<b>\$85,570</b>	<b>269</b>	<b>252</b>	<b>\$85,570</b>	<b>259</b>	<b>243</b>	<b>\$85,588</b>	<b>(10)</b>	<b>(9)</b>	<b>\$18</b>
Subtotal Discretionary - Appropriation	269	252	\$85,570	269	252	\$85,570	259	243	\$85,588	(10)	(9)	\$18

**PPA Level I Description**

Mission Support funds personnel compensation and benefits for all CWMD employees and provides enterprise leadership, management, and business administration in support of daily operations. Key capabilities include workforce management, financial management, physical and personnel security, goods and services acquisition, information technology, compliance activities, property and assets management, communications, and general management and administration.

Programs funded by the Mission Support PPA include the following:

**Office of the Assistant Secretary and Enterprise Services:** The Office of the Assistant Secretary and Enterprise Services provide overall management of CWMD and develop long-range management plans for the efficient and effective operation of the organization. The office develops and reviews CWMD strategic direction and policy and issues internal guidance to employees that is consistent with regulations and the authority delegated by DHS. The office comprises the Chief of Staff, Executive Secretary, Communications staff, and Enterprise Services. Business requirements include financial management systems and operations, workforce management, information technology, compliance and evidence monitoring, facility management, and personnel security services.

**Salaries, Benefits, and Detailees:** Provides compensation for all CWMD Federal personnel and reimbursement to other Federal agencies for detailees, for personnel from Federal and other interagency partners, and the Office of General Counsel (OGC).

**Mission Support – PPA**  
**Budget Authority and Obligations**  
*(Dollars in Thousands)*

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Enacted/Request</b>	<b>\$85,570</b>	<b>\$85,570</b>	<b>\$85,588</b>
Carryover - Start of Year	-	-	-
Recoveries	-	-	-
Rescissions to Current Year/Budget Year	(\$350)	-	-
Net Sequestered Resources	-	-	-
Reprogramming/Transfers	\$339	-	-
Supplementals	-	-	-
<b>Total Budget Authority</b>	<b>\$85,559</b>	<b>\$85,570</b>	<b>\$85,588</b>
Collections - Reimbursable Resources	-	-	-
Collections - Other Sources	-	-	-
<b>Total Budget Resources</b>	<b>\$85,559</b>	<b>\$85,570</b>	<b>\$85,588</b>
Obligations (Actual/Estimates/Projections)	\$85,335	\$85,570	\$85,588
<b>Personnel: Positions and FTE</b>			
Enacted/Request Positions	269	269	259
Enacted/Request FTE	252	252	243
<b>Onboard and Actual FTE</b>			
Onboard (Actual/Estimates/Projections)	236	269	259
FTE (Actual/Estimates/Projections)	221	248	243

**Mission Support – PPA**  
**Summary of Budget Changes**  
*(Dollars in Thousands)*

	Positions	FTE	Pay Amount	Non-Pay Amount	Amount
<b>FY 2023 Enacted</b>	<b>269</b>	<b>252</b>	<b>\$56,851</b>	<b>\$28,719</b>	<b>\$85,570</b>
<b>FY 2024 Annualized CR</b>	<b>269</b>	<b>252</b>	<b>\$56,851</b>	<b>\$28,719</b>	<b>\$85,570</b>
<b>FY 2025 Base Budget</b>	<b>269</b>	<b>252</b>	<b>\$56,851</b>	<b>\$28,719</b>	<b>\$85,570</b>
<b>Total Technical Changes</b>	-	-	-	-	-
Annualization of FY 2023 Enacted Program Changes	-	1	\$182	-	\$182
<b>Total Annualizations and Non-Recurs</b>	-	<b>1</b>	<b>\$182</b>	-	<b>\$182</b>
2025 Civilian Pay Raise	-	-	\$911	-	\$911
2024 Civilian Pay Raise	-	-	\$3,003	-	\$3,003
2023 Civilian Pay Raise Annualization	-	-	\$696	-	\$696
<b>Total Pricing Changes</b>	-	-	<b>\$4,610</b>	-	<b>\$4,610</b>
<b>Total Adjustments-to-Base</b>	-	<b>1</b>	<b>\$4,792</b>	-	<b>\$4,792</b>
<b>FY 2025 Current Services</b>	<b>269</b>	<b>253</b>	<b>\$61,643</b>	<b>\$28,719</b>	<b>\$90,362</b>
<b>Total Transfers</b>	-	-	-	-	-
Advisory and Assistance Services & Travel Decrease	-	-	-	(\$1,827)	(\$1,827)
Financial Management Systems	-	-	-	(\$876)	(\$876)
Funded Vacancies Reduction	(10)	(10)	(\$2,071)	-	(\$2,071)
<b>Total Program Changes</b>	<b>(10)</b>	<b>(10)</b>	<b>(\$2,071)</b>	<b>(\$2,703)</b>	<b>(\$4,774)</b>
<b>FY 2025 Request</b>	<b>259</b>	<b>243</b>	<b>\$59,572</b>	<b>\$26,016</b>	<b>\$85,588</b>
<b>FY 2024 TO FY 2025 Change</b>	<b>(10)</b>	<b>(9)</b>	<b>\$2,721</b>	<b>(\$2,703)</b>	<b>\$18</b>

**Mission Support – PPA  
Personnel Compensation and Benefits**

**Pay Summary**  
*(Dollars in Thousands)*

	FY 2023 Enacted				FY 2024 Annualized CR				FY 2025 President's Budget				FY 2024 to FY 2025 Total			
	Pos.	FTE	Amount	Rate	Pos.	FTE	Amount	Rate	Pos.	FTE	Amount	Rate	Pos.	FTE	Amount	Rate
Mission Support	269	252	\$56,851	\$205.33	269	252	\$56,851	\$205.33	259	243	\$59,572	\$222.44	(10)	(9)	\$2,721	\$17.11
<b>Total</b>	<b>269</b>	<b>252</b>	<b>\$56,851</b>	<b>\$205.33</b>	<b>269</b>	<b>252</b>	<b>\$56,851</b>	<b>\$205.33</b>	<b>259</b>	<b>243</b>	<b>\$59,572</b>	<b>\$222.44</b>	<b>(10)</b>	<b>(9)</b>	<b>\$2,721</b>	<b>\$17.11</b>
Subtotal Discretionary - Appropriation	269	252	\$56,851	\$205.33	269	252	\$56,851	\$205.33	259	243	\$59,572	\$222.44	(10)	(9)	\$2,721	\$17.11

**Pay by Object Class**  
*(Dollars in Thousands)*

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget	FY 2024 to FY 2025 Change
11.1 Full-time Permanent	\$37,518	\$37,518	\$39,142	\$1,624
11.3 Other than Full-time Permanent	\$197	\$197	\$178	(\$19)
11.5 Other Personnel Compensation	\$750	\$750	\$815	\$65
11.8 Special Personal Services Payments	\$5,107	\$5,107	\$5,519	\$412
12.1 Civilian Personnel Benefits	\$13,279	\$13,279	\$13,918	\$639
<b>Total - Personnel Compensation and Benefits</b>	<b>\$56,851</b>	<b>\$56,851</b>	<b>\$59,572</b>	<b>\$2,721</b>
<b>Positions and FTE</b>				
Positions - Civilian	269	269	259	(10)
FTE - Civilian	252	252	243	(9)



**Pay Cost Drivers**

	FY 2023 Enacted			FY 2024 Annualized CR			FY 2025 President's Budget			FY 2024 to FY 2025 Total Changes		
	FTE	Amount	Rate	FTE	Amount	Rate	FTE	Amount	Rate	FTE	Amount	Rate
Mission Personnel Compensation and Benefits	176	\$36,332	\$206.43	176	\$36,332	\$206.43	171	\$38,226	\$223.54	(5)	\$1,894	\$17.11
Mission Support Personnel Compensation and Benefits	76	\$15,412	\$202.79	76	\$15,412	\$202.79	72	\$15,833	\$219.90	(4)	\$421	\$17.11
Other PC&B Costs	-	\$5,107	-	-	\$5,107	-	-	\$5,519	-	-	\$412	-
<b>Total - Pay Cost Drivers</b>	<b>252</b>	<b>\$56,851</b>	<b>\$205.33</b>	<b>252</b>	<b>\$56,851</b>	<b>\$205.33</b>	<b>243</b>	<b>\$59,577</b>	<b>\$222.46</b>	<b>(9)</b>	<b>\$2,726</b>	<b>\$17.13</b>

**Explanation of Pay Cost Drivers**

**Mission Personnel Compensation and Benefits:** This cost driver supports personnel compensation, benefits, and performance awards for Federal employees who are direct, mission-focused personnel. In FY 2025, this cost driver includes a decrease of (5) positions and (5) FTE.

**Mission Support Personnel Compensation and Benefits:** This cost driver supports personnel compensation, benefits, and performance awards for Federal employees indirectly facilitating the operations and mission of CWMD. They include Front Office personnel and those in Enterprise Services such as business, administrative, communications, facilities management, security, and finance personnel. In FY 2025, the cost driver includes (5) positions and (5) FTE reduction with 1 FTE added as an annualization from FY 2023. This results in a net decrease of (5) positions and (4) FTE.

**Other PC&B Costs:** This cost driver provides funding for Federal personnel detailed from DHS Operational Components, OGC, United States Health and Human Services (HHS) Public Health Service Officers (PHSOs), and other interagency partners. The FY 2025 change reflects the pay increase for reimbursable detailees.

**Mission Support – PPA  
Non Pay Budget Exhibits**

**Non Pay Summary**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
Mission Support	\$28,719	\$28,719	\$26,016	(\$2,703)
<b>Total</b>	<b>\$28,719</b>	<b>\$28,719</b>	<b>\$26,016</b>	<b>(\$2,703)</b>
Subtotal Discretionary - Appropriation	\$28,719	\$28,719	\$26,016	(\$2,703)

**Non Pay by Object Class**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
21.0 Travel and Transportation of Persons	\$83	\$83	\$83	-
23.3 Communications, Utilities, & Miscellaneous	\$85	\$85	\$85	-
24.0 Printing and Reproduction	\$26	\$26	\$26	-
25.1 Advisory & Assistance Services	\$15,667	\$15,667	\$14,065	(\$1,602)
25.2 Other Services from Non-Federal Sources	\$743	\$743	\$743	-
25.3 Other Purchases of goods and services	\$2,408	\$2,408	\$2,408	-
25.4 Operations & Maintenance of Facilities	\$150	\$150	\$150	-
25.7 Operation & Maintenance of Equipment	\$8,361	\$8,361	\$7,260	(\$1,101)
26.0 Supplies & Materials	\$351	\$351	\$351	-
31.0 Equipment	\$845	\$845	\$845	-
<b>Total - Non Pay Budget Object Class</b>	<b>\$28,719</b>	<b>\$28,719</b>	<b>\$26,016</b>	<b>(\$2,703)</b>

**Non Pay Cost Drivers**

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Total Changes</b>
Operations Support	\$9,053	\$9,053	\$7,053	(\$2,000)
Financial Systems	\$4,504	\$4,504	\$5,648	\$1,144
Information Technology Support	\$5,849	\$5,849	\$4,849	(\$1,000)
Financial Systems Support	\$4,140	\$4,140	\$4,488	\$348
Other Costs	\$5,173	\$5,173	\$3,978	(\$1,195)
<b>Total - Non-Pay Cost Drivers</b>	<b>\$28,719</b>	<b>\$28,719</b>	<b>\$26,016</b>	<b>(\$2,703)</b>

**Explanation of Non Pay Cost Drivers**

**Operations Support:** This includes costs for contract staff for financial management; Evidence Act & Evaluation activities; executive assistants, security contract staff, and facilities support personnel. The decrease reflects efficiencies in contract support.

**Financial Systems:** This cost driver supports the financial systems currently utilized by CWMD to execute its mission. It includes the cost for the DHS Financial Systems Modernization Solution (FSMS), CWMD Planning, Programming, Budgeting, and Execution (PPBE) One Stream Solution, and the remaining maintenance for Immigration and Customs Enforcement (ICE) Federal Financial Management System (FFMS). The increase reflects the addition of the CWMD PPBE OneStream solution in 2024.

**Information Technology Support:** Includes costs for Information Technology and Cyber Security support, compliance activities, secure telephone lines, Homeland Secure Data Network (HSDN) data network circuits, Enterprise license agreements, and SharePoint site operations and maintenance costs. The decrease reflects the efficiencies in contract staff for Cyber Security and Compliance activities.

**Financial Systems Support:** This includes the costs for U.S. Coast Guard Finance Center, FSMS licenses, and FSMS integration costs to the DHS travel management system. The increase reflects inflationary operational cost growth to maintain the prior level of service.

**Other Costs:** This cost driver includes for supplies, materials, enterprise service support, transit expenses, printing and reproduction, travel, training of personnel, information subscription services, facility support, and reception. The decrease reflects efficiencies in contract support.

*Capability and Operations Support – PPA*

**Budget Comparison and Adjustments**

**Comparison of Budget Authority and Request**

*(Dollars in Thousands)*

	FY 2023 Enacted			FY 2024 Annualized CR			FY 2025 President's Budget			FY 2024 to FY 2025 Total Changes		
	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount
Capability and Operational Support	-	-	\$66,400	-	-	\$66,400	-	-	\$74,575	-	-	\$8,175
<b>Total</b>	-	-	<b>\$66,400</b>	-	-	<b>\$66,400</b>	-	-	<b>\$74,575</b>	-	-	<b>\$8,175</b>
Subtotal Discretionary - Appropriation	-	-	\$66,400	-	-	\$66,400	-	-	\$74,575	-	-	\$8,175

**PPA Level I Description**

The C&OS PPA funds programs and activities that provide situational awareness, decision support for DHS leadership and Federal partners, and the procurement of portable CBRN detection equipment. The C&OS PPA supports CWMD capabilities through the development of strategies, plans, policies, capability gap and threat/risk analyses, and the formulation of operational requirements. The C&OS PPA also funds the NBIC, CWMD Test and Evaluation infrastructure, and CWMD operations that provide an effective means of surveillance, collaboration, and response to emerging WMD threats. In FY 2025, CWMD is moving the procurement of Portable Detection Systems to the O&S appropriation, C&OS PPA to comply with the DHS Consolidated Appropriation Structure whereby all procurements with an end-item cost of less than \$250,000.00 are to be procured within Operational & Support appropriations. In addition, in FY 2025, CWMD is also consolidating funding for the Program Integration and Management Services office (PIMSO) function within O&S, C&OS PPA to improve knowledge management and promote coordination and transparency.

This PPA includes the following programs:

**Strategic Planning and Threat Analysis:** Costs associated with Strategic Planning include the development and coordination of DHS policies, strategies, and plans to counter CBRN and security threats affecting the United States. CWMD also conducts assessments to improve the capability to understand, anticipate, and mitigate the risk of CBRN. Funding within this program provides administrative and programmatic services across many disciplines, including:

- 1) development of DHS and CWMD strategies, plans, and policies related to CBRN security issues;
- 2) coordination across CWMD, DHS, and the interagency addressing the CBRN mission space;
- 3) policy review of all DHS external communications on CBRN;
- 4) support for White House engagement by CWMD and DHS senior leaders;
- 5) development, coordination, and publication of reports required by Congress and DHS;

- 6) support to and engagement with FSLTT partners to implement and align strategies, plans, and policies that enable an informed, prepared homeland security posture; and
- 7) strengthen the CWMD requirements function by adding a formal, enterprise-wide capability and risk assessment function.

Additionally, CWMD provides mission-area information to support the DHS Office of Intelligence and Analysis' process to provide senior leaders with the most current and accurate WMD threat information available. CWMD coordinates with the Science & Technology Directorate and interagency partners on research and development requirements as necessary.

- *Strategic Planning* provides necessary support to develop and coordinate strategies, plans, policy, and reports on behalf of DHS on CBRN and related matters. This project supports CWMD policy coordination for DHS and strategy development and implementation planning for DHS and CWMD. This effort includes support for coordination of Department-wide implementation activities, such as for the National Biodefense Strategy, development of Department-wide and multi-Component steady state and contingency plans, including the DHS Chemical Defense Strategy Implementation Plan and Inbound Nuclear Threat Planning Framework, and White House engagement and coordination.
- *Capabilities and Risk Assessments* leads development and implementation of a robust, enterprise-wide CBRN risk assessment and gap identification capability to prioritize investments that directly address CBRN risks and capability gaps. The program will conduct capabilities-based assessments to identify capability gaps and prioritize processes and resources that may prevent exploitable vulnerabilities, ultimately improving the capability to understand, anticipate, and mitigate the risk of CBRN security threats.
- *Countering Emerging & Enduring Biological and Chemical Threats* leverages CWMD's responsibility to coordinate Federal Government actions and help ensure the U.S. Government is countering enduring and emerging biological and chemical threats in a cohesive, comprehensive, and effective manner. CWMD will utilize integrative yet focused support, engagement, and studies to implement strategies, plans, and policies that enable an informed, prepared homeland security posture.
- *International Partner Engagement Support Project* facilitates CWMD engagement with international partners to identify threats and disrupt adversary acquisition planning, transport, and use of WMD before they reach U.S. borders. CWMD actively engages with DHS Headquarters, Components, Federal interagency partners, and when appropriate, directly with international partners and organizations to accomplish its mission to prevent the use of WMD against the homeland and promote readiness for CBRN and other security threats.
- *CWMD Threat Analysis Activities* develops a robust and technologically advanced analytic capability to counter chemical, biological, radiological, and nuclear threats to the homeland and U.S. interests. The program provides timely current/strategic intelligence and classified situational awareness for DHS, via oral presentations, alerts, and via a Common Intelligence Picture that provides DHS with a geospatial view of WMD and WMD-related materials potentially at risk, pathways to the Homeland, U.S. and Allied countermeasures, and current threats. Additionally, the program maintains a capability to provide DHS leadership with warning of emergent WMD threats, based upon information from across the Intelligence Community (IC) and, where appropriate, from its own warning analysis.

**Information and Data Systems:** The Information and Data Systems project includes funding to support the improvements, operations and maintenance to mission focused data analysis capabilities and systems. This project works to provide a framework to gather, integrate, analyze, and disseminate information/data to better anticipate, prevent, and respond to WMD threats. The Information and Data Systems also provides a unified data sharing and analytics environment to facilitate identification of CBRN threats using advanced analytic techniques, including data science, and machine learning.

- *Data Integration* is responsible for developing a robust and technologically advanced analytic capabilities to combat CBRN threats to the homeland and U.S. interests. This effort provides operationally focused WMD intelligence, sensor data interpretation and tool integration, operational integration with departmental field operations, and Department of Defense (DoD), Information Analysis (IA), IC, and Foreign Partner collaboration. Data Integration also defines requirements for Information Technology (IT) systems needed to support this function.
- *Machine Learning* supports and facilitates the collection and integration of data. It also provides capabilities that allows CWMD to characterize and ingest, process, and analyze new data and information sources for evidence or indicators of CBRN threats.
- *CWMD Cloud Services Platform Operations and Maintenance* supports the operations and maintenance of the CWMD Information Architecture (GATE-U) Platform and supports the data infrastructure for the data analytics, data acquisition, code development, and data exploitation. CWMD Information Architecture (GATE-U) Maintenance and Support activities include contracted software engineering labor to properly maintain and support the system, contract technical capabilities, third-party cybersecurity software required to properly secure and operate the system, and contracted cybersecurity labor to support authorization activities and security integrity monitoring of the system.

**NBIC:** NBIC detects early indicators of biological threats of national concern, whether intentional bioterrorism or nationally occurring pandemics, across human, animal, and plant species in service to the FSLTT governments. NBIC disseminates biosurveillance tools, analysis, and information to support common situational awareness and operational responses. NBIC is expanding its reach into partner biosurveillance organization and systems and greatly enhance its analytic capabilities to handle the increasing complex information needs of leaders within the Department as well as in our FSLTT partners. NBIC also supports the development and deployment of IT systems to support NBIC's mission, and to provide a framework for collaboration with its interagency National Biosurveillance Integration System (NBIS) partners. These systems include the Biosurveillance Ecosystem (BSVE), a cloud-based platform that facilitates information sharing and analysis capabilities for NBIC's partners, and the Biofeeds system, which enables the efficient review of large volumes of open-source data, rapid curation and analysis, and the generation of NBIC products and reports.

**Test and Evaluation (T&E):** The T&E program provides funds to characterize, verify, and validate technical performance, and assess the operational effectiveness and suitability of chemical, biological, and radiological/nuclear detection technologies under development, commercially available systems, and emerging technologies and systems prior to deployment (full operational capability). CWMD's suite of test instrumentation and automated data collection systems enable testing teams to rapidly verify and validate data. The Standards project follows a development, use, and revision cycle to ensure that consensus and technical capability standards remain effective for detection technology.

T&E supports CWMD programs by conducting tests and evaluations to determine technological maturity, effectiveness, suitability, and compliance with cybersecurity requirements.

- *T&E Operations* implement innovative methods scalability testing based on the maturity, complexity, and cost of the technology being tested. This includes actions to identify and implement T&E best practices for supporting traditional and rapid Acquisition Programs; incorporate best T&E practices into the T&E Operational Instruction; deliver T&E solutions for rapid and conventional acquisitions; evaluate technical maturity of materiel solutions in support of their transfer from R&D to Acquisition; and developmental T&E, operational T&E, and regression testing for deployed capabilities. Additionally, T&E Operations supports operational analyses, deployments of capabilities (e.g., Radiation Portal Monitor Enterprise), and support for System Performance Evaluations.
- *T&E Operational Analysis and Technical Assessments* supports subject matter expertise for T&E, particularly the Data Mining, Analysis, and Modeling Cell (DMAMC). DMAMC is a unique resource that optimizes the use of CWMD's existing knowledge base to improve efficiency of test planning and execution, address questions of detector performance through the reuse and evaluation of existing data and shift the reliance on testing only when needed to acquire new knowledge. The program has consolidated and built several databases and libraries that feature common, controlled access and easy reuse of CWMD data, and DMAMC personnel are vital resources for using these databases. Projects funded directly by DMAMC cut across programs and past tests to ensure CWMD maintains a comprehensive view of its knowledge base in detection, modeling and simulation, data management, and analysis. DMAMC allows CWMD to respond to requests for information from stakeholders that require such cross-cutting analyses.
- *T&E Infrastructure* supports the maintenance and sustainment of testing and evaluation infrastructure to promote efficiencies, cost savings, consistency, and robustness across all types of test and evaluation events. This infrastructure includes but is not limited to the design/fabrication of fissile material handling, maintenance, sustainment, and storage of radiological and Special Nuclear Material sources, chem/biomaterials, test and analysis tools, and equipment that are required to support test execution and analysis, software and licenses, cybersecurity tools, data catalogs, databases, data collection systems, specialized testing equipment, models, and data repositories to allow for the reuse of data. This program also supports CWMD's data governance and management activities.
- *The Standards* effort supports the development and maintenance of performance standards for radiological and nuclear, biological, and chemical detection systems as required by CWMD acquisition and research and development programs. The program provides funding for the development and maintenance of Institute of Electrical and Electronics Engineers, American Society for Testing and Materials, and International Electrotechnical Commission voluntary consensus standards. CWMD also publishes Technical Capability Standards as directed by section 121 of the *Security and Accountability for Every (SAFE) Port Act of 2006* (P.L. 109-347) (6 U.S.C. 921). Voluntary consensus standards establish baseline performance requirements, provide a means to verify those requirements are met, and help promote development and revision of detection equipment for operational government users, law enforcement, and other State and local users. The standards serve as the premier benchmark criteria for detection system capability requirements for radiological/nuclear detection. The program also works in the international consensus standard arena to keep U.S. and international standards harmonized when not feasible to be identical.

- *T&E Directed Testing* provides performance data to DHS Components, other FSLTT program managers, requirements developers, and operations managers to address existing and emerging needs. Assessment topics are selected based on input from the end-users, who are included throughout the life cycle of the assessments from scoping to interpretation. Consequently, the resulting information responds to specific questions and is uniquely relevant to the stakeholders. The program also affords end users, such as front-line officers, the opportunity to participate in the planning, execution, and interpretation of sophisticated test campaigns and/or test events that are designed to provide them with targeted, specific, and comprehensive performance data on CBRN technology. The program provides the countering WMD community with information that ensures that selected CBRN equipment have demonstrated that they fulfill the missions' criteria and that they are used properly. The data collected also provide cost-benefit information to support and defend acquisition decisions at the Federal and SLTT levels. The data are also shareable with the proper protection with the commercial and international community to support the global architecture and improve the state of the technologies. The body of data collected during directed tests can be used to inform systems threat reviews, acquisition program, and research and development programs. Directed Testing data is always archived for later re-use. The Directed Test Program works closely with the DMAMC to coordinate activities.

**Coordination & Requirements:** The Coordination and Requirements program provides funds for requirements, current operations, chemical support coordination, field operations and Program Mission and Integration Services (PIMSO).

- *Requirements* serves as the central integrator of countering WMD capability gap identification across the Department and works with DHS Components to identify, validate, prioritize, and catalog capability gaps and support the development of requirements documents as required by the Department's Joint Requirements Council. Requirements project personnel oversee the development and management of a standardized process to generate and maintain capability (operational) requirements for DHS frontline operators and first responders in support of follow-on acquisition activities. This project ensures validated countering WMD capability gaps are prioritized by a cross-Component evaluation team using a CWMD Requirements Oversight Council (WROC)-approved evaluation process. The prioritized list is then used to inform the CWMD PPBE process and CWMD Directorate activities and initiatives. This project also serves as the executive secretariat of the WROC, which functions as CWMD's oversight and coordination body for countering WMD requirements and capability gap validation. It comprises Senior Executives from nine DHS Components.
- *Current Operations* provides near real-time situational awareness and analysis daily to CWMD leadership on emerging threats or incidents as they relate to WMD, CBRN, and terrorism events. Current Operations will continue to leverage existing, off-the-shelf technologies to provide near-real time reporting and situational awareness to both CWMD leadership and personnel/assets deployed in support of CBRN detection missions. This includes comprehensive daily, steady-state reporting, and situational crisis reporting. Specifically, Current Operations is responsible for:
  - Coordinating the DHS informational updates for Federal Bureau of Investigation Weapons of Mass Destruction Strategic Group deployment.
  - Through assigned Federal staff, maintaining CWMD's liaison with the DHS Office of Homeland Security Situational Awareness, which coordinates planning for future operations and threat responses (i.e., countering unmanned aerial systems, and inbound nuclear threat planning).



- Maintaining the family of plans and responses to continuity of operations, continuity of government, and CWMD’s devolution of authority.
  - Implementing Incident Coordination for CWMD efforts and provide the Assistant Secretary the most accurate and actionable information to aid in emergency decision making.
  - Maintaining a contingency planning capability allowing support and course of action development for CWMD senior leadership in response to CBRN security threats and incidents.
  - Managing the CWMD Watch Desk at the DHS National Operations Center, which develops and provides 24/7/365 situational awareness and related incident information with DHS and Federal agencies. This is executed by providing end-to-end scalable operations coordination, which is required to support CWMD and the Department’s information sharing and coordination requirements, across the chemical, biological, radiological, and nuclear domains.
- *Chemical Support* leads DHS-wide chemical defense coordination through Chemical Coordination Group (CCG), a coordination body comprising DHS operational and Headquarters Components with significant chemical defense equities to align, enhance, and integrate DHS chemical defense capabilities. The CCG serves as the principal DHS coordination body for both strategic and emergent operational issues related to chemical defense. In conjunction with CWMD, the CCG developed and maintains the DHS Chemical Defense Strategy, which was signed by the Acting Secretary in December 2019. To implement the strategy and enhance DHS-wide unity of effort, the CCG is:
    - 1) holding monthly group meetings;
    - 2) identifying implementation priorities to take to action;
    - 3) holding threat-based workshops to provide state of the science education and identify current capabilities and potential gaps; and
    - 4) developing inventories and in-depth analyses to identify key areas of improvement and unity of effort across DHS components.
  - *Field Operations* supports CWMD personnel who provide coordinating functions and interface with CWMD stakeholders across the Nation, allowing CWMD to provide direct and focused support CBRN expertise in support of CWMD programs within the area of operation.

**Portable Detection Systems:** Costs included in the Portable Detection Systems project support the procurement of CBRN detection equipment that can be carried, worn, or easily moved to support operational end-users and Special Mission Units. This project also supports limited sustainment of sensors, detectors and/or equipment that CWMD provides to support DHS Components and other first responders. Activities such as collecting and analyzing Reliability, Availability, and Maintainability (RAM) data, conducting Operational Assessments (OAs) and Integrated Life Cycle Management Reviews (ILCMRs) are part of these limited sustainment activities. This project is moved to Operations and Support (O&S) in FY 2025. In prior years, it was funded in the Procurement, Construction, & Improvements (PC&I) appropriation, the Portable Detection Systems PPA.

**Capability and Operations Support – PPA  
Budget Authority and Obligations**

*(Dollars in Thousands)*

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Enacted/Request</b>	<b>\$66,400</b>	<b>\$66,400</b>	<b>\$74,575</b>
Carryover - Start of Year	\$24,219	\$5,983	-
Recoveries	\$666	-	-
Rescissions to Current Year/Budget Year	-	-	-
Net Sequestered Resources	-	-	-
Reprogramming/Transfers	\$12	-	-
Supplementals	-	-	-
<b>Total Budget Authority</b>	<b>\$91,297</b>	<b>\$72,383</b>	<b>\$74,575</b>
Collections - Reimbursable Resources	-	-	-
Collections - Other Sources	-	-	-
<b>Total Budget Resources</b>	<b>\$91,297</b>	<b>\$72,383</b>	<b>\$74,575</b>
Obligations (Actual/Estimates/Projections)	\$85,314	\$72,383	\$74,575
<b>Personnel: Positions and FTE</b>			
Enacted/Request Positions	-	-	-
Enacted/Request FTE	-	-	-
<b>Onboard and Actual FTE</b>			
Onboard (Actual/Estimates/Projections)	-	-	-
FTE (Actual/Estimates/Projections)	-	-	-

**Capability and Operations Support – PPA**  
**Summary of Budget Changes**  
*(Dollars in Thousands)*

	Positions	FTE	Pay Amount	Non-Pay Amount	Amount
<b>FY 2023 Enacted</b>	-	-	-	<b>\$66,400</b>	<b>\$66,400</b>
<b>FY 2024 Annualized CR</b>	-	-	-	<b>\$66,400</b>	<b>\$66,400</b>
<b>FY 2025 Base Budget</b>	-	-	-	<b>\$66,400</b>	<b>\$66,400</b>
<b>Total Technical Changes</b>	-	-	-	-	-
<b>Total Annualizations and Non-Recurs</b>	-	-	-	-	-
<b>Total Pricing Changes</b>	-	-	-	-	-
<b>Total Adjustments-to-Base</b>	-	-	-	-	-
<b>FY 2025 Current Services</b>	-	-	-	<b>\$66,400</b>	<b>\$66,400</b>
<b>Total Transfers</b>	-	-	-	-	-
Advisory and Assistance Services & Travel Decrease	-	-	-	(\$2,701)	(\$2,701)
Countering Emerging Bio Chem Threats	-	-	-	(\$800)	(\$800)
Portable Detection Systems	-	-	-	\$9,676	\$9,676
Test & Evaluation of CBRN Detection Equipment	-	-	-	\$2,000	\$2,000
<b>Total Program Changes</b>	-	-	-	<b>\$8,175</b>	<b>\$8,175</b>
<b>FY 2025 Request</b>	-	-	-	<b>\$74,575</b>	<b>\$74,575</b>
<b>FY 2024 TO FY 2025 Change</b>	-	-	-	<b>\$8,175</b>	<b>\$8,175</b>

**Capability and Operations Support – PPA  
Non Pay Budget Exhibits**

**Non Pay Summary**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
Capability and Operational Support	\$66,400	\$66,400	\$74,575	\$8,175
<b>Total</b>	<b>\$66,400</b>	<b>\$66,400</b>	<b>\$74,575</b>	<b>\$8,175</b>
Subtotal Discretionary - Appropriation	\$66,400	\$66,400	\$74,575	\$8,175

**Non Pay by Object Class**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
21.0 Travel and Transportation of Persons	\$1,468	\$1,468	\$1,282	(\$186)
24.0 Printing and Reproduction	\$22	\$22	\$22	-
25.1 Advisory & Assistance Services	\$21,352	\$21,352	\$20,159	(\$1,193)
25.2 Other Services from Non-Federal Sources	\$12,652	\$12,652	\$13,830	\$1,178
25.3 Other Purchases of goods and services	\$17,095	\$17,095	\$17,161	\$66
25.5 Research & Development Contracts	\$1,000	\$1,000	\$1,000	-
25.7 Operation & Maintenance of Equipment	\$7,435	\$7,435	\$7,519	\$84
26.0 Supplies & Materials	\$2,021	\$2,021	\$2,021	-
31.0 Equipment	\$1,961	\$1,961	\$10,187	\$8,226
41.0 Grants, Subsidies, and Contributions	\$1,394	\$1,394	\$1,394	-
<b>Total - Non Pay Budget Object Class</b>	<b>\$66,400</b>	<b>\$66,400</b>	<b>\$74,575</b>	<b>\$8,175</b>

**Non Pay Cost Drivers**

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Total Changes</b>
Test and Evaluation (T&E)	\$16,666	\$16,666	\$18,666	\$2,000
Strategic Planning and Analysis	\$17,435	\$17,435	\$16,635	(\$800)
National BioSurveillance Integration Center	\$16,008	\$16,008	\$16,008	-
Portable Detection Systems	-	-	\$9,676	\$9,676
Data Systems and Architecture	\$9,768	\$9,768	\$7,067	(\$2,701)
Coordination and Requirements	\$6,523	\$6,523	\$6,523	-
<b>Total - Non-Pay Cost Drivers</b>	<b>\$66,400</b>	<b>\$66,400</b>	<b>\$74,575</b>	<b>\$8,175</b>

**Explanation of Non Pay Cost Drivers**

**Test and Evaluation (T&E):** Includes funds for T&E Operations, Operational Analysis and Technical Assessments, Sources and Infrastructure, Standards and Conformity, and test campaigns for characterization of CBRN detection equipment. The increase reflects the Test and Evaluation of CBRN Equipment program change which supports the characterization of CBRN detection equipment. Characterization of CBRN detection equipment is the operational analysis and technical assessment of CBRN detection equipment, including mature, commercially available CBRN systems in operational scenarios faced by FSLTT end-users.

**Strategic Planning and Analysis:** Strategic Planning and Threat Analysis provides resources for the development and coordination of DHS policy, strategy, and plans to counter CBRN and security threats affecting the United States, capability gap and risk assessments, and information analysis and anomaly detection. This includes operationally focused WMD intelligence, sensor data interpretation and tool integration, biosurveillance, and interagency collaboration. The decrease reflects the reduction of contract advisory and assistance services for studies which have been completed.

**National BioSurveillance Integration Center:** NBIC provides biosurveillance tools, analysis, and information to support common situational awareness and operational responses. NBIC also supports the development and deployment of IT systems to support NBIC’s mission and provide a framework for collaboration with its interagency NBIC partners.

**Portable Detection Systems:** Includes funding for CBRN detection equipment that can be carried, worn, or easily moved to support operational end-users and Special Mission Units. This project also includes limited sustainment of sensors, detectors and/or equipment that CWMD provides to support DHS Components and other first responders. The change reflects the movement of the Portable Detection Systems PPA procurements from PC&I to O&S in FY 2025.

**Data Systems and Architecture:** Includes funding to continue operations and maintenance of the CWMD Gate-U Platform and to facilitate the integration of CBRN data into analytic platforms. It also supports capabilities that allow CWMD to ingest, process, and analyze new data and information sources for evidence or indicators of CBRN threats. The decrease from FY 2024 to FY 2025 reflects the efficiencies of advisory and assistance services to support machine learning activities.

**Coordination and Requirements:** Includes funding for coordination support including operations, requirements, watch desk, continuity, and contingency planning, chemical support coordination, and travel for field operations.

# Department of Homeland Security

## *Countering Weapons of Mass Destruction*

### *Procurement, Construction, and Improvements*



**Fiscal Year 2025**

**Congressional Justification**

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*Procurement, Construction, and Improvements*

**Budget Comparison and Adjustments**

**Comparison of Budget Authority and Request**

*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
Large Scale Detection Systems	\$66,137	\$66,137	\$33,397	(\$32,740)
Portable Detection Systems	\$9,067	\$9,067	-	(\$9,067)
<b>Total</b>	<b>\$75,204</b>	<b>\$75,204</b>	<b>\$33,397</b>	<b>(\$41,807)</b>
Subtotal Discretionary - Appropriation	\$75,204	\$75,204	\$33,397	(\$41,807)

The Countering Weapons of Mass Destruction Office (CWMD) Procurement, Construction, and Improvements (PC&I) appropriation provides resources necessary for the planning, development, procurement, deployment, operational test and evaluation, and improvement of assets that help the Department of Homeland Security (DHS) and its partners to prevent, protect against, respond to, and mitigate chemical, biological, radiological, and nuclear (CBRN) threats and incidents. It also provides for minor construction related to the deployment of Radiation Portal Monitors (RPM).

The PC&I appropriation includes the following Programs, Projects, and Activities (PPA):

**Large Scale Detection Systems:** This PPA includes resources to enhance, acquire, and deploy radiation detection equipment including: Radiation Portal Monitors (RPMs) and related systems, and ancillary equipment under an integrated portfolio enterprise. This PPA supports DHS operational end-users and addresses operational and technical detection requirements at user locations throughout the United States, and provides the programmatic, scientific, and technical expertise to design, acquire, and deploy these systems. This PPA also funds activities such as collecting and analyzing Reliability, Availability, and Maintainability (RAM) data, conducting Operational Assessments (OAs) and Integrated Life Cycle Management Reviews (ILCMRs), critical information that informs effectiveness and future requirements.

**Portable Detection Systems:** No funding is included in this PPA in the FY 2025 Budget. The small-scale portable detection programs are funded in the CWMD Operations & Support (O&S) Appropriation as minor procurements, construction, and improvements to better align with the funding thresholds to purchase end item assets and improvement projects in DHS financial policy.

**Procurement, Construction, and Improvements**

**Budget Authority and Obligations**

*(Dollars in Thousands)*

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Enacted/Request</b>	<b>\$75,204</b>	<b>\$75,204</b>	<b>\$33,397</b>
Carryover - Start of Year	\$43,770	\$51,415	\$49,107
Recoveries	\$3,336	-	-
Rescissions to Current Year/Budget Year	-	-	-
Net Sequestered Resources	-	-	-
Reprogramming/Transfers	-	-	-
Supplementals	-	-	-
<b>Total Budget Authority</b>	<b>\$122,310</b>	<b>\$126,619</b>	<b>\$82,504</b>
Collections - Reimbursable Resources	-	-	-
Collections - Other Sources	-	-	-
<b>Total Budget Resources</b>	<b>\$122,310</b>	<b>\$126,619</b>	<b>\$82,504</b>
Obligations (Actual/Estimates/Projections)	\$70,895	\$77,512	\$82,504
<b>Personnel: Positions and FTE</b>			
Enacted/Request Positions	-	-	-
Enacted/Request FTE	-	-	-
<b>Onboard and Actual FTE</b>			
Onboard (Actual/Estimates/Projections)	-	-	-
FTE (Actual/Estimates/Projections)	-	-	-

**Procurement, Construction, and Improvements**

**Summary of Budget Changes**

*(Dollars in Thousands)*

	<b>Positions</b>	<b>FTE</b>	<b>Amount</b>
<b>FY 2023 Enacted</b>	-	-	<b>\$75,204</b>
<b>FY 2024 Annualized CR</b>	-	-	<b>\$75,204</b>
<b>FY 2025 Base Budget</b>	-	-	-
Radiation Portal Monitor Program (RPMP)	-	-	\$13,197
Radiation Portal Monitor Replacement Program (RPM RP)	-	-	\$16,700
International Rail (IRAIL)	-	-	\$3,500
<b>Total Investment Elements</b>	-	-	<b>\$33,397</b>
<b>FY 2025 Request</b>	-	-	<b>\$33,397</b>
<b>FY 2024 TO FY 2025 Change</b>	-	-	<b>(\$41,807)</b>

**Procurement, Construction, and Improvements**

**Non Pay Budget Exhibits**

**Non Pay by Object Class**

*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
21.0 Travel and Transportation of Persons	\$35	\$35	\$317	\$282
25.1 Advisory & Assistance Services	\$9,853	\$9,853	\$6,802	(\$3,051)
25.2 Other Services from Non-Federal Sources	\$30,330	\$30,330	\$10,985	(\$19,345)
25.3 Other Purchases of goods and services	\$4,120	\$4,120	\$9,533	\$5,413
26.0 Supplies & Materials	-	-	\$5,760	\$5,760
31.0 Equipment	\$30,866	\$30,866	-	(\$30,866)
<b>Total - Non Pay Budget Object Class</b>	<b>\$75,204</b>	<b>\$75,204</b>	<b>\$33,397</b>	<b>(\$41,807)</b>

**Procurement, Construction, and Improvements  
Capital Investment Exhibits**

**Capital Investments**

*(Dollars in Thousands)*

	<b>Acquisition Level</b>	<b>IT/ Non-IT</b>	<b>MAOL</b>	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>
N024_000005961 - Radiation Portal Monitor Replacement Program (RPM RP)	Level 2	Non-IT	Yes	\$34,530	\$34,530	\$16,700
N024_000005960 - Basic Handheld RIIDs	Level 3	Non-IT	No	\$3,000	\$3,000	-
N/A - Radiation Portal Monitor Program (RPMP)	Level 3	Non-IT	No	\$21,942	\$21,942	\$13,197
N/A - International Rail (IRAIL)	Level 3	Non-IT	No	\$9,665	\$9,665	\$3,500
N/A - Portable Detection Equipment End Items	Level 3	Non-IT	No	\$6,067	\$6,067	-

*Large Scale Detection Systems – PPA***Budget Comparison and Adjustments****Comparison of Budget Authority and Request***(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
Radiation Portal Monitor Program (RPMP)	\$21,942	\$21,942	\$13,197	(\$8,745)
Radiation Portal Monitor Replacement Program (RPM RP)	\$34,530	\$34,530	\$16,700	(\$17,830)
International Rail (IRAIL)	\$9,665	\$9,665	\$3,500	(\$6,165)
<b>Total</b>	<b>\$66,137</b>	<b>\$66,137</b>	<b>\$33,397</b>	<b>(\$32,740)</b>
Subtotal Discretionary - Appropriation	\$66,137	\$66,137	\$33,397	(\$32,740)

**PPA Level I Description**

Large Scale Detection Systems PPA includes resources to enhance, acquire, and deploy large, fixed, and vehicle-mounted radiation detection equipment such as: RPMs, and other related systems and ancillary equipment, to support DHS operational end-users addressing operational and technical detection requirements. This PPA includes the enhancements, procurement and/or deployment of RPM systems at user locations throughout the United States, and provides the programmatic, scientific, and technical expertise to design, acquire, and deploy these systems. This PPA also funds activities such as collecting and analyzing RAM data, conducting OAs and ILCMRs, critical information that informs effectiveness and future requirements. CWMD is transitioning to managing these projects as an integrated RPM Enterprise Portfolio. As such, CWMD has coordinated with U.S. Custom and Border Protection (CBP) to implement operational priorities with regards to deployment of RPM technologies to Port of Entry (POEs) and funding allocations across the portfolio reflect those priorities.

The Large-Scale Detection Systems PPA includes the following investments:

**Radiation Portal Monitor Program (RPMP):** RPMP is a post-Full Operational Capability (FOC) program to maintain scanning coverage in support of CBP operations at previously deployed POEs. Major activities include deploying, and redeploying refurbished RPMs to address POE requirements, including new POEs being constructed such as the Gordie Howe Bridge; and evaluating, acquiring, and deploying improvements to fielded RPM systems. Includes conducting analysis of RAM data, OAs in collaboration with CBP, and ILCMRs for all post- FOC programs in this PPA.

**Radiation Portal Monitor Replacement Program (RPM RP):** RPM RP will acquire and deploy a limited number of enhanced RPMs to improve effectiveness of the current fleet of fixed RPMs in support of the CBP operation at priority POEs. Once FOC has been reached, these systems will be incorporated into the RPM fleet and any limited future sustainment activities will be accomplished by the RPMP.

**International Rail (IRAIL):** IRAIL will acquire and deploy a solution to detect and identify nuclear or other radioactive materials out of regulatory control entering the United States via freight rail. This solution will be integrated with the CBP-led rail Non-Intrusive Inspection (NII) Recapitalization Program by procuring, integrating, and testing Radiation Detection Equipment (RDE) deployed with rail NII.

**Large Scale Detection Systems – PPA**  
**Budget Authority and Obligations**  
*(Dollars in Thousands)*

	FY 2023	FY 2024	FY 2025
<b>Enacted/Request</b>	<b>\$66,137</b>	<b>\$66,137</b>	<b>\$33,397</b>
Carryover - Start of Year	\$33,279	\$50,703	\$49,107
Recoveries	\$3,118	-	-
Rescissions to Current Year/Budget Year	-	-	-
Net Sequestered Resources	-	-	-
Reprogramming/Transfers	-	-	-
Supplementals	-	-	-
<b>Total Budget Authority</b>	<b>\$102,534</b>	<b>\$116,840</b>	<b>\$82,504</b>
Collections - Reimbursable Resources	-	-	-
Collections - Other Sources	-	-	-
<b>Total Budget Resources</b>	<b>\$102,534</b>	<b>\$116,840</b>	<b>\$82,504</b>
Obligations (Actual/Estimates/Projections)	\$51,831	\$67,733	\$82,504
<b>Personnel: Positions and FTE</b>			
Enacted/Request Positions	-	-	-
Enacted/Request FTE	-	-	-
<b>Onboard and Actual FTE</b>			
Onboard (Actual/Estimates/Projections)	-	-	-
FTE (Actual/Estimates/Projections)	-	-	-



**Large Scale Detection Systems – PPA**  
**Summary of Budget Changes**  
*(Dollars in Thousands)*

	Positions	FTE	Amount
<b>FY 2023 Enacted</b>	-	-	\$66,137
<b>FY 2024 Annualized CR</b>	-	-	\$66,137
<b>FY 2025 Base Budget</b>	-	-	-
Radiation Portal Monitor Program (RPMP)	-	-	\$13,197
Radiation Portal Monitor Replacement Program (RPM RP)	-	-	\$16,700
International Rail (IRAIL)	-	-	\$3,500
<b>Total Investment Elements</b>	-	-	\$33,397
<b>FY 2025 Request</b>	-	-	\$33,397
<b>FY 2024 TO FY 2025 Change</b>	-	-	(\$32,740)

**Large Scale Detection Systems – PPA**

**Non Pay Budget Exhibits**

**Non Pay by Object Class**

*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
21.0 Travel and Transportation of Persons	\$25	\$25	\$317	\$292
25.1 Advisory & Assistance Services	\$9,100	\$9,100	\$6,802	(\$2,298)
25.2 Other Services from Non-Federal Sources	\$30,330	\$30,330	\$10,985	(\$19,345)
25.3 Other Purchases of goods and services	\$4,120	\$4,120	\$9,533	\$5,413
26.0 Supplies & Materials	-	-	\$5,760	\$5,760
31.0 Equipment	\$22,562	\$22,562	-	(\$22,562)
<b>Total - Non Pay Budget Object Class</b>	<b>\$66,137</b>	<b>\$66,137</b>	<b>\$33,397</b>	<b>(\$32,740)</b>

**Large Scale Detection Systems – PPA**  
**Capital Investment Exhibits**

**Capital Investments**

*(Dollars in Thousands)*

	<b>Acquisition Level</b>	<b>IT/ Non-IT</b>	<b>MAOL</b>	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>
N024_000005961 - Radiation Portal Monitor Replacement Program (RPM RP)	Level 2	Non-IT	Yes	\$34,530	\$34,530	\$16,700
N/A - Radiation Portal Monitor Program (RPMP)	Level 3	Non-IT	No	\$21,942	\$21,942	\$13,197
N/A - International Rail (IRAIL)	Level 3	Non-IT	No	\$9,665	\$9,665	\$3,500

**Radiation Portal Monitor Program (RPMP) – Investment  
Capital Investment Exhibits**

**Procurement/Acquisition Programs**

*(Dollars in Thousands)*

	<b>Acquisition Level</b>	<b>IT/ Non-IT</b>	<b>MAOL</b>	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>
N/A - Radiation Portal Monitor Program (RPMP)	Level 3	Non-IT	No	\$21,942	\$21,942	\$13,197

**Investment Description**

RPMs operated by CBP at U.S. land and sea POEs to scan cargo and conveyances are a critical component of the Global Nuclear Detection Architecture to prevent the smuggling of radiological/nuclear (R/N) threats or threat materials into the United States, while facilitating the flow of legitimate trade and travel.

The RPMP supports CBP’s efforts to continue scanning coverage at POEs. As POEs are reconfigured, expanded, or new POEs are opened, RPMs must be relocated, decommissioned, and/or additional RPM systems must be deployed to uphold current scanning capabilities. In addition, improvements will be deployed to systems in the field to extend the service life of RPMs, as well as augment detection efficacy, operational performance, and operational efficiency such as implementing capability to enable Remote Operations by CBP officers and improved algorithms to detect threats and reduce nuisance alarms.

In FY 2025, CWMD plans to continue managing the redeployment of legacy RPM systems as well as decommissioning, inventory management, functional checkout, and deployment of selected improvements that enhance operational or threat detection performance for fielded systems to meet CBP operational requirements. These activities have been coordinated with CBP to reflect the relative operational priorities across the entire RPM Enterprise portfolio.

**Justification**

RPMs are an essential capability to protect the United States from R/N threats. Funding in FY 2025 will support fulfilling CWMD’s responsibilities in continuing to scan inbound commercial cargo and vehicles using the legacy fleet of RPMs as well as needed improvements to detection efficacy and efficiency to ensure DHS meets the legislative requirements of section 232 of the *Security and Accountability for Every (SAFE) Port Act of 2006, (P.L. 109-347) (6 U.S.C. 982)*. RPMP ensures statutorily required radiation scanning coverage to threat detection at the Nation's seaports, land border POEs, and Express Consignment and Carrier Facilities (ECCF) without an adverse impact to the flow of commerce.

**FY 2023 Key Milestone Events**

- Reconfigured deployment of RPMs at 15 POEs.
- Deployed remote operations equipment at 7 POEs.

## Large Scale Detection Systems – PPA

## Radiation Portal Monitor Program

- Decommissioned at 7 POEs.
- Identified/decommissioned low use/no use.
- Upgraded/Field Tested RPMs with encapsulated Polyvinyl Toluene (PVT).

### FY 2024 Planned Key Milestone Events

- Reconfigure deployment of RPMs at 7 POEs.
- Deploy remote operations equipment at 18 POEs.
- Deploy 38 RPMs with encapsulated PVT.
- Decommission at 7 POEs.

### FY 2025 Planned Key Milestone Events

- Reconfigure deployment of RPMs at 11 POEs.
- Deploy remote operations equipment at 7 POEs.
- Decommission at 10 POEs.

### Overall Investment Funding

<i>(Dollars in Thousands)</i>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Operations and Support <sup>1</sup>	-	-	-	-
Procurement, Construction, and Improvements <sup>2</sup>	\$138,162	\$21,942	\$21,942	\$13,197
Research and Development	-	-	-	-
Legacy Appropriations	\$974,385			
<b>Total Project Funding</b>	<b>\$1,112,547</b>	<b>\$21,942</b>	<b>\$21,942</b>	<b>\$13,197</b>
Obligations	\$1,071,676	\$14,554		
Expenditures	\$1,043,628	\$14,554		

1 – Note: RPMs are transferred to CBP, which funds associated Operations and Support (O&S) costs separately under their budget authority.

2 – Note: CWMD re-allocated \$2.1M in Fiscal Year 2023 RPMP funding to the RPM-RP program.

**Contract Information (Current/Execution Year, Budget Year)**

Contract Number	Contractor	Type	Award Date (mo/yr)	Start Date (mo/yr)	End Date (mo/yr)	EVM in Contract	Total Value (Dollars in Thousands)
70RWMD21D00000004	K2 Construction Consultants Inc.	IDIQ	06/2021	05/2023	06/2026	No	\$252,523
70RDND19K00000015	Pacific Northwest National Lab	IAA	06/2019	06/2019	05/2024	No	\$104,940
HSHQDC-20-ACQ01-003	CBP Data Analysis Center – Threat Evaluation Reduction (DAC-TER)	IAA	08/2023	08/2023	08/2026	No	\$2,200
HSHQDC-22-ACQ001	CBP Border Security Deployment Program (BSDP)	IAA	07/2022	07/2022	07/2025	No	\$1,910

**Significant Changes to Investment since Prior Year Enacted**

RPMP is transitioning from deploying RPM systems with Department of Energy’s Pacific Northwest National Laboratory to a contractor, K2 Construction Consultants, Inc. across FY 2024 and FY 2025.

**Investment Schedule**

Description	Design Work		Project Work	
	Initiated	Completed	Initiated	Completed
	<b>FY 2023</b>			
Deployment/redeployment including but not limited to land and seaports of entry: <ul style="list-style-type: none"> <li>• Laredo Bridge Shipping Support</li> <li>• Pharr, TX</li> <li>• Vancouver, CAN</li> </ul>	-	-	FY 2023 Q1	FY 2023 Q4

**Large Scale Detection Systems – PPA**

**Radiation Portal Monitor Program**

Continuing System Improvement including Remote Operations but not limited to: <ul style="list-style-type: none"> <li>• Pier A, CA</li> <li>• Red Hook, NJ</li> <li>• Oakland TraPac, CA</li> </ul>	-	-	FY 2023 Q1	FY 2023 Q4
Science and Engineering including but not limited to: <ul style="list-style-type: none"> <li>• RPM Next Generation Windows Interface</li> <li>• Remote Secondary Operations Design</li> <li>• Encapsulated PVT Field Validation</li> </ul>	-	-	FY 2023 Q1	FY 2023 Q4
Program Support	-	-	FY 2023 Q1	FY 2023 Q4
<b>FY 2024</b>				
Deployment/redeployment including but not limited to land and seaports of entry: <ul style="list-style-type: none"> <li>• Albur Springs, VT</li> <li>• Anzalduas, TX</li> <li>• Gordie Howe International Bridge, MI</li> </ul>	-	-	FY 2024 Q1	FY 2024 Q4
Continuing System Improvement including Remote Operations but not limited to: <ul style="list-style-type: none"> <li>• Barbours Cut Consolidated – Houston, TX</li> <li>• Everett, WA</li> <li>• PNCT Newark, NJ</li> </ul>	-	-	FY 2024 Q1	FY 2024 Q4
Science and Engineering including but not limited to: <ul style="list-style-type: none"> <li>• Calibration and Interval Analysis</li> <li>• State of Health Integration</li> </ul>	-	-	FY 2024 Q1	FY 2024 Q4
Program Support	-	-	FY 2024 Q1	FY 2024 Q4
<b>FY 2025</b>				
Deployment/redeployment including but not limited to land and seaports of entry: <ul style="list-style-type: none"> <li>• Blue Water Bridge, MI</li> </ul>	-	-	FY 2025 Q1	FY 2025 Q4
Continuing System Improvement including Remote Operations but not limited to: <ul style="list-style-type: none"> <li>• Charleston, SC</li> <li>• Turning Basin, Houston, TX</li> </ul>	-	-	FY 2025 Q1	FY 2025 Q4
Science and Engineering including but not limited to: <ul style="list-style-type: none"> <li>• Calibration and Interval Analysis</li> <li>• State of Health Integration</li> </ul>	-	-	FY 2025 Q1	FY 2025 Q4
Program Support	-	-	FY 2025 Q1	FY 2025 Q4

**Radiation Portal Monitor Replacement Program (RPM RP) – Investment  
Capital Investment Exhibits**

**Procurement/Acquisition Programs**

*(Dollars in Thousands)*

	<b>Acquisition Level</b>	<b>IT/ Non-IT</b>	<b>MAOL</b>	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>
N024_000005961 - Radiation Portal Monitor Replacement Program (RPM RP)	Level 2	Non-IT	Yes	\$34,530	\$34,530	\$16,700

**Investment Description**

RPMs are used at U.S. land and sea POEs by CBP to scan cargo and conveyances to prevent the smuggling of R/N threats or threat materials into the United States, while facilitating the flow of legitimate trade and commerce. This program supports the needed enhancements to CBP R/N materials detection and identification capabilities at high-volume POEs.

The focus of the RPM RP is the deployment of enhanced RPMs to reduce nuisance alarms at specific high-volume POEs to facilitate remote operation and monitoring and reducing the operational burden on CBP. RPM RP is aligned to several overarching technical requirements for improving R/N detection, including the following areas:

- 1) Deploy detection systems for scanning of cargo and conveyances for R/N materials at U.S. POEs.
- 2) Ensure steady state operations of deployed radiation detection systems do not unduly disrupt commercial cargo and passenger flow.

CWMD previously procured 217 enhanced RPM RP systems. The FY 2025 Budget, along with prior year funding, will support the deployment, installation, and commissioning of a total of 216 RPM RP systems at 41 POEs achieving FOC. The additional RPM RP system will remain a test asset.

**Justification**

RPMs are an essential capability to protect the United States from R/N threats. The FY 2025 Budget provides funding required to complete deployment, installation, and commissioning of 112 RPM RP systems at 20 POE. In accordance with CBP Operational Priorities, CWMD re-allocated funds within the Large-Scale PPA to support deployment of the already procured RPM RP systems.

**FY 2023 Key Milestone Events**

- Declared Initial Operating Capability (IOC) after successful deployments.
- Commissioned 22 RPM RP systems at 5 POEs.



**Large Scale Detection Systems – PPA**

**Radiation Portal Monitor Replacement Program**

**FY 2024 Planned Key Milestone Events**

- Validate blanking technology.
- Commission 80 RPM RP Systems at 16 POEs.

**FY 2025 Planned Key Milestone Events**

- Commission 112 RPM RP Systems at 20 POEs.
- Achieve program FOC.

**Overall Investment Funding**

<i>(Dollars in Thousands)</i>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Operations and Support <sup>1</sup>	-	-	-	-
Procurement, Construction, and Improvements <sup>2, 3</sup>	\$163,298	\$34,530	\$34,530	\$16,700
Research and Development	-	-	-	-
Legacy Appropriations	\$6,460			
<b>Total Project Funding</b>	<b>\$169,758</b>	<b>\$34,530</b>	<b>\$34,530</b>	<b>\$16,700</b>
Obligations	\$152,621	\$4,266		
Expenditures	\$98,232	\$4,266		

1 – Note: RPMs are transferred to CBP, which funds associated O&S costs separately under their budget authority.

2 – Note: Original capital investment plan did not include procurement and deployment funding beyond FY 2023.

3 – Note: CWMD re-allocated \$2.1M in RPMP and \$11.9M in Next Generation Mobile program FY 2023 funding to the RPM RP program.

**Contract Information (Current/Execution Year, Budget Year)**

<b>Contract Number</b>	<b>Contractor</b>	<b>Type</b>	<b>Award Date (mo/yr)</b>	<b>Start Date (mo/yr)</b>	<b>End Date (mo/yr)</b>	<b>EVM in Contract</b>	<b>Total Value (Dollars in Thousands)</b>
70RDND18D00000001	Leidos/L-3 Communications	IDIQ	09/2018	09/2018	09/2033	No	\$291,400 <sup>1</sup>
70RDND18D00000003	Smith’s Detection	IDIQ	09/2018	09/2018	09/2033	No	\$291,400 <sup>1</sup>
70RWMD21D00000004	K2 Construction Consultants Inc.	IDIQ	06/2021	05/2023	06/2026	No	\$252,523

**Large Scale Detection Systems – PPA**

**Radiation Portal Monitor Replacement Program**

1 - The RPM RP Procurement contract ceiling is \$291.4M shared between the two (2) IDIQ Contract Holders.

**Significant Changes to Investment since Prior Year Enacted**

N/A.

**Investment Schedule**

Description	Design Work		Project Work	
	Initiated	Completed	Initiated	Completed
<b>FY 2023</b>				
System Deployment and Construction including but not limited to land and sea POE: <ul style="list-style-type: none"> <li>• North Charleston, SC</li> <li>• Oakland Seaport, CA</li> <li>• Pembina, ND</li> <li>• Portal, ND</li> <li>• Champlain, NY</li> </ul>	-	-	FY 2023 Q1	FY 2023 Q4
Program Support	-	-	FY 2023 Q1	FY 2023 Q4
<b>FY 2024</b>				
System Deployment and Construction including but not limited to land and sea POE: <ul style="list-style-type: none"> <li>• Sweetgrass, MT</li> <li>• T5, Seattle, WA</li> <li>• Napoleon Terminal, New Orleans, LA</li> <li>• Everglades, FL</li> </ul>	-	-	FY 2024 Q1	FY 2024 Q4
Program Support	-	-	FY 2024 Q1	FY 2024 Q4
<b>FY 2025</b>				
System Deployment and Construction including but not limited to land and sea POE: <ul style="list-style-type: none"> <li>• Pacific Highway, WA</li> <li>• Ysleta, TX</li> <li>• VIG, VA</li> <li>• Miami, FL</li> </ul>	-	-	FY 2025 Q1	FY 2025 Q4
Program Support	-	-	FY 2025 Q1	FY 2025 Q4

**International Rail (IRAIL) – Investment  
Capital Investment Exhibits**

**Procurement/Acquisition Programs**

*(Dollars in Thousands)*

	<b>Acquisition Level</b>	<b>IT/ Non-IT</b>	<b>MAOL</b>	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>
N/A - International Rail (IRAIL)	Level 3	Non-IT	No	\$9,665	\$9,665	\$3,500

**Investment Description**

The International Rail (IRAIL) program will acquire and deploy fixed Radiation Detection Equipment (RDE) in the form of RPM configured specifically for the freight rail environment (rail variant) and integrated with the CBP High Energy Rail Radiography system to allow for side-by-side operation. The RDE will detect and identify nuclear or other radioactive materials out of regulatory control entering the United States via freight rail cargo through the active rail POEs. The CWMD IRAIL program will acquire and deploy the solution in coordination with the CBP NII Program, which is recapitalizing aging NII High Energy Rail Radiography systems at rail POEs.

**Justification**

The FY 2025 Budget provides the RDE component of the integrated solution, development, configuration, integration, test, vendor oversight, and deployment of configured RPM systems for operation in a rail environment and capable of functioning side-by-side with the CBP High Energy Rail system.

**FY 2023 Key Milestone Events**

- Purchased one RDE system from one vendor.
- Conducted Blanking Studies at Vista, CA and Edgewood, MD.
- Initiated System Performance Evaluation (SPE) modeling and simulation.

**FY 2024 Planned Key Milestone Events**

- Conduct integration verification testing for one system.
- Conduct data collection at one site.
- Purchase and deploy two systems.

**FY 2025 Planned Key Milestone Events**

- Purchase, deploy, and test two RDE systems.
- Conduct SPE modeling and simulation.

**Overall Investment Funding**

<i>(Dollars in Thousands)</i>	Prior Years	FY 2023	FY 2024	FY 2025
Operations and Support <sup>1</sup>	-	-	-	-
Procurement, Construction, and Improvements	\$33,745	\$9,665	\$9,665	\$3,500
Research and Development	\$5,750	-	-	-
Legacy Appropriations	-			
<b>Total Project Funding</b>	<b>\$39,495</b>	<b>\$9,665</b>	<b>\$9,665</b>	<b>\$3,500</b>
Obligations	\$32,267	\$1,151		
Expenditures	\$7,185	\$1,151		

<sup>1</sup> - Note: This technology is transferred to CBP, which funds associated O&S costs separately under their budget authority.

**Contract Information (Current/Execution Year, Budget Year)**

Contract Number	Contractor	Type	Award Date (mo/yr)	Start Date (mo/yr)	End Date (mo/yr)	EVM in Contract	Total Value (Dollars in Thousands)
HSHQDC21ACQ006	CBP	Existing IAA	06/2021	06/2021	09/2023	No	\$16,002
70RWMD21K00000013	PNNL	Existing IAA	05/2022	06/2022	09/2023	No	\$7,035

**Significant Changes to Investment since Prior Year Enacted**

The program schedule continues to be coordinated with CBP. Delays have been experienced by CBP NII portion of this joint program. Integration verification testing and data collection for the first Smith's system were moved from FY 2023 to FY 2024. CBP broke ground at Buffalo, NY in May 2023 and testing is scheduled for April 2024. Groundbreaking for the Leidos and Rapiscan systems are pending, and deployment is expected to be initiated in FY 2024.

**Large Scale Detection Systems – PPA**  
**Investment Schedule**

**International Rail**

Description	Design Work		Project Work	
	Initiated	Completed	Initiated	Completed
	<b>FY 2023</b>			
Initiate deployment of first three systems, coordinated with CBP.	-	-	FY 2023 Q2	FY 2024 Q2
Conduct Blanking Studies at Vista, CA and Edgewood, MD.	-	-	FY 2023 Q1	FY 2023 Q3
Initiate System Performance Evaluation.	-	-	FY 2023 Q4	FY 2023 Q4
	<b>FY 2024</b>			
Perform one integration verification test.	-	-	FY 2024 Q3	FY 2024 Q3
Conduct data collection at one site.	-	-	FY 2024 Q3	FY 2024 Q3
Purchase and deploy two systems.	-	-	FY 2024 Q1	FY 2024 Q4
	<b>FY 2025</b>			
Purchase, test, and deploy two systems, coordinated with CBP.	-	-	FY 2025 Q1	FY 2025 Q4
Conduct SPE modeling and simulation.	-	-	FY 2025 Q1	FY 2027 Q4

*Portable Detection Systems – PPA***Budget Comparison and Adjustments****Comparison of Budget Authority and Request***(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
Basic Handheld RIIDs	\$3,000	\$3,000	-	(\$3,000)
Portable Detection Equipment End Items	\$6,067	\$6,067	-	(\$6,067)
<b>Total</b>	<b>\$9,067</b>	<b>\$9,067</b>	-	<b>(\$9,067)</b>
Subtotal Discretionary - Appropriation	\$9,067	\$9,067	-	(\$9,067)

**PPA Level I Description**

The small-scale portable detection programs are funded in the CWMD Operations & Support (O&S) Appropriation as minor procurements, construction, and improvements to better align with the funding thresholds to purchase an end item, asset, or improvement project in DHS financial policy.

The Portable Detection Systems PPA includes the following projects:

**Basic Handheld (BHH) Radioisotope Identification Devices (RIID):** BHH RIIDs are used for search, detection, localization, and identification of R/N materials, and for quick and accurate measurement of dose rate, and count rate. These devices also support secondary screening and small-area searches. Advanced Handheld (AHH) RIIDs are deployed and included in this project to maintain operational capability.

**Portable Detection Equipment End Items:**

- **Personal Radiation Detectors (PRDs):** PRDs are pager-size devices always worn by an operator for the purposes of R/N detection. They monitor the user's environment and alert operators when radioactivity levels above the natural background are detected, at which time the user would call for an identification device.
- **Rapid CBRN Equipping:** Critical counter-weapon of mass destruction (WMD) capabilities including detection and identification equipment, interdiction equipment, personal protective equipment, and decontamination equipment for DHS Special Mission Units and other operational

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entities requiring urgently needed CBRN equipment. Rapid CBRN Equipping varies by year in types of equipment items and number of items depending on requirements from DHS customers.

## Portable Detection Systems – PPA Budget Authority and Obligations

*(Dollars in Thousands)*

	FY 2023	FY 2024	FY 2025
<b>Enacted/Request</b>	<b>\$9,067</b>	<b>\$9,067</b>	-
Carryover - Start of Year	\$3,594	\$712	-
Recoveries	\$218	-	-
Rescissions to Current Year/Budget Year	-	-	-
Net Sequestered Resources	-	-	-
Reprogramming/Transfers	-	-	-
Supplementals	-	-	-
<b>Total Budget Authority</b>	<b>\$12,879</b>	<b>\$9,779</b>	-
Collections - Reimbursable Resources	-	-	-
Collections - Other Sources	-	-	-
<b>Total Budget Resources</b>	<b>\$12,879</b>	<b>\$9,779</b>	-
Obligations (Actual/Estimates/Projections)	\$12,167	\$9,779	-
<b>Personnel: Positions and FTE</b>			
Enacted/Request Positions	-	-	-
Enacted/Request FTE	-	-	-
<b>Onboard and Actual FTE</b>			
Onboard (Actual/Estimates/Projections)	-	-	-
FTE (Actual/Estimates/Projections)	-	-	-



**Portable Detection Systems – PPA**  
**Summary of Budget Changes**  
*(Dollars in Thousands)*

	<b>Positions</b>	<b>FTE</b>	<b>Amount</b>
<b>FY 2023 Enacted</b>	-	-	<b>\$9,067</b>
<b>FY 2024 Annualized CR</b>	-	-	<b>\$9,067</b>
<b>FY 2025 Base Budget</b>	-	-	-
<b>FY 2025 Request</b>	-	-	-
<b>FY 2024 TO FY 2025 Change</b>	-	-	<b>(\$9,067)</b>

**Portable Detection Systems – PPA**

**Non Pay Budget Exhibits**

**Non Pay by Object Class**

*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
21.0 Travel and Transportation of Persons	\$10	\$10	-	(\$10)
25.1 Advisory & Assistance Services	\$753	\$753	-	(\$753)
31.0 Equipment	\$8,304	\$8,304	-	(\$8,304)
<b>Total - Non Pay Budget Object Class</b>	<b>\$9,067</b>	<b>\$9,067</b>	-	<b>(\$9,067)</b>

**Portable Detection Systems – PPA**  
**Capital Investment Exhibits**

**Capital Investments**  
*(Dollars in Thousands)*

	<b>Acquisition Level</b>	<b>IT/ Non-IT</b>	<b>MAOL</b>	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>
N024_000005960 - Basic Handheld RIIDs	Level 3	Non-IT	No	\$3,000	\$3,000	-
N/A - Portable Detection Equipment End Items	Level 3	Non-IT	No	\$6,067	\$6,067	-

**Basic Handheld RIIDs – Investment  
Capital Investment Exhibits**

**Procurement/Acquisition Programs**

*(Dollars in Thousands)*

	<b>Acquisition Level</b>	<b>IT/ Non-IT</b>	<b>MAOL</b>	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>
N024_000005960 - Basic Handheld RIIDs	Level 3	Non-IT	No	\$3,000	\$3,000	-

**Investment Description**

Basic Handheld (BHH) Radioisotope Identification Devices (RIID) are used for search, detection, localization, and identification of R/N materials, and for quick and accurate measurement of dose rate, count rate, and some spectral data for identification. These devices also support secondary screening and small-area searches. Advanced Handheld (AHH) RIIDs are also included in this investment as needed to maintain operational capability. This project will conduct a Service Life Extension Program (SLEP) on CBP’s fleet of approximately 708 RadSeeker DL devices, which represents one-third of CBP’s entire RIID fleet. This funding provides the programmatic, scientific, and technical expertise to manage the portfolio of small-scale detection systems. Also funds activities such as collecting and analyzing RAM data, conducting OAs, and ILCMRs.

**Justification**

For the FY 2025 Budget, the small-scale portable detection programs are funded in the CWMD Operations & Support (O&S) Appropriation as minor procurements, construction, and improvements to better align with the funding thresholds to purchase an end item, asset, or improvement project in DHS financial policy.

**FY 2023 Key Milestone Events**

- Continued the refurbishment and SLEP of RadSeeker DL RIIDs for CBP.
- Completed upgrade of energy window of AHH RIIDs for CBP, USCG, MDDP, and FEMA.
- Conducted annual ILCMR and conduct OA planning and data collection.
- Continued the collection and analysis of RAM data in support of the ILCMR and OA.

**FY 2024 Planned Key Milestone Events**

- Complete the refurbishment and SLEP of RadSeeker DL RIIDs for CBP.
- Continue the collection and analysis of RAM data in support of the ILCMR and OA.
- Complete OA and conduct an AA or CBA to determine if SLEP or recapitalization is needed.
- Conduct annual ILCMR.

**FY 2025 Planned Key Milestone Events**

- Funded in O&S, please see that chapter for description of activities.

**Overall Investment Funding**

<i>(Dollars in Thousands)</i>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Operations and Support <sup>1</sup>	-	-	-	\$1,472
Procurement, Construction, and Improvements <sup>2, 3</sup>	\$22,483	\$3,000	\$3,000	-
Research and Development	-	-	-	-
Legacy Appropriations	\$7,708			
<b>Total Project Funding</b>	<b>\$30,191</b>	<b>\$3,000</b>	<b>\$3,000</b>	<b>\$1,472</b>
Obligations	\$17,243	\$1,968		
Expenditures	\$14,723	\$1,968		

1 – Note: BHH RIIDs are transferred to CBP and USCG, which fund associated O&S costs separately from their appropriations.

2 – Note: FY 2022 Above Threshold notification to transfer \$1.0M from PC&I BHH to FA BioWatch program.

3 – Note: CWMD re-allocated \$500,000 BD-21 program FY 2023 funding to the BHH program.

4 – Note: CWMD moved the BHH program to O&S to better align with the DHS Common Appropriation Structure.

**Contract Information (Current/Execution Year, Budget Year)**

<b>Contract Number</b>	<b>Contractor</b>	<b>Type</b>	<b>Award Date (mo/yr)</b>	<b>Start Date (mo/yr)</b>	<b>End Date (mo/yr)</b>	<b>EVM in Contract</b>	<b>Total Value (Dollars in Thousands)</b>
70RWMD20D00000001	BHH: Symetrica, Inc.	IDIQ	09/2020	09/2020	09/2023	No	\$7,000
70RWMD20C00000018	AHH: Ortec/Ametek	Contract existing	09/2020	09/2020	03/2023	No	\$444

**Significant Changes to Investment since Prior Year Enacted**

N/A

**Portable Detection Systems – PPA**  
**Investment Schedule**

**Basic Handheld RIIDs**

Description	Design Work		Project Work	
	Initiated	Completed	Initiated	Completed
	<b>FY 2023</b>			
BHH RadSeeker DL SLEP.	-	-	FY 2023 Q1	FY 2023 Q4
Completed Small-Scale Portfolio RAM data collection and analysis.	-	-	FY 2023 Q1	FY 2023 Q4
Initiate BHH Operational Analysis.	-	-	FY 2023 Q3	FY 2023 Q4
Complete ILCMR.	-	-	FY 2023 Q2	FY 2023 Q2
AHH upgrade completed.	-	-	FY2023 Q1	FY 2023 Q2
	<b>FY 2024</b>			
BHH RadSeeker DL SLEP.	-	-	FY 2024 Q1	FY 2024 Q4
Small-Scale Portfolio documentation, RAM data collection and analysis.	-	-	FY 2024 Q1	FY 2024 Q4
Complete BHH Operational Analysis.	-	-	FY 2024 Q1	FY 2024 Q1
Complete ILCMR.	-	-	FY 2024 Q2	FY 2024 Q2
Complete BHH and AHH AA or CBA.	-	-	FY 2024 Q2	FY 2024 Q4
	<b>FY 2025</b>			
Funded in O&S, please see that chapter for description of activities	N/A	N/A	N/A	N/A

**Portable Detection Equipment End Items – Investment  
Itemized Procurements**

**End Items Purchases**

*(Dollars in Thousands)*

	<b>Acquisition Level</b>	<b>IT/ Non-IT</b>	<b>MAOL</b>	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>
N/A - Portable Detection Equipment End Items	Level 3	Non-IT	No	\$6,067	\$6,067	-

<b>End Items Breakdown</b> <i>(Dollars in Thousands)</i>	<b>FY 2023 Enacted <sup>1</sup></b>		<b>FY 2024 Annualized CR</b>		<b>FY 2025 President's Budget</b>	
	<b>Quantity</b>	<b>Amount</b>	<b>Quantity</b>	<b>Amount</b>	<b>Quantity</b>	<b>Amount</b>
Personal Radiation Detectors <sup>2</sup>	-	\$1,067	-	\$1,067	-	-
Rapid CBRN Equipping	-	\$5,000	-	\$5,000	-	-
<b>Total</b>	-	<b>\$6,067</b>	-	<b>\$6,067</b>	-	-

1 – Note: In Fiscal Year 2022 and Fiscal Year 2023, both Personal Radiation Detectors and Rapid CBRN Equipping were funded as individual investments; funding detail for these three projects in these Fiscal Years immediately proceeds this exhibit.

2 – Note: CWMD re-allocated \$987,000 from the BD-21 program Fiscal Year 2023 funding to the PRD program to support CCBR purchases and A&AS contract support.

3 – Note: CWMD moved the PRD and Rapid CBRN Equipping programs to O&S to better align with the DHS Common Appropriation Structure.

**End Items Description**

- **Personal Radiation Detectors (PRDs):** PRDs are pager-size devices worn by an operator for the purposes of R/N detection. They monitor the user’s environment and alert operators when radioactivity levels above the natural background are detected. CWMD procures two types of PRD variants for our DHS operational partners: a general-purpose variant and a maritime variant. The small-scale portable detection programs are funded in the CWMD Operations & Support (O&S) Appropriation as minor procurements, construction, and improvements to better align with the funding thresholds to purchase an end item, asset, or improvement project in DHS financial policy.
- **Rapid CBRN Equipping:** CWMD will rapidly equip DHS Special Mission Units and other operational entities requiring CBRN equipment with critical counter-WMD capabilities including detection and identification equipment, interdiction equipment, personal protective equipment, and decontamination equipment. This equipment is necessary to enable mission success and ensure the unimpeded employment of DHS Special Mission Units and other operational entities in potentially toxic/hazardous environments to execute their counter-WMD mission. CWMD fills the role to acquire the capability with sustainment being provided by the DHS Operational Components. Rapid CBRN Equipping varies by year in types of equipment items and number of items depending on requirements from DHS customers. The small-scale portable detection programs are

**Portable Detection Systems – PPA**

**Portable Detection Equipment End Items**

funded in the CWMD Operations & Support (O&S) Appropriation as minor procurements, construction, and improvements to better align with the funding thresholds to purchase an end item, asset, or improvement project in DHS financial policy.



# Department of Homeland Security

## *Countering Weapons of Mass Destruction*

### *Research and Development*



**Fiscal Year 2025**

**Congressional Justification**

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**Research and Development**

**Budget Comparison and Adjustments**

**Comparison of Budget Authority and Request**

*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
Transformational Research and Development	\$37,004	\$37,004	\$33,820	(\$3,184)
Technical Forensics	\$2,000	\$2,000	\$6,530	\$4,530
Detection Capability Development	\$25,611	\$25,611	\$20,588	(\$5,023)
<b>Total</b>	<b>\$64,615</b>	<b>\$64,615</b>	<b>\$60,938</b>	<b>(\$3,677)</b>
Subtotal Discretionary - Appropriation	\$64,615	\$64,615	\$60,938	(\$3,677)

The Countering Weapons of Mass Destruction Office (CWMD) Research and Development (R&D) appropriation provides resources necessary to identify, explore, develop, and demonstrate new technologies and capabilities that will help enable the Department of Homeland Security (DHS) and its partners to succeed in our mission to safeguard the American people, our homeland, and our values. This includes providing funding through cooperative agreements. R&D funds are used to support the following Technology Readiness Levels (TRLs):

<b>Basic Research</b>		<b>Applied Research</b>		<b>Technology Development</b>	<b>Technology Demonstration</b>	<b>System Development</b>
TRL-1	TRL-2	TRL-3	TRL-4	TRL-5	TRL-6	TRL-7
Basic Principles Observed/ Reported	Technology Concept/Application Formulated	Critical Function or Characteristic Proof of Concept	Validation in Lab Environment	Validation in Relevant Environment	System Prototypes in Relevant Environment	System Prototypes in Operational Environment

The R&D Appropriation includes the following PPAs:

**Transformational Research and Development:** This program covers basic and applied research and technology development at TRL 1-5 related to chemical, biological, radiological, and nuclear (CBRN) threat detection; counter weapons of mass destruction (WMD) data analytics focused on artificial intelligence and machine learning algorithmic approach; Small Business Innovation Research (SBIR) projects; and Academic Research Initiative (ARI) cooperative agreements.

**Technical Forensics:** This program advances technological capabilities to characterize and identify the nature, origin, and history of nuclear materials interdicted before a detonation rapidly, accurately, and credibly. CWMD supports the National Nuclear Forensics Expertise Development program that addresses the enduring challenge of sustaining a preeminent workforce of scientists and policymakers that are educated and trained in nuclear forensics-related specialties by funding research projects postdoctoral technical fellowships and Federal expertise development courses.

**Detection Capability Development:** This program supports capability development projects that are characterized as late-stage TRL (6-7) and are anticipated to lead to a materiel solution. CWMD acquisition activities adhere to the Department's integrated lifecycle management approach to develop, acquire, procure, deploy, and sustain CBRN detection systems for operational customers that operate the systems in the field.

**Research and Development  
Budget Authority and Obligations**

*(Dollars in Thousands)*

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Enacted/Request</b>	<b>\$64,615</b>	<b>\$64,615</b>	<b>\$60,938</b>
Carryover - Start of Year	\$39,882	\$34,459	\$35,051
Recoveries	\$827	-	-
Rescissions to Current Year/Budget Year	-	-	-
Net Sequestered Resources	-	-	-
Reprogramming/Transfers	(\$2,773)	-	-
Supplementals	-	-	-
<b>Total Budget Authority</b>	<b>\$102,551</b>	<b>\$99,074</b>	<b>\$95,989</b>
Collections - Reimbursable Resources	-	-	-
Collections - Other Sources	-	-	-
<b>Total Budget Resources</b>	<b>\$102,551</b>	<b>\$99,074</b>	<b>\$95,989</b>
Obligations (Actual/Estimates/Projections)	\$68,092	\$64,023	\$95,989
<b>Personnel: Positions and FTE</b>			
Enacted/Request Positions	-	-	-
Enacted/Request FTE	-	-	-
<b>Onboard and Actual FTE</b>			
Onboard (Actual/Estimates/Projections)	-	-	-
FTE (Actual/Estimates/Projections)	-	-	-

**Research and Development  
Summary of Budget Changes**

*(Dollars in Thousands)*

	<b>Positions</b>	<b>FTE</b>	<b>Amount</b>
<b>FY 2023 Enacted</b>	-	-	<b>\$64,615</b>
<b>FY 2024 Annualized CR</b>	-	-	<b>\$64,615</b>
<b>FY 2025 Base Budget</b>	-	-	-
Transformational Research and Development	-	-	\$33,820
Technical Forensics	-	-	\$6,530
Detection Capability Development	-	-	\$20,588
<b>Total Research and Development Projects</b>	-	-	<b>\$60,938</b>
<b>FY 2025 Request</b>	-	-	<b>\$60,938</b>
<b>FY 2024 TO FY 2025 Change</b>	-	-	<b>(\$3,677)</b>

**Research and Development  
Non Pay Budget Exhibits**

**Non Pay by Object Class**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
21.0 Travel and Transportation of Persons	\$76	\$76	\$58	(\$18)
25.1 Advisory & Assistance Services	\$7,218	\$7,218	\$6,970	(\$248)
25.2 Other Services from Non-Federal Sources	\$5,032	\$5,032	\$5,498	\$466
25.3 Other Purchases of goods and services	\$5,900	\$5,900	\$5,853	(\$47)
25.5 Research & Development Contracts	\$38,955	\$38,955	\$37,178	(\$1,777)
31.0 Equipment	\$2,965	\$2,965	\$3,096	\$131
41.0 Grants, Subsidies, and Contributions	\$4,469	\$4,469	\$2,285	(\$2,184)
<b>Total - Non Pay Budget Object Class</b>	<b>\$64,615</b>	<b>\$64,615</b>	<b>\$60,938</b>	<b>(\$3,677)</b>

**Research and Development  
Research and Development Projects**

**Summary of Projects**

*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>
Transformational Research and Development	\$37,004	\$37,004	\$33,820
Technical Forensics	\$2,000	\$2,000	\$6,530
Detection Capability Development	\$25,611	\$25,611	\$20,588



*Transformational Research and Development – PPA*

**Budget Comparison and Adjustments**

**Comparison of Budget Authority and Request**

*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
Transformational Research and Development	\$37,004	\$37,004	\$33,820	(\$3,184)
<b>Total</b>	<b>\$37,004</b>	<b>\$37,004</b>	<b>\$33,820</b>	<b>(\$3,184)</b>
Subtotal Discretionary - Appropriation	\$37,004	\$37,004	\$33,820	(\$3,184)

**PPA Level I Description**

The Transformational R&D PPA covers basic and applied research and technology development (TRL 1-5) related to CBRN threat detection; counter WMD data analytics focused on artificial intelligence and machine learning algorithmic approach; and SBIR projects.

Recurring analyses and reviews conducted by CWMD in conjunction with U.S. Government partner agencies on CBRN detection have highlighted several technical areas that provide a focus for research activities to be conducted through Transformational R&D.

This type of R&D explores innovative technologies that address gaps in U.S. counter WMD and CBRN detection capabilities. These technologies also provide improvements in performance or a reduction in cost for CBRN detection capabilities that support the CWMD mission. Work also includes the maturation and transition of technologies developed by interagency partners for operational capability. R&D for technologies such as anomaly detection, algorithmic capabilities, and alternative approaches to biodetection will support the next-generation of biodetection systems.

**Transformational Research and Development – PPA  
Budget Authority and Obligations**

*(Dollars in Thousands)*

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Enacted/Request</b>	<b>\$37,004</b>	<b>\$37,004</b>	<b>\$33,820</b>
Carryover - Start of Year	\$11,031	\$11,884	\$12,104
Recoveries	\$30	-	-
Rescissions to Current Year/Budget Year	-	-	-
Net Sequestered Resources	-	-	-
Reprogramming/Transfers	-	-	-
Supplementals	-	-	-
<b>Total Budget Authority</b>	<b>\$48,065</b>	<b>\$48,888</b>	<b>\$45,924</b>
Collections - Reimbursable Resources	-	-	-
Collections - Other Sources	-	-	-
<b>Total Budget Resources</b>	<b>\$48,065</b>	<b>\$48,888</b>	<b>\$45,924</b>
Obligations (Actual/Estimates/Projections)	\$36,181	\$36,784	\$45,924
<b>Personnel: Positions and FTE</b>			
Enacted/Request Positions	-	-	-
Enacted/Request FTE	-	-	-
<b>Onboard and Actual FTE</b>			
Onboard (Actual/Estimates/Projections)	-	-	-
FTE (Actual/Estimates/Projections)	-	-	-

**Transformational Research and Development – PPA**

**Summary of Budget Changes**

*(Dollars in Thousands)*

	<b>Positions</b>	<b>FTE</b>	<b>Amount</b>
<b>FY 2023 Enacted</b>	-	-	<b>\$37,004</b>
<b>FY 2024 Annualized CR</b>	-	-	<b>\$37,004</b>
<b>FY 2025 Base Budget</b>	-	-	-
Transformational Research and Development	-	-	\$33,820
<b>Total Research and Development Projects</b>	-	-	<b>\$33,820</b>
<b>FY 2025 Request</b>	-	-	<b>\$33,820</b>
<b>FY 2024 TO FY 2025 Change</b>	-	-	<b>(\$3,184)</b>

**Transformational Research and Development – PPA**

**Non Pay Budget Exhibits**

**Non Pay by Object Class**

*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
21.0 Travel and Transportation of Persons	\$71	\$71	\$30	(\$41)
25.1 Advisory & Assistance Services	\$2,604	\$2,604	\$2,505	(\$99)
25.5 Research & Development Contracts	\$31,360	\$31,360	\$29,900	(\$1,460)
41.0 Grants, Subsidies, and Contributions	\$2,969	\$2,969	\$1,385	(\$1,584)
<b>Total - Non Pay Budget Object Class</b>	<b>\$37,004</b>	<b>\$37,004</b>	<b>\$33,820</b>	<b>(\$3,184)</b>

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**Research and Development  
Research and Development Projects**

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**Summary of Projects**

*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>
Transformational Research and Development	\$37,004	\$37,004	\$33,820

**Transformational Research and Development  
Research and Development**

**Technology Readiness Level Exhibit**

*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>
Transformational Research and Development	\$37,004	\$37,004	\$33,820

**R&D Description**

Funding for Transformational R&D will enable the development of innovative new detection and identification technologies, connectivity technologies, and data analytic efforts focused on artificial intelligence and machine learning related to advanced algorithms for the purpose of strengthening DHS and U.S. Government agencies’ WMD detection programs. This R&D is intended to enable new technologies to be fielded or to directly spur commercial development that strengthens the Homeland Security Enterprise.

Transformational R&D includes multiple projects. The table that follows identifies and summarizes the initiatives and funding levels for FY 2025. Details on the projects are outlined in the narrative below.

<b>Transformational Research and Development</b> <i>(Dollars in Thousands)</i>			
<b>Project</b>	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President’s Budget</b>
Radiological/Nuclear (R/N) Research and Development	\$8,136	\$8,136	\$8,266
Chemical Research and Development	\$4,190	\$4,190	\$9,775
Biological Research and Development	\$8,100	\$8,100	\$9,665
Data Analytics	\$9,025	\$9,025	\$3,856
Small Business Innovation Research (SBIR)	\$2,553	\$2,553	\$2,258
Food, Agriculture, Veterinary Defense (FAVD) Research and Development <sup>1</sup>	\$5,000	\$5,000	-
<b>Total – Transformational Research and Development</b>	<b>\$37,004</b>	<b>\$37,004</b>	<b>\$33,820</b>

<sup>1</sup> – Note: This responsibility is moved to OHS and S&T for FAVD Research and Development activities in FY 2025.

**Radiological Nuclear (R/N) Research and Development**

- **Problem:** Analyses and reviews conducted by CWMD in conjunction with U.S. Government partner agencies on detection related to countering WMD have highlighted several technical areas that provide a focus for research activities to be conducted under the R/N R&D program.
- **Solution:** This project enhances the Nation’s ability to prevent the use of R/N weapons by developing break-through technologies that meet DHS operational requirements. Funding for the R/N R&D project will be used to explore innovative, high payoff, high-risk technologies that address gaps in U.S. R/N detection capabilities and provide improvements in performance or reduction in cost of R/N detection capabilities in support of the CWMD mission. Examples of technologies developed under this project include components for next generation R/N detection capabilities such as compact, high energy resolution (high isotope specificity), high sensitivity, gamma ray semiconductor materials for radioisotope identification devices (RIIDs), low cost robust ceramic scintillator gamma detectors, and materials for future RPMs, and linear accelerators and detector materials with enhanced performance for detection of shielded Special Nuclear Material (SNM) in conveyances.
- **Justification:** The FY 2025 President’s Budget provides \$8.3M for this project. Funding for this research initiative will be used to develop and demonstrate breakthrough technologies that address R/N detection technical capability needs and provide cost effective, enhanced performance to counter WMD.
- **Impact:** Completion of activities under the R/N R&D project will result in the development and demonstration of enabling technologies in support of the developmental R&D programs within CWMD to meet the DHS Component operator requirements or directly spur commercial development. Some developments can transition to existing and future projects as enhancements and improvements to detection capabilities.

**Type of Research**

Basic, Applied

**Technology Readiness Level**

TRL varies between levels 1-5, with the majority in TRL 3-5 for counter WMD radiological and nuclear detection and technology development. Technologies developed under this project will undergo TRL changes as they mature through the R&D pipeline during budget years. The frequency of TRL changes will be dependent on the technology itself and the technology needs which the program is aiming to address. In general, TRL changes within the program do occur annually.

**Transition Plans**

Technologies developed under the R/N R&D project will transition to developmental R&D programs within CWMD to meet specific needs for DHS Components or Homeland Security Enterprise customers. There is a potential for direct commercialization to industry as well. Technologies developed under this program will undergo transitions as they mature through the R&D pipeline. The frequency of transitions will be dependent on the technology itself and the need it is aiming to address. Transition typically happens at TRL 5 with a successful demonstration of the prototype technology in a relevant environment. In general, research at TRL 1-2 can take anywhere from 5-10 years to achieve TRL 5 and research in the TRL 3-4 range can take anywhere from 3-5 years to achieve TRL 5.

**Project Schedule**

Research & Development Description	Planned Start Date	Planned Completion	TRL Level(s)
	<b>FY 2023</b>		
Completed development of thallium bromide-based core detector modules for future radioisotope identification device development for transition to thallium bromide RIID (THOR) program.	FY 2022 Q4	FY 2023 Q2	4
Completed an initial prototype unit of large ceramic panels for future RPM gamma detection.	FY 2022 Q4	FY 2023 Q4	4
Completed final demonstration of Integrated Predictive Modeling Code.	FY 2023 Q1	FY 2023 Q2	5
Continued basic research studies into scaled up perovskites and ceramics for x-ray radiography and to fabricate optimized pixels and arrays.	FY 2022 Q4	FY 2023 Q4	2
Continued basic research into photo fission nuclear data for active interrogation to improve modeling capabilities with further exclusive photofission and delayed neutron and photon measurements.	FY 2023 Q1	FY 2023 Q4	2
Continued basic research into technology component improvements for active interrogation systems using neutrons with algorithm development and active background measurements.	FY 2023 Q1	FY 2023 Q4	2
Continued development of a compact, high repetition-rate linear accelerator.	FY 2023 Q1	FY 2023 Q3	5
Initiated research into multi-mode ceramic-based detector materials to discover and develop durable, highly efficient, and good energy resolution detectors for neutron and photon detection.	FY 2023 Q1	FY 2023 Q2	2
Initiated research into polycrystalline based semiconductors.	FY 2023 Q3	FY 2023 Q4	2
Initiated new starts for TlBr based Spectroscopic Radiation Detectors (SPRDs).	FY 2023 Q3	FY 2023 Q4	3
Completed a prototype unit of various options of large garnet ceramic panels for future RPM gamma detection.	FY 2023 Q4	FY 2023 Q4	4



**Research and Development**

**Technical Forensics – PPA**

<b>Research &amp; Development Description</b>	<b>Planned Start Date</b>	<b>Planned Completion</b>	<b>TRL Level(s)</b>
	<b>FY 2024</b>		
Continue basic research studies into scaled up perovskites and ceramics for x-ray radiography, characterize fabricated materials and implement improved processes into fabrication of pixels and arrays.	FY 2023 Q4	FY 2024 Q4	3
Continue basic research into photo fission nuclear data for active interrogation to improve modeling capabilities by completing measurement analysis and publishing completed results.	FY 2024 Q1	FY 2024 Q4	2
Continue basic research into technology component improvements for active interrogation systems using neutrons with system integration and algorithm refinement.	FY 2024 Q1	FY 2024 Q4	2
Continue research into multi-mode ceramic-based detector materials to discover and develop durable, highly-efficient, and good energy resolution detectors for neutron and photon detection.	FY 2024 Q1	FY 2024 Q4	2
Continue existing and initiate new R&D to meet emerging needs for R/N detection capabilities for DHS Components and SLTT partners.	FY 2024 Q3	FY 2024 Q4	3
Continue research into polycrystalline based semiconductors.	FY 2024 Q1	FY 2024 Q4	2
Continue research into TlBr based SPRDs.	FY 2024 Q1	FY 2024 Q4	3
Initiate investigation of combined Dual-Mode (gamma and neutron) and Dual-Functionality (Radiation Detection and Battery Power) Scintillators for Gamma Detection.	FY 2024 Q3	FY 2025 Q3	2
Continue development of a compact, high repetition-rate linear accelerator.	FY 2024 Q1	FY 2024 Q4	6
	<b>FY 2025</b>		
Continue research into polycrystalline based semiconductors.	FY 2025 Q1	FY 2025 Q4	2
Continue research into multi-mode ceramic-based detector materials to discover and develop durable, highly efficient, and good energy resolution detectors for neutron and photon detection.	FY 2025 Q1	FY 2025 Q4	2
Continue development of Neutron Generators for Security Applications, an enabling technology for cargo scanning through heavy shielding, leading to Phase II Critical Design Reviews.	FY 2025 Q1	FY 2025 Q4	3
Initiate self-powered deployable fieldable radiation detection systems.	FY 2025 Q2	FY 2025 Q2	3-4
Continue investigation of combined Dual-Mode (gamma and neutron) and Dual-Functionality (Radiation Detection and Battery Power) Scintillators for Gamma Detection.	FY 2025 Q3	FY 2025 Q3	2-4
Initiate basic research in radiological / nuclear R&D in emerging areas for nuclear detection.	FY 2025 Q2	FY 2025 Q2	3-4
Continue development of a compact, high repetition-rate linear accelerator.	FY 2025 Q1	FY 2025 Q4	6

### Chemical Research and Development

- **Problem:** Analyses and reviews conducted by CWMD in conjunction with U.S. Government partner agencies on counter WMD detection have highlighted several technical areas that provide a focus for research activities to be conducted under the Transformational R&D program. Specifically, the requirement exists for advances in innovative technologies for the detection and identification of chemical threats. CWMD seeks improvements in the fidelity of detection along with a reduction in overall costs of the detection systems that support DHS Components and State, local, tribal, and territorial (SLTT) partners.
- **Solution:** The Chemical R&D portfolio will focus on developing technologies that decrease the time to detect the occurrence of an attack, improve the fidelity of that detection, and reduce the overall costs of detection systems (manpower and materials). Examples of these efforts include explorations focused on identifying and characterizing existing, as well as new and alternative or emerging signatures in detection, particularly in a ‘field-forward’ setting. These activities have the potential to lead to new technical solutions. The Chemical R&D portfolio also explores newly developed high-risk technologies that address gaps in United States chemical detection capabilities and provide improvements in performance or reduction in cost of chemical detection capabilities in support of the CWMD mission. The Chemical R&D portfolio will leverage interagency efforts for traditional and non-traditional chemical warfare agent detection and contamination avoidance and focus on DHS-specific scenarios such as toxic industrial chemicals and materials precursors, and scenarios such as checkpoint screening and soft targets/crowded spaces.
- **Justification:** The FY 2025 President’s Budget provides \$9.8M for this project. Funding for these research initiatives will be used to support activities that develop and demonstrate breakthrough technologies that address emerging chemical detection technical capability needs and provide cost effective and enhanced performance to DHS Operational Components and State and local first responders.

The R&D supported by this funding will enable CWMD to pursue R&D efforts to develop essential capabilities to improve detection of chemical threats. Examples of such areas include: 1) Transportation defense: Improved checkpoint and mass transit chemical threat detection, 2) Wide area monitoring for early chemical threat warning, and 3) Improved fieldable detection and identification for chemical threats. These focus areas each include technological development for automated approaches to sample collection and identification, improved sensors expanding the detection range of chemical agents and increasing specificity/sensitivity; development of prototype technologies for non-contact chemical detection for applications such as checkpoint container or parcel screening; and addressing technology gaps identified by the Transportation Security Administration (TSA), U.S. Coast Guard (USCG), and other DHS Components.

- **Impact:** Completion of activities under the Chemical R&D project will result in the development and demonstration of enabling technologies in support of the developmental R&D programs within CWMD to meet operator needs or directly spur commercial development.

### Type of Research

Basic, Applied

## Research and Development

## Technical Forensics – PPA

### Technology Readiness Level

The TRL varies between levels 1-5, with the majority in TRL 3-5 for counter WMD chemical detection and technology development. This research also includes reviews of chemical detection technologies developed by government and industry partners and transition of developments from lower TRL (concepts, hardware components and or prototypes) stages to higher TRL products.

### Transition Plans

Technologies developed under the Chemical R&D project will transition to developmental R&D programs within CWMD to meet specific requirements for DHS Components or Homeland Security Enterprise customers. There is potential for commercialization as well. Technologies developed under this program will undergo transitions as they mature through the R&D pipeline. The frequency of transitions will be dependent on the maturity of the technology itself and the need it is aiming to address. Transition of a technology typically happens at TRL 5 with a successful demonstration of the prototype technology in a relevant environment.

### Project Schedule

Research & Development Description	Planned Start Date	Planned Completion	TRL Level(s)
	<b>FY 2023</b>		
Continued research activities that address current and emerging chemical threats to aviation security.	FY 2023 Q1	FY 2023 Q4	5
Completed R&D to augment X-ray algorithms for chemical threats to aviation security.	FY 2023 Q1	FY 2023 Q2	5
Conducted feasibility assessment for R&D to mature and demonstrate non-contact detection technologies for sensing of chemical threats relevant to checkpoint screening scenarios.	FY 2023 Q1	FY 2023 Q4	4
Awarded and kicked off new R&D Proof of Concept Demonstration for small, person worn, multi-threat chemical detectors that will perform continuous monitoring.	FY 2023 Q3	FY 2023 Q4	4
Awarded and kicked off new R&D to theoretically determine chemical threat signatures, to reduce chemical detector library development time and cost.	FY 2023 Q3	FY 2023 Q4	4
	<b>FY 2024</b>		
Continue research activities that address current and emerging chemical threats to aviation security.	FY 2024 Q1	FY 2024 Q4	5
Conduct preliminary design for R&D to mature and demonstrate non-contact detection technologies for sensing of chemical threats relevant to checkpoint screening scenarios.	FY 2024 Q1	FY 2024 Q4	5
Initiate research activities for development of a through container screening capability.	FY 2024 Q2	FY 2024 Q4	4
Initiate basic research in chemical R&D in emerging areas for chemical detection.	FY 2024 Q4	FY 2024 Q4	2
Continue R&D to theoretically determine chemical threat signatures, to reduce chemical detector library development time and cost.	FY 2024 Q3	FY 2024 Q4	4
Continue existing and initiate new research & development to meet emerging needs for chemical detection capabilities for DHS Operational Components and State and local first responders.	FY 2024 Q1	FY 2024 Q4	3

**Research and Development****Technical Forensics – PPA**

<b>Research &amp; Development Description</b>	<b>Planned Start Date</b>	<b>Planned Completion</b>	<b>TRL Level(s)</b>
	<b>FY 2025</b>		
Continue research activities that address current and emerging chemical threats to aviation security.	FY 2025 Q1	FY 2025 Q4	5
Conduct critical design for R&D to mature and demonstrate non-contact detection technologies for sensing of chemical threats relevant to checkpoint screening scenarios.	FY 2025 Q1	FY 2025 Q4	5
Continue research activities for development of a through container screening capability.	FY 2025 Q1	FY 2025 Q4	5
Continue research activities for development of a small, person worn, multi-threat chemical detectors that will perform continuous monitoring.	FY 2025 Q1	FY 2025 Q3	5
Continue research activities for development of novel approaches to theoretically determine chemical threat signatures, to reduce detector library development time and cost.	FY 2025 Q1	FY 2025 Q4	4
Continue existing and initiate new research & development to meet emerging needs for chemical detection capabilities for DHS Operational Components and State and local first responders	FY 2025 Q1	FY 2025 Q4	3
Continue basic research in chemical R&D in emerging areas for chemical detection.	FY 2025 Q1	FY 2025 Q4	2

**Biological Research and Development**

- **Problem:** Analyses and reviews conducted by CWMD in conjunction with U.S. Government partner agencies on counter WMD detection have highlighted several technical areas that provide a focus for research activities to be conducted under the Transformational R&D program. Specifically, the requirement exists for advancements in innovative technologies for the detection and identification of biological agents, to decrease the time interval between the occurrence of a presumptive attack and confirmation that it has occurred. CWMD seeks improvements in the fidelity of detection along with a reduction in overall costs of the detection systems that support DHS Components and SLTT partners. It is crucial to move high fidelity detection and identification ‘field forward’ to reduce response time and limit consequences of a biological weapons event.

There is a requirement to explore the ability to improve biosensor manufacturability to enable more cost effective and efficient production approaches needed to meet the demands and multipurpose applications of biosensors for agencies across DHS and DoD. There is also a requirement for biosurveillance technologies capable of surveying environments and enable early warning of intentional, natural, and/or inadvertent release of biological materials that can cause human illness.

As new and emerging biological threats either occurring naturally or developed by threat actors become more imminent, the requirement for detecting threats with unknown threat signatures is becoming more significant (agent agnostic detection). Most current biodetection systems require a library of known threat agent characteristics to detect and identify threats by associating the threat to its respective threat signature. New and emerging threats can go undetected if their biological signatures are unique and do not match any of the associated threat signatures within the biodetection system library. A missed detection is likely because most threat libraries are not specific to the DNA or RNA level, and the mutation or genetic engineering of a biological concern will likely have a unique threat signature that will not match any signatures contained in a library. For these reasons, the ability to detect agents without the reliance of threat libraries or associated threat signatures is necessary to enable detection of new and emerging biological threats.

- **Solution:** Biological R&D (Bio R&D) will focus on developing technologies that decrease the time to detect the occurrence of an attack, increase the fidelity of detection and identification, and reduce the overall costs of detection/identification systems (hardware, manpower, materials, and maintenance). Examples of these efforts include explorations focused on identifying and characterizing existing, as well as new and emerging biological signatures, particularly in a ‘field-forward’ setting. These activities have the potential to lead to new technical solutions. The Bio R&D portfolio will assess the commercial manufacturability of advanced biological detection technologies in efforts to identify sensor cost efficiencies through mass production, reproducibility, quality control, and decreased production lead time and labor costs by alleviating custom sensor development by scientists. The Bio R&D portfolio will explore agent agnostic detection approaches, such as utilization of existing genomic databases for data analytics and machine learning application, and detection capabilities with species level specificity leveraging genomic sequencing, rapid assay development, and/or alternative signature technologies. The Bio R&D portfolio also explores newly developed high-risk technologies that address gaps in U.S. biological detection capabilities and provides improvements in performance or reduction in cost of biological detection/identification capabilities in support of the CWMD mission.

- **Justification:** The FY 2025 President’s Budget provides \$9.7M for this project. Funding for this research initiatives will be used to support activities that develop and demonstrate breakthrough technologies that address emerging biological detection technical capability requirements and provide cost effective and enhanced performance to DHS Operational Components and State and local first responders. It will enable CWMD to pursue R&D efforts to develop essential capabilities to improve detection and identification of biological threats. Examples of such areas include: automated approaches to sample collection and identification for biothreats; improved sensors expanding the detection range of bioagents and increasing specificity/sensitivity; next generation genetic sequencing of samples for biothreat detection; standoff non-intrusive inspection approaches for detecting biological threats in conveyances; development of prototype technologies for standoff trace biological detection and addressing technology gaps identified by TSA, USCG, and Customs and Border Protection (CBP).
- **Impact:** Completion of activities under the Bio R&D portfolio will result in the development and demonstration of enabling technologies in support of the developmental R&D programs to meet CWMD operator needs or directly spur commercial development.

### Type of Research

Basic, Applied

### Technology Readiness Level

The starting TRL varies between levels 1-5, with the majority in TRL 3-5 for counter WMD biological detection/identification and technology development. This research also includes a review of biological detection technologies developed by government, academic, and industry partners and transition of developments from lower TRL (concepts, hardware components and or prototypes) stages to higher TRL products.

### Transition Plans

Technologies developed under the Bio R&D project will transition to developmental R&D programs to meet specific requirements for DHS Components, Homeland Security Enterprise customers and/or potential commercialization. Technologies developed under this program will undergo transitions as they mature through the R&D pipeline. The frequency of transitions will be dependent on the maturity of the technology itself and the need it is aiming to address. Transition typically occurs at TRL 5 with a successful demonstration of the prototype technology in a relevant environment. In general, research at TRL 1-2 can take anywhere from 5-10 years to achieve TRL 5 and research in the TRL 3-4 range can take anywhere from 3-5 years to achieve TRL 5.

**Project Schedule**

Research & Development Description	Planned Start Date	Planned Completion	TRL Level(s)
	<b>FY 2023</b>		
Delivered autonomous presumptive identification preliminary design review for the Biological Early Warning of Aerosol Risk and Exposure (BEWARE) extreme polymerase chain reaction (PCR) sensor development.	FY 2022 Q3	FY 2023 Q2	1-2
Delivered autonomous presumptive identification critical design review BEWARE development.	FY 2022 Q3	FY 2023 Q4	1-2
Continued basic research for fluid-based biodetection capabilities.	FY 2023 Q1	FY 2023 Q4	3
Continued basic research for alternative signatures for biodetection using mass spectroscopy for metabolomic finger printing of pathogens.	FY 2023 Q1	FY 2023 Q4	2
Continued R&D sensor redesign development of advanced biosensors.	FY 2023 Q1	FY 2023 Q3	5
Initiated assessment study for cost effective manufacturing and production of advanced biological detection sensors.	FY 2023 Q1	FY 2023 Q4	3-4
Conducted outdoor simulant development and release demonstration for real time monitoring of advanced anomaly detection algorithm.	FY 2023 Q1	FY 2023 Q4	6
Initiated multiplex nucleic assay prototype modification development to extending assay shelf life in the field.	FY 2023 Q1	FY 2023 Q4	4
	<b>FY 2024</b>		
Continue basic research for microfluids-based biodetection capabilities.	FY 2024 Q1	FY 2024 Q4	4
Continue multiplex nucleic assay prototype modification development to extending assay shelf life in the field.	FY 2024 Q1	FY 2024 Q4	5
Initiate next generation sequencing development for autonomous bio detectors.	FY 2024 Q1	FY 2024 Q4	1
Continue autonomous presumptive identification prototype development for BEWARE.	FY 2024 Q1	FY 2024 Q4	3
Continue R&D sensor redesign development of advanced biosensors.	FY 2024 Q1	FY 2024 Q4	6
Initiate technology development approaches to improve cost effective manufacturing and production of advanced biological detection sensors.	FY 2024 Q1	FY 2024 Q4	3-4
Continue existing and initiate new research & development to meet emerging needs for biodetection capabilities for DHS Operational Components and State and local first responders.	FY 2024 Q1	FY 2024 Q4	3
Award Phase I concept development and preliminary design for Agent Agnostic Detection System.	FY 2023 Q4	FY 2024 Q4	2

**Research and Development****Technical Forensics – PPA**

<b>Research &amp; Development Description</b>	<b>Planned Start Date</b>	<b>Planned Completion</b>	<b>TRL Level(s)</b>
	<b>FY 2025</b>		
Award Phase I concept development and preliminary design of Environmental Monitoring and Detection program.	FY 2025 Q1	FY 2025 Q4	1-2
Begin the design development, testing, and delivery of BEWARE continuous monitoring system prototype iteration 1.	FY 2025 Q1	FY 2025 Q4	4
Complete design concept development of Agent Agnostic Detection capability and complete preliminary design review (PDR).	FY 2025 Q1	FY 2025 Q4	2-3
Continue existing and initiate new research & development to meet emerging needs for biological detection capabilities for DHS Operational Components and State and local first responders.	FY 2025 Q1	FY 2025 Q4	3
Continue basic research in chemical R&D in emerging areas for biological detection.	FY 2025 Q1	FY 2025 Q4	2



### Data Analytics

- **Problem:** CBRN threat detection relies on operators and analysts, detectors, and information. The special challenges in CBRN are the threats are generally rare, detections must be reliable and traceable, and the time-to-detection must be as short as possible. Integration of situational awareness across wide geographical and informatic spaces, including networked CBRN detectors, remains a persistent challenge. Meeting these challenges requires mission-targeted investment in artificial intelligence/machine learning (AI/ML) technology development.
- **Solution:** The Data Analytics portfolio sponsors R&D initiatives focused on technologies that (a) identify anomalies within information data streams, (b) integrate physical sensor data with other information streams, and (c) identify patterns in the CBRN domain. In an analytic environment developed by a DHS Component partner, CWMD sponsored an initiative to research expert-led, operator-focused analytics, and structured queries to support CBRN counter proliferation. Other efforts include multimodal data fusion on networked detectors, threat detection in radiography, and improving operational performance of an aging but very much serviceable fleet of radiation portal monitors using machine learning (e.g., the Advanced RPM Maintenance Operating Reporter (ARMOR), under the Detection Capability Development PPA). Initiatives also include the development of an Anomaly Detection Algorithm (ADA). These activities will support targeting and interdiction by domestic and global partners, to improve capabilities and for the prevention of WMD terrorism. The research activities to meet this challenge support the Transformational R&D Program, as a pipeline for innovative operator capabilities.
- **Justification:** The FY 2025 President’s Budget provides \$3.9M for this project. Funding for this research initiative will be used to develop breakthrough computational technologies in AI/ML and other advanced algorithms to enhance the capabilities of DHS Operational Components and State and local first responders to prevent WMD terrorism. Pursuing R&D in applying AI/ML and/or advanced algorithms to data streams from CBRN sensors and other contextual information improves the likelihood of discovering threats, and with the goal of shortening the time to detect.
- **Impact:** Completion of activities under the Data Analytics project will result in the development and demonstration of enabling technologies in support of the developmental R&D programs within CWMD or directly spur commercial development.

### Type of Research

Basic, Applied

### Technology Readiness Level

The TRL varies between levels 1-5, with the majority in TRL 3-5 for counter WMD detection and technology development. Technologies developed under this project will undergo TRL changes as they mature through the R&D pipeline during budget years. The frequency of TRL changes will be dependent on the technology itself and the needs of the technology which the project aims to address. In general, TRL changes within the program do occur annually.

**Transition Plans**

Technologies developed under the Data Analytics project will transition to developmental R&D programs within CWMD to meet specific needs for DHS Components, Homeland Security Enterprise customers, and/or commercialization. Technologies developed under this program will undergo transitions as they mature through the R&D pipeline. The frequency of transitions will be dependent on the technology itself and the need it is aiming to address.

**Project Schedule**

<b>Research &amp; Development Description</b>	<b>Planned Start Date</b>	<b>Planned Completion</b>	<b>TRL Level(s)</b>
	<b>FY 2023</b>		
Initiated new R&D for algorithm development of Automated Threat Recognition (ATR) for Non-Intrusive Inspection (NII) to identify high-Z threats in cargo.	FY 2022 Q4	FY 2023 Q2	4
Continued WMD SME development support for analytics-based graph project utilizing an AI/ML informatics analytic platform. Effort will allow more effective analysis of relevant data streams to generate actionable information in the CWMD mission area.	FY 2021 Q4	FY 2023 Q4	3
Delivered Feasibility Evaluation Review and report for ATR for NII project.	FY 2023 Q2	FY 2024 Q1	4
Progression of three university-based projects exploring basic R&D for CBRN wide area sensor approaches leading to initial dataset either in the laboratory (for lower TRL projects) or in public areas.	FY 2023 Q1	FY 2023 Q4	2-3
Conclusion of four university-based projects focused on radiological anomaly detection in transportation pathways leading to deployment in transportation pathway, delivery of datasets and final report.	FY 2023 Q1	FY 2024 Q4	4
Initiated biodetection anomaly detection algorithm development version for an array of sensor nodes to include current BD-21 sensors, new enhanced sensor modalities, and informed by simulant releases.	FY 2023 Q1	FY2023 Q4	5
Initiated Multi-sensor, Multi-Data Analysis (MSMDA) research for development of a toolkit for fusing data from multiple radiation detectors to achieve enhanced threat detection, reduced false alarm, and operationally focused reporting.	FY 2023 Q2	FY 2024 Q1	3
	<b>FY 2024</b>		
Develop an initial working prototype of the ATR for NII algorithm and software architecture.	FY 2023 Q4	FY 2024 Q4	4
Conduct MSMDA critical design review.	FY 2024 Q4	FY 2024 Q4	4
Progression of three university-based projects exploring basic R&D for CBRN analytics on wide area sensor networks leading to an operational sensor network and initial data collections take place.	FY 2024 Q1	FY 2024 Q4	3
Initiate new R&D to meet emerging needs for data analytics capabilities for DHS Operational Components and State and local first responders.	FY 2024 Q3	FY 2024 Q4	3
Initiating a campaign of safe bio-simulant disseminations to support ADA maintenance and performance improvement.	FY 2024 Q3	FY 2024 Q4	5
Initiating a project to examine Data Analytics solutions to support the National Biosurveillance Integration Center.	FY 2024 Q1	FY 2024 Q4	5

**Research and Development****Technical Forensics – PPA**

<b>Research &amp; Development Description</b>	<b>Planned Start Date</b>	<b>Planned Completion</b>	<b>TRL Level(s)</b>
	<b>FY 2025</b>		
Progression of three university-based projects exploring basic R&D for CBRN analytics on wide area sensor networks leading to an operational sensor network and initial data collections take place.	FY 2025 Q1	FY 2025 Q4	3
Conduct simulant releases to support environmental biodetection architecture development.	FY 2025 Q1	FY 2025 Q4	5
MSMDA characterization readiness review.	FY 2025 Q2	FY 2025 Q2	5
Critical Design review for the ATR for NII algorithm and software architecture.	FY 2025 Q1	FY 2025 Q4	6
Initiate R&D to meet emerging needs for data analytics capabilities for DHS CWMD mission.	FY 2025 Q1	FY 2025 Q4	3

**Small Business Innovation Research (SBIR)**

- **Problem:** Analyses and reviews conducted by CWMD in conjunction with U.S. Government partner agencies on counter WMD detection have highlighted several technical areas that provide a focus for research activities to be conducted under the Transformational R&D program to enable detection of a WMD. Specifically, there exists a need for greater innovation in CBRN detection technologies and methodologies, developing systems for early warning and diagnostics, and advance data analytics capabilities into unique solutions which complement and support DHS Operational Components and State and local first responders for rapid detection WMD threats.
- **Solution:** Small businesses capable of conducting research and development in homeland security-related areas can provide unique capabilities and expertise that could address these needs by stimulating high-tech innovation in the United States while looking for an incentive to profit from commercialization. The near-term solutions are opportunities for small businesses to harness leading edge technologies applicable to homeland security. The SBIR program enables technological innovation by strengthening the role of small businesses in federally funded R&D. The CWMD SBIR program is specifically focused on meeting Federal R&D needs aimed at CBRN detection and R&D for countering WMD. The R&D needs include technological approaches that address gaps in the larger framework for CBRN detection and counter WMD capabilities, significantly improve the performance of detection methods, components, and systems, and/or significantly reduce the operational burden of using these technologies.
- **Justification:** The FY 2025 President’s Budget provides \$2.3M for this project. Funding for this research initiative will support SBIR Phase I and Phase II activities that enable small businesses to develop and demonstrate technologies that address counter WMD technical capability needs, ultimately allowing the CWMD SBIR program to encompass a wider breadth of activities across the CBRN detection and counter WMD R&D spectrum.
- **Impact:** Completion of this project will stimulate technological innovation by strengthening the role of innovative small businesses in federally funded R&D to meet DHS Operational Components needs. SBIR programs transition near-term solutions, supporting identified capability gaps, into commercial products or services.

**Type of Research**

Applied, Developmental

**Technology Readiness Level**

SBIR includes applied and developmental R&D, depending on the phase. SBIR Phase I projects are applied R&D, ending in TRL 3-4. SBIR Phase II projects are applied and developmental R&D, ending at a TRL 5-7.

**Transition Plans**

The primary objective of the SBIR program, at the whole-of-government level, is for new innovative products to reach the consumer market towards one or more identified end users – i.e., “commercialization.” The CWMD SBIR program also seeks projects which can meet R&D needs identified by operational end-users and subject matter experts, as well as the development of components that can be integrated into larger development R&D projects or utilized by CWMD. Aspects of the technologies developed under SBIR will support and can further augment technologies of all other R&D programs within CWMD.

**Project Schedule**

Research & Development Description	Planned Start Date	Planned Completion	TRL Level(s)
	<b>FY 2023</b>		
Networked sensors Phase II adaptable sensor network management infrastructure demonstration and final report.	FY 2022 Q4	FY 2023 Q1	5
Next Generation Semiconductor-Based Spectroscopic Personal Radiation Detectors (SPRDs) Phase I benchtop demonstration, demonstrate fabrication quality, characterize detector material, final review, and final report.	FY 2022 Q3	FY 2023 Q1	3
Field Forward Diagnostics for Select Agent List Toxins Phase I develop conceptual toxin detection assay, proof of concept and feasibility results of design, final review, and final report.	FY 2022 Q3	FY 2023 Q1	3
Wearable Detector for Aerosolized Chemical Threats Phase I conceptual design and breadboard, analysis, and proof of low SWAP, outline of success criteria, final review, and final report.	FY 2022 Q3	FY 2023 Q1	3
From Port-Side to Pen-Side: Low-Cost Detection/Diagnostics for High-Consequence Transboundary or Nationally Reportable Animal Diseases, Particularly Those with Zoonotic Propensity Phase I conceptual design, final determination of specifications, demonstrate ability to develop system, final review, and final report.	FY 2022 Q3	FY 2023 Q1	3
Fieldable Multiplex Detection of Biothreats Phase II demonstrate initial prototype bio detector, develop multiplex panel for biothreats, characterize results and mid-phase review.	FY 2023 Q2	FY 2023 Q3	4-5
Theoretical Classification Methodologies to Enable Detection with Predicted Signatures Phase I award and kickoff.	FY2023 Q3	FY2023 Q3	3
Next Generation Semiconductor-Based Spectroscopic Personal Radiation Detectors (SPRDs) Phase II award and kickoff.	FY 2023 Q2	FY 2023 Q3	3
Field Forward Diagnostics for Select Agent List Toxins Phase II award and kickoff.	FY 2023 Q2	FY 2023 Q3	3
Wearable Detector for Aerosolized Chemical Threats Phase II award and kickoff.	FY 2023 Q2	FY 2023 Q3	3
From Port-Side to Pen-Side: Low-Cost Detection/Diagnostics for High-Consequence Transboundary or Nationally Reportable Animal Diseases, Particularly Those with Zoonotic Propensity Phase I conceptual design, final determination of specifications, demonstrate ability to develop system, final review, and final report.	FY 2023 Q2	FY 2023 Q3	3

**Research and Development**

**Technical Forensics – PPA**

<b>Research &amp; Development Description</b>	<b>Planned Start Date</b>	<b>Planned Completion</b>	<b>TRL Level(s)</b>
	<b>FY 2024</b>		
Fieldable Multiplex Detection of Biothreats Phase II field final prototype bio detector, complete multiplex panel for biothreats, provide analysis of capability, and final review.	FY 2024 Q2	FY 2024 Q3	6
Theoretical Classification Methodologies to Enable Detection with Predicted Signatures Phase I conceptual design, final determination of specifications, demonstrate ability to develop system, final review, and final report.	FY 2024 Q1	FY 2024 Q1	3
Theoretical Classification Methodologies to Enable Detection with Predicted Signatures Phase II award and kickoff.	FY 2024 Q2	FY 2024 Q2	3
Next Generation Semiconductor-Based Spectroscopic Personal Radiation Detectors (SPRDs) Phase II demonstrate initial prototype rendering and electronics, develop system for nuclide identification, characterize sensors results and midphase review.	FY 2024 Q3	FY 2024 Q3	4-5
Field Forward Diagnostics for Select Agent List Toxins Phase II demonstrate initial prototype status, determine system for diagnostics, characterize results and midphase review.	FY 2024 Q3	FY 2024 Q3	4-5
Wearable Detector for Aerosolized Chemical Threats Phase II demonstrate initial prototype status, review design requirements and update with feedback, analyze initial results, characterize results and midphase review.	FY 2024 Q3	FY 2024 Q3	4-5
Initiate up to two SBIR Phase I projects for Enhancing Mobile Radiological/Nuclear (R/N) Detection Through Contextual Information.	FY 2024 Q3	FY 2024 Q3	3-4
	<b>FY 2025</b>		
Theoretical Classification Methodologies to Enable Detection with Predicted Signatures Phase II demonstrate initial prototype status, develop system of analytics for classification, characterize results and midphase review.	FY 2024 Q2	FY 2025 Q2	4
Next Generation Semiconductor-Based Spectroscopic Personal Radiation Detectors (SPRDs) Phase II prototype demonstration, final design configuration, capability analysis, and final report.	FY 2025 Q3	FY 2025 Q3	6
Field Forward Diagnostics for Select Agent List Toxins Phase II prototype demonstration, final design configuration, capability analysis, and final report.	FY 2025 Q3	FY 2025 Q3	6
Wearable Detector for Aerosolized Chemical Threats Phase II prototype demonstration, end-user testing and feedback, final design configuration, capability analysis, and final report.	FY 2025 Q3	FY 2025 Q3	6
Initiate up to two SBIR Phase I projects capable of meeting DHS Component CWMD mission needs.	FY 2025 Q3	FY 2025 Q3	3-4
Initiate up to two SBIR Phase II projects for Enhancing Mobile Radiological/Nuclear (R/N) Detection Through Contextual Information.	FY 2025 Q3	FY 2025 Q3	3-4
Next Generation Semiconductor-Based Spectroscopic Personal Radiation Detectors (SPRDs) Phase III award, Field Forward Diagnostics for Select Agent List Toxins Phase III award, and Wearable Detector for Aerosolized Chemical Threats Phase III award.	FY 2025 Q4	FY 2025 Q4	6

**Food, Agriculture, Veterinary Defense (FAVD) Research and Development**

- **Problem:** Section 528 of the *Homeland Security Act of 2002* (P.L. 107-296) (6 U.S.C. 321q), as amended by the *Securing our Agriculture and Food Act* (SAFA) (P.L. 115-43) requires DHS to coordinate efforts related to defending the food, agricultural, and veterinary defense (FAVD) systems of the United States against terrorism and other high-consequence events. This responsibility is being moved to the Office of Health Security (OHS) and DHS S&T for FAVD Research and Development activities. Analyses and reviews conducted by the DHS Chief Medical Officer in conjunction with U.S. Government partner agencies on the existing and emerging threats to FAV systems highlighted several technical areas for research under the Transformational R&D program. These analyses identified the need to improve the detection, characterization, forecasting, and prevention of, and the mitigation, protection, response, and recovery from high-consequence agents in the agricultural, food, and water supply chains and/or interdependent systems.
- **Solution:** FAVD R&D will accelerate and expand the development of current and new countermeasures against threats to domestic and non-domestic populations of animals and plants, whether they originate from the natural, intentional, or unintentional introduction of an etiologic agent, or from the chemical, biological, nuclear, or radiological adulteration of the agricultural, food, and water supply chains. Because of the relocation of FAVD authority to OHS, CWMD did not conduct FY 2023 FAV R&D activities. Instead, because S&T has R&D authority for DHS, including conducting R&D for OHS, CWMD is entering into an Economy Act interagency agreement to transfer CWMD's FY 2023 FAVD R&D funding to DHS S&T to carry out the FAVD R&D in coordination with OHS (as guided by the DHS FAVD Research, Development, Testing, and Evaluation Strategic Plan). While both CWMD and S&T have R&D authorities, CWMD's authority is narrower and is generally limited to counter WMD/CBRN efforts; therefore, because both CWMD and S&T must have authority to carry out the work under an interagency agreement, the FAVD R&D activities are limited to CBRN-related FAVD matters.
- **Justification:** No CWMD R&D funding is included for FAVD R&D in the FY 2025 President's Budget.
- **Impact:** The responsibility and funding for FAVD R&D is relocated to S&T.

**Type of Research**

Basic and Applied

**Technology Readiness Level**

The TRL varies between levels 1-5, with the majority in TRL 3-5 for health security-related R&D.

**Transition Plans**

CWMD and S&T will work together to transfer the FY 2023 funding through an interagency agreement.

**Project Schedule**

Research & Development Description	Planned Start Date	Planned Completion	TRL Level(s)
	<b>FY 2023</b>		
N/A	N/A	N/A	N/A
	<b>FY 2024</b>		
N/A	N/A	N/A	N/A
	<b>FY 2025</b>		
N/A	N/A	N/A	N/A



*Technical Forensics – PPA*

**Budget Comparison and Adjustments**

**Comparison of Budget Authority and Request**

*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
Technical Forensics	\$2,000	\$2,000	\$6,530	\$4,530
<b>Total</b>	<b>\$2,000</b>	<b>\$2,000</b>	<b>\$6,530</b>	<b>\$4,530</b>
Subtotal Discretionary - Appropriation	\$2,000	\$2,000	\$6,530	\$4,530

**PPA Level I Description**

The Technical Forensics program advances the U.S. Government’s technical capability to assess pre- and post-detonation material with novel analysis methods for identification of signatures and device characteristics, and to improve post-detonation material collection and prompt signal analysis methods. CWMD manages the National Nuclear Forensics Expertise Development Program (NNFEDP) that addresses the enduring challenge of sustaining a preeminent workforce of scientists and policymakers that are educated and trained in nuclear forensics-related specialties by funding undergraduate and advanced education and research projects.

**Technical Forensics – PPA**  
**Budget Authority and Obligations**  
*(Dollars in Thousands)*

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Enacted/Request</b>	<b>\$2,000</b>	<b>\$2,000</b>	<b>\$6,530</b>
Carryover - Start of Year	\$5,096	\$541	-
Recoveries	-	-	-
Rescissions to Current Year/Budget Year	-	-	-
Net Sequestered Resources	-	-	-
Reprogramming/Transfers	-	-	-
Supplementals	-	-	-
<b>Total Budget Authority</b>	<b>\$7,096</b>	<b>\$2,541</b>	<b>\$6,530</b>
Collections - Reimbursable Resources	-	-	-
Collections - Other Sources	-	-	-
<b>Total Budget Resources</b>	<b>\$7,096</b>	<b>\$2,541</b>	<b>\$6,530</b>
Obligations (Actual/Estimates/Projections)	\$6,555	\$2,541	\$6,530
<b>Personnel: Positions and FTE</b>			
Enacted/Request Positions	-	-	-
Enacted/Request FTE	-	-	-
<b>Onboard and Actual FTE</b>			
Onboard (Actual/Estimates/Projections)	-	-	-
FTE (Actual/Estimates/Projections)	-	-	-

**Technical Forensics – PPA**  
**Summary of Budget Changes**  
*(Dollars in Thousands)*

	<b>Positions</b>	<b>FTE</b>	<b>Amount</b>
<b>FY 2023 Enacted</b>	-	-	<b>\$2,000</b>
<b>FY 2024 Annualized CR</b>	-	-	<b>\$2,000</b>
<b>FY 2025 Base Budget</b>	-	-	-
Technical Forensics	-	-	\$6,530
<b>Total Research and Development Projects</b>	-	-	<b>\$6,530</b>
<b>FY 2025 Request</b>	-	-	<b>\$6,530</b>
<b>FY 2024 TO FY 2025 Change</b>	-	-	<b>\$4,530</b>

**Technical Forensics – PPA  
Non Pay Budget Exhibits**

**Non Pay by Object Class**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
21.0 Travel and Transportation of Persons	-	-	\$14	\$14
25.1 Advisory & Assistance Services	\$500	\$500	\$1,168	\$668
25.3 Other Purchases of goods and services	-	-	\$4,448	\$4,448
41.0 Grants, Subsidies, and Contributions	\$1,500	\$1,500	\$900	(\$600)
<b>Total - Non Pay Budget Object Class</b>	<b>\$2,000</b>	<b>\$2,000</b>	<b>\$6,530</b>	<b>\$4,530</b>

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**Research and Development**  
**Research and Development Projects**

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**Summary of Projects**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>
Technical Forensics	\$2,000	\$2,000	\$6,530

**Technical Forensics  
Research and Development**

**Technology Readiness Level Exhibit**

*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>
Technical Forensics	\$2,000	\$2,000	\$6,530

**R&D Project Description**

The Technical Forensics program advances the U.S. Government’s technical capability to assess pre- and post-detonation material. CWMD manages the NNFEDP that addresses the enduring challenge of sustaining a preeminent workforce of scientists and policymakers that is educated and trained in nuclear forensics-related specialties by funding research projects.

- **Problem:** Nuclear forensics-related disciplines at U.S. universities have declined and there exists a need to develop the next generation of U.S. nuclear forensic scientists. The disciplines of pre- and post-detonation forensics are evolving and critical fields. The narrowing pipeline of qualified people into these critical fields is a serious impediment to maintaining a robust and credible nuclear forensics program.
- **Solution:** Established in the Homeland Security Act of 2002 (P.L. 107-296) as amended by both the Nuclear Forensics and Attribution Act (NFAA) (P.L.111-140) and the CWMD Act of 2018 (P.L. 115-387), DHS is directed to establish a National Nuclear Forensics Expertise Development Program, which is devoted to developing and maintaining a vibrant and enduring academic pathway from undergraduate to post-doctorate study in nuclear and geochemical science specialties directly relevant to technical nuclear forensics, including radiochemistry, geochemistry, nuclear physics, nuclear engineering, materials science, and analytical chemistry. The NNFEDP is led by The National Technical Nuclear Forensics Center.

DHS CWMD proposes to meet this objective by implementing the NNFEDP in close coordination with other Departments and Agencies to ensure a robust academic pathway needed to sustain a viable nuclear forensics workforce; and by sponsoring post-doctoral fellowships, nuclear forensics research awards to universities, and Federal expertise development opportunities. These initiatives will develop future technical experts and leaders by funding nuclear forensics-related research efforts and establishing links among university faculty, graduate and undergraduate students, national technical nuclear forensics (NTNF)-supporting Departments, Agencies, and staff at the national and defense laboratories. Per sections 1923 and 1926 of the Homeland Security Act of 2002, as amended (P.L. 107-296) (6 U.S.C. 592, 596), CWMD uses the Nuclear Forensics Research Award financial assistance program to build capability and capacity in nuclear forensics among Alaska Native-serving institutions, Asian American and Native American Pacific Islander-serving institutions, Native Hawaiian-serving institutions, Hispanic-serving

institutions, Tribal Colleges or Universities, and Historically Black Colleges or Universities and will encourage them to participate.

- **Justification:** The FY 2025 President’s Budget provides \$6.5M for this project. Funding will meet this CWMD requirement through the sponsorship of Nuclear Forensics Research Awards, postdoctoral fellowships, laboratory R&D with directed support to graduate and undergraduate students, and specialized nuclear forensics related coursework.
- **Impact:** The DHS CWMD expertise development program maintains the pipeline of technical professionals at the national laboratories supporting technical nuclear forensics that continuously improves the United States Government pre-and post-detonation nuclear forensics operational capability. These improvements allow experts to reach technical conclusions in support of forensics and attribution assessments for decision makers.

**Type of Research**

Basic, Applied, Developmental

**Technology Readiness Level**

This project includes TRLs 1-7. The project maintains the technical expertise required to execute the Nation’s Nuclear Forensics mission through interdisciplinary R&D collaboration among students, academic departments, universities, and national laboratories.

**Transition Plans**

Students trained under the expertise development program will likely obtain employment either at a Department of Energy National/Department of Defense Laboratory or a Federal agency responsible for nuclear forensics. Capabilities developed under this program will transition to the Laboratories/Federal Departments and Agencies that are responsible for the operational technical nuclear forensics mission.

**Project Schedule**

Research & Development Description	Planned Start Date	Planned Completion	TRL Level(s)
<b>FY 2023</b>			
Expertise Development- Sponsorship of postdoctoral fellows, undergraduate and graduate students and mentors aligned with technical nuclear forensics focus areas.	FY 2023 Q1	FY 2023 Q4	7
<b>FY 2024</b>			
Expertise Development- Sponsorship of postdoctoral fellows, undergraduate and graduate students and mentors aligned with technical nuclear forensics focus areas.	FY 2024 Q1	FY 2024 Q4	7
<b>FY 2025</b>			
Expertise Development- Sponsorship of postdoctoral fellows, undergraduate and graduate students and mentors aligned with technical nuclear forensics focus areas.	FY 2025 Q1	FY 2025 Q4	7

*Detection Capability Development – PPA*

**Budget Comparison and Adjustments**

**Comparison of Budget Authority and Request**

*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
Detection Capability Development	\$25,611	\$25,611	\$20,588	(\$5,023)
<b>Total</b>	<b>\$25,611</b>	<b>\$25,611</b>	<b>\$20,588</b>	<b>(\$5,023)</b>
Subtotal Discretionary - Appropriation	\$25,611	\$25,611	\$20,588	(\$5,023)

**PPA Level I Description**

The Detection Capability Development program supports R&D projects anticipated to lead to a materiel solution. Capability gaps exist across multiple pathways through which WMD can be transported. These capability gaps can to some degree be mitigated with non-materiel solutions but primarily require a materiel solution to be developed, tested, acquired, and deployed to address the gap. DHS operational users and CWMD recognize many deployed systems will be reaching their respective end-of-life, and modernization and/or recapitalization efforts will be required to maintain or improve CWMD sensor capabilities. Additionally, potential COTS material solutions may require customization and will always require test and evaluation to ensure they meet operational and functional requirements.

Through Analyses of Alternatives (AoAs), threat assessments, preparation of documentation to prepare for materiel solution acquisition, development activities to mature material solutions that meet operational partners requirements, evaluation of proposed materiel solutions, and test and evaluation activities, CWMD can conduct the capability development effort necessary to acquire and deploy materiel solutions. CWMD acquisition activities adhere to the Department’s Integrated Lifecycle Management approach to develop, acquire, procure, deploy, and sustain chemical, biological, radiological, and nuclear detection systems for customers that operate the systems in the field. Throughout the life of each Detection Capability Development project, CWMD works collaboratively with the DHS Operational Components and with State and local agencies to manage the equipment configuration to ensure it continues to meet its operational requirements, as well as collect and analyze operational performance and maintenance data to maximize performance per maintenance dollar and inform future procurement requirements.



**Detection Capability Development – PPA  
Budget Authority and Obligations**

*(Dollars in Thousands)*

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Enacted/Request</b>	<b>\$25,611</b>	<b>\$25,611</b>	<b>\$20,588</b>
Carryover - Start of Year	\$23,738	\$22,017	\$22,947
Recoveries	\$791	-	-
Rescissions to Current Year/Budget Year	-	-	-
Net Sequestered Resources	-	-	-
Reprogramming/Transfers	(\$2,773)	-	-
Supplementals	-	-	-
<b>Total Budget Authority</b>	<b>\$47,367</b>	<b>\$47,628</b>	<b>\$43,535</b>
Collections - Reimbursable Resources	-	-	-
Collections - Other Sources	-	-	-
<b>Total Budget Resources</b>	<b>\$47,367</b>	<b>\$47,628</b>	<b>\$43,535</b>
Obligations (Actual/Estimates/Projections)	\$25,350	\$24,681	\$43,535
<b>Personnel: Positions and FTE</b>			
Enacted/Request Positions	-	-	-
Enacted/Request FTE	-	-	-
<b>Onboard and Actual FTE</b>			
Onboard (Actual/Estimates/Projections)	-	-	-
FTE (Actual/Estimates/Projections)	-	-	-

**Detection Capability Development – PPA**  
**Summary of Budget Changes**  
*(Dollars in Thousands)*

	<b>Positions</b>	<b>FTE</b>	<b>Amount</b>
<b>FY 2023 Enacted</b>	-	-	<b>\$25,611</b>
<b>FY 2024 Annualized CR</b>	-	-	<b>\$25,611</b>
<b>FY 2025 Base Budget</b>	-	-	-
Detection Capability Development	-	-	\$20,588
<b>Total Research and Development Projects</b>	-	-	<b>\$20,588</b>
<b>FY 2025 Request</b>	-	-	<b>\$20,588</b>
<b>FY 2024 TO FY 2025 Change</b>	-	-	<b>(\$5,023)</b>

**Detection Capability Development – PPA  
Non Pay Budget Exhibits**

**Non Pay by Object Class**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
21.0 Travel and Transportation of Persons	\$5	\$5	\$14	\$9
25.1 Advisory & Assistance Services	\$4,114	\$4,114	\$3,297	(\$817)
25.2 Other Services from Non-Federal Sources	\$5,032	\$5,032	\$5,498	\$466
25.3 Other Purchases of goods and services	\$5,900	\$5,900	\$1,405	(\$4,495)
25.5 Research & Development Contracts	\$7,595	\$7,595	\$7,278	(\$317)
31.0 Equipment	\$2,965	\$2,965	\$3,096	\$131
<b>Total - Non Pay Budget Object Class</b>	<b>\$25,611</b>	<b>\$25,611</b>	<b>\$20,588</b>	<b>(\$5,023)</b>

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**Research and Development**  
**Research and Development Projects**

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**Summary of Projects**

*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>
Detection Capability Development	\$25,611	\$25,611	\$20,588

**Detection Capability Development  
Research and Development**

**Technology Readiness Level Exhibit**

*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>
Detection Capability Development	\$25,611	\$25,611	\$20,588

**R&D Project Description**

The capability development activities funded with this program will support acquisition and deployment of counter WMD devices that will partially or wholly address capability gaps and provide DHS and CWMD operational users and Federal, State, Local, Tribal, and Territorial (FSLTT) stakeholders with commercially available or next-generation counter WMD devices. This R&D is intended to enable new technologies to be fielded or to directly spur commercial development that strengthens the Homeland Security Enterprise.

The Detection Capability Development R&D program includes multiple projects. The table that follows identifies and summarizes the initiatives and funding levels for FY 2025. Details on the projects are outlined in the narrative below.

<b>Detection Capability Development</b> <i>(Dollars in Thousands)</i>			
<b>Project</b>	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President’s Budget</b>
Biological Detection for the 21 <sup>st</sup> Century (BD-21)	\$17,004	\$17,004	-
Environmental Biodetection Capability Development and Maturation	-	-	\$7,814
CWMD GATE-U (formerly Information Architecture (IA)/GATE-U)	\$2,032	\$2,032	\$2,098
Advanced Technology Demonstration/Rapid Prototyping	\$4,065	\$4,065	\$4,196
TIBr HPRDS Objective Resolution (THOR) (formerly Thallium Bromide RIID)	\$1,000	\$1,000	-
CWMD Sensor Integration	\$1,000	\$1,000	-
Mobile Active Interrogation Using Neutrons (MAIN)	\$500	\$500	-
Radiation Portal Monitor (RPM) Recapitalization (RAPTER)	\$10	\$10	-
RPM Enterprise (RPME) Capability Development and Maturation	-	-	\$6,480
<b>Total – Detection Capability Development</b>	<b>\$25,611</b>	<b>\$25,611</b>	<b>\$20,588</b>

**Biological Detection for the 21<sup>st</sup> Century (BD-21)**

- Problem:** The operational bio-detection program has several capability gaps, the most significant being a prolonged event-to-detection timeline. BD-21 was initiated to address these gaps and to support the 2019 Biodetection Mission Needs Statement (MNS). A subsequent capabilities assessment rendered the MNS obsolete including the BD-21 program.
- Solution:** Recognizing opportunities for improvements in the current system that monitors for biological attack, CWMD is transitioning from BD-21 into an Environmental Biodetection (EBD) Capability Development and Maturation project that will assess existing and emerging EBD technologies for their potential to address new mission needs identified through the EBD capabilities-based assessment.
- Justification:** The FY 2025 President’s Budget provides no funding for this project. The FY 2025 President’s Budget moves the previously planned BD-21 funding to the EBD Capability Development and Maturation project, which incorporates legacy BD-21 investments to meet CWMD’s updated mission needs.
- Impact:** No impact, CWMD will continue investing in EBD capabilities by continuing the research and development of candidate technologies to address identified EBD gaps.

**Type of Research**

Developmental

**Technology Readiness Level**

TRL 5-6

**Transition Plans**

All BD-21 investments through the end of FY 2024 will directly transition to the Environmental Biodetection Capability Development and Maturation project portfolio.

**Project Schedule**

Research & Development Description	Planned Start Date	Planned Completion	TRL Level(s)
	<b>FY 2023</b>		
Conducted indoor system testbed.	FY 2023 Q1	FY 2023 Q4	6
Conducted stakeholder engagement to assess notional indoor concept acceptance.	FY 2023 Q3	FY2023 Q4	6
Updated Technology Readiness Assessment for the indoor system concept.	FY 2023 Q3	FY 2023 Q4	5-6
Coordinated review of complete Indoor and Outdoor ORD with JRIMS.	FY 2023 Q3	FY 2023 Q4	6
Developed and demonstrated outdoor testbed capabilities.	FY 2023 Q2	FY 2024 Q1	6
Developed and demonstrated biological release modeling capabilities for system development and verification.	FY 2023 Q2	FY 2025 Q4	6
	<b>FY 2024</b>		
Update and conduct field trials of integrated indoor/outdoor system testbeds.	FY 2024 Q1	FY 2024 Q4	5-6
Establish a broader, expanded threat list to enable future technology and scenario development.	FY 2024 Q2	FY 2025 Q2	5-6
Develop Environmental Biodetection Modeling and Simulation capabilities.	FY 2024 Q1	FY 2024 Q4	5-6
Conduct updated Technology Readiness Assessment for complete indoor/outdoor system concepts.	FY 2024 Q3	FY 2024 Q4	5-6
Evaluate emerging technologies using indoor/outdoor system testbed to determine applicability to Environmental Biodetection.	FY 2024 Q2	FY 2025 Q4	5-6
Evaluate DigitalMALDI Time of Flight (TOF) per Congressional guidance.	FY 2024 Q3	FY 2025 Q4	6
Develop network architecture design for local and national environmental detection capabilities.	FY 2024 Q3	FY 2025 Q2	6
Conduct final program Technology Readiness Assessment and Technology Feasibility Assessment to support program closeout and transition.	FY 2024 Q4	FY 2025 Q3	6
	<b>FY 2025</b>		
N/A	N/A	N/A	N/A



**Environmental Biodetection Capability Development and Maturation**

- **Problem:** CWMD has identified biodetection gaps associated with the need to detect traditional agents but also a broader range of biological risks, including unpredictable novel, synthetic, and/or modified agents, decrease the timeline for detection of aerosolized agents, and expand Nation-wide adaptive capabilities.
- **Solution:** Activities support development of capabilities that will enable CWMD to continuously monitor for airborne biological agents using various detection approaches. These capabilities will improve warnings to public health officials, better inform State, local, tribal, and territorial response, and accelerate treatment decisions. EBD will focus on developing and deploying near term mature technologies to meet BioWatch enhancement recommendations. EBD will also incorporate developing modeling capabilities, cybersecurity capabilities, and evaluating sensors developed by CWMD, DHS S&T, and DoD JPEO programs.
- **Justification:** The FY 2025 President’s Budget provides \$7.8M for this project. Funding for this initiative supports capability development and performance assessments, informed from an updated Biodetection MNS, policies, and strategic guidance. EBD includes the activities formerly performed as a part of the BD-21 program, which was funded at \$6.8M in the FY 2024 President’s Budget; in FY 2025, EBD funding is \$1.0M more than BD-21 funding in the FY 2024 President’s Budget.
- **Impact:** Provide a networked detection solution that prevents, disrupts, and/or mitigates an aerosolized biological attack. The future solution will directly leverage technology investments and lessons learned from the BD-21 program, BioWatch program, DHS S&T programs, and collaboration efforts with other agencies.

**Type of Research**

Developmental

**Technology Readiness Level**

TRL 5-7

**Transition Plans**

Developmental technologies will transition from system concepts into temporary deployment testbeds at CWMD BioWatch special events. These limited deployments support technology evaluation in relevant operational environments and the effectiveness in supporting Federal, State, and local first responders and public health officials needs at regional and national levels.

**Project Schedule**

Research & Development Description	Planned Start Date	Planned Completion	TRL Level(s)
	<b>FY 2025</b>		
Update indoor and outdoor system test beds to address new Environmental Biodetection capability needs	FY 2025 Q1	FY 2026 Q1	6
Update Environmental Biodetection modeling capabilities to support test and evaluation efforts	FY 2025 Q1	FY2026 Q1	6
Develop Cybersecurity risk and mitigation guidance for Environmental Biodetection networks	FY 2025 Q2	FY 2026 Q2	6
Conduct an initial performance assessment against updated Environmental Biodetection operational requirements	FY 2025 Q2	FY 2026 Q3	5-7

**CWMD GATE-U (formerly Information Architecture (IA)/GATE-U)**

- **Problem:** The need to collect, maintain, secure, and share diverse data sets is growing to support the countering-WMD mission. The threat to data security is ever changing. The CWMD Office lacks a common platform for advanced data analytics, data pattern recognition, and a common platform to securely store, analyze, and archive large data sets (e.g., sensor networks).
- **Solution:** The CWMD GATE-U environments will provide a common platform to gather, integrate, analyze, and disseminate information to CWMD partners to anticipate, prevent, and respond to WMD threats to the homeland. The GATE-U environments can support an interconnected system-of-systems approach capable of integrating disparate data streams and information sources to identify unique indicators of threats to the homeland based on WMD activity. The GATE-U environments will disseminate operationally relevant results to Federal, State, local, and international partners.
- **Justification:** The FY 2025 President’s Budget provides \$2.1M for this project. Funding for this initiative will continue the development and integration of additional user sensors, data streams, applications, and information sources into the cloud-based environments. Additionally, CWMD will continue the development and integration of required security protocols as new applications and data collection and/or analysis enhancements are added. With a set of common platforms, CWMD will have an agile environment for the development of security protocols and tools to leverage data into actionable information to support the CWMD mission.
- **Impact:** Completion of this project will support expansion of the quality and breadth of information available to complete data driven CWMD missions. It is expected to save cost and time by automating data analysis and promote integration between programs and DHS Components.

**Type of Research**

Developmental

**Technology Readiness Level**

TRL 6-7

**Transition Plans**

The GATE-U environments will likely span development and operations due to the ever-changing threats and the growing need to collect, store, combine, and transmit data and information. Upon completion of the development efforts, the operations will transition to the appropriate operational Components with support by the GATE-U software engineering/cybersecurity/system administration team.

**Project Schedule**

Research & Development Description	Planned Start Date	Planned Completion	TRL Level(s)
<b>FY 2023</b>			
Continued development of the GATE-U environment to support addition of advanced analytics tools to the environment. Inclusion of Cognitive Sensor Network technology.	FY 2023 Q1	FY 2023 Q4	7
<b>FY 2024</b>			
Continued development of the GATE-U environment to support addition of advanced analytics tools to the environment. Upgrade the outdated technology of the Cognitive Sensor Network, inclusion of a development environment for the DCATS application and prototyping operational user sensor network feeds.	FY 2024 Q1	FY 2024 Q4	7
Inclusion of the Multi-Sensor Multi-Domain Awareness (MSMDA) research and development data analytics environment and prototyping operational user sensor network feeds.	FY 2025 Q1	FY 2025 Q4	7
Explore the technology and architect a Google Cloud Platform (GCP) environment to take advantage of the technical strengths provided by Google over other cloud services providers. Continued the architecting and development of the GATE-U Azure environment and continue implementing the sharing of best of breed technologies between the GATE-U AWS, and GATE-U Azure, and GATE-U GCP environments.	FY 2024 Q1	FY 2024 Q4	7
<b>FY 2025</b>			
Continue development of the GATE-U environment to support addition of advanced analytics tools to the environment. Inclusion of the Multi-Sensor Multi-Domain Awareness (MSMDA) environment and prototyping operational user sensor network feeds. Continue upgrading the outdated technology of the Cognitive Sensor Network, inclusion of development environments for tenant applications, and prototyping operational user sensor network feeds.	FY 2025 Q1	FY 2025 Q4	7
Continue development of the GATE-U environment to support addition of advanced analytics tools to the environment. Inclusion Expansion of the capabilities of the Multi-Sensor Multi-Domain Awareness (MSMDA) research and development data analytics environment and prototyping operational user sensor network feeds.	FY 2025 Q1	FY 2025 Q4	7
Develop a Google Cloud Platform (GCP) environment to take advantage of the technical strengths provided by Google over other cloud providers. Continue the architecting and development of the GATE-U Azure environment and continue implementing the sharing of best of breed technologies between the GATE-U AWS, and GATE-U Azure, and GATE-U GCP environments.	FY 2025 Q1	FY 2025 Q4	7

**Advanced Technology Demonstration/Rapid Prototyping**

- **Problem:** There is a need to ensure that there are mechanisms in place to transition promising technologies developed by applied and developmental research into operational capabilities available for future acquisitions. As technologies mature, there is a need to develop research and operational prototype systems via an Advanced Technology Demonstration (ATD) or Rapid Prototyping. These efforts highlight the potential of the technology by placing a prototype system with operational users in an operational environment to gain feedback to inform acquisition and operational and support requirements. As threats evolve and new operational capability gaps become known, it is expected one or more efforts to characterize emerging technologies in operational environments will be needed to address urgent operational capability gaps and requirements quickly and effectively.
- **Solution:** Funding will support the development, execution, and documentation of ATD and Rapid Prototyping projects. Since technologies mature at various rates and emerging operational gaps are identified in real-time, the exact nature of the projects is unknown until typically the year of execution.
- **Justification:** The FY 2025 President’s Budget provides \$4.2M for this project. Funding for this initiative will enable CWMD to rapidly address emerging threats and capability gaps through first-look operational assessments and proof-of-concept demonstrations of new prototype systems, with minimal modification as required to meet the operational scenario and application. It is crucial to have a process in place that allows new and emerging technologies to be developed into prototype systems that can be used to inform operational users and develop acquisition requirements.
- **Impact:** ATD/Rapid Prototyping funding will allow CWMD to be responsive to emerging technologies and urgent operational capability gaps and requirements/requests. Funding will allow CWMD to be proactive with operational users, industry partners, and inter-agency partners.

**Type of Research**

Developmental

**Technology Readiness Level**

TRL 6-7

**Transition Plans**

As the ATDs and rapid prototypes conclude, the capability may stay with the operational Component to provide an interim capability until the final solution to provide the capability is produced, tested, and deployed or the ATD prototype critical technology elements are transferred to the next phase of development and/or included in a production system.

**Project Schedule**

Research & Development Description	Planned Start Date	Planned Completion	TRL Level(s)
	<b>FY 2023</b>		
Demonstrated LIDAR-Enhanced Mobile Urban Radiation System (LP LEMURS).	FY 2022 Q4	FY 2023 Q4	6
ATD(s)/rapid prototyping based on emerging technologies and urgent operational capability gaps.	FY 2022 Q4	FY 2023 Q4	6-7
Training toolkit for radiological/nuclear/chemical Phase III final demonstration, equipment builds, report, and review.	FY 2023 Q1	FY 2023 Q1	7
Initiated up to one SBIR Phase III project capable of meeting DHS Component CWMD mission needs.	FY 2023 Q2	FY 2023 Q4	6
Continued R&D for the improvement and further development of enhanced biosensors.	FY 2023 Q1	FY 2023 Q4	6-7
	<b>FY 2024</b>		
Deliver LP LEMURS.	FY 2023 Q4	FY 2024 Q2	7
ATD(s)/rapid prototyping based on emerging technologies and urgent operational capability gaps.	FY 2023 Q4	FY 2024 Q4	6-7
Initiate Secondary Neutron Air Cargo Screening (SNACS) project	FY 2024 Q2	FY 2024 Q2	6
Continue R&D for the improvement and further development of enhanced biosensors.	FY 2024 Q1	FY 2024 Q4	6-7
Initiate up to one SBIR Phase III project capable of meeting DHS Component CWMD mission needs.	FY 2024 Q2	FY 2024 Q4	6
	<b>FY 2025</b>		
ATD(s)/rapid prototyping based on emerging technologies and urgent operational capability gaps.	FY 2024 Q4	FY 2025 Q4	6-7
SNAC Mid-Phase Review	FY 2025 Q2	FY 2023 Q2	6-7
Continue R&D for the improvement and further development of enhanced biosensors	FY 2025 Q1	FY 2025 Q4	6-7
Initiate Detecting Chemical Threats at Checkpoints (DTAC)	FY 2025 Q2	FY 2025 Q2	5

**TIBr HPRDS Objective Resolution (THOR) (formerly Thallium Bromide RIID)**

- **Problem:** The current Basic and Advanced Handheld RIIDs are deficient in their detection and identification performance due to limited selection of detection materials available in the marketplace at prices that can be widely deployed to meet operational requirements. The lack of cost-effective and better performing detection materials available in the marketplace is restricting the end user's efficiency of operations. There is a requirement to improve the efficiency of R/N detection and identification operations in the field and in performing secondary inspections.
- **Solution:** Thallium Bromide RIID detection capability development, referred to as program TIBr Human Portable Radiological/Nuclear Detection Systems (HPRDS) Objective Resolution (THOR), is intended to support the transition of this emerging technology from R&D to industry. This will be accomplished by developing TIBr Core Detection Modules (CDMs) and integrating CDMs into technology demonstrator RIIDs to demonstrate key attributes of the new technology. These improved capabilities include better detection, as well as better identification or equivalent detection and identification using less detector material.
- **Justification:** The FY 2025 President's Budget provides no funding for this project.
- **Impact:** Completion of this project will transition of TIBr technology from R&D to radioisotope detectors that will significantly improve operations and alarm adjudications in the field.

**Type of Research**

Developmental

**Technology Readiness Level**

TRL 5

**Transition Plans**

This program planned to transition the R&amp;D TIBr effort to industry once it reaches TRL-6.

**Project Schedule**

Research & Development Description	Planned Start Date	Planned Completion	TRL Level(s)
	<b>FY 2023</b>		
Design TIBr Breadboard.	FY 2023 Q4	FY 2024 Q4	5
Vendor Development of Breadboard.	FY 2023 Q4	FY 2025 Q2	5
	<b>FY 2024</b>		
Vendor Testing of the TIBr Breadboard.	FY 2025 Q2	FY 2025 Q2	5
	<b>FY 2025</b>		
Project Close-out.	FY 2025 Q1	FY 2025 Q1	5



**CWMD Sensor Integration**

- **Problem:** Thousands of CBRN detection devices have been deployed across the United States. However, these detection devices have limits in the ability to integrate into a network that can collect, analyze, and distribute real-time information from deployed devices due to technological limitations. CWMD needs to establish the ability to collect, analyze, and distribute near real-time information from deployed detection devices to better protect the homeland.
- **Solution:** This project will continue to expand upon prior research under the Cognitive Sensor Network (CSN) program to demonstrate integration of legacy and future detection technologies and cloud analytics. In parallel, CWMD will conduct a Sensor Backbone Capability Based Analysis (CBA) to begin the development of a follow-on sensor integration and analysis platform to replace the outdated Cognitive Sensor Network technology.
- **Justification:** The FY 2025 President’s Budget provides no funding for this project. Prior year funding will allow completion of the CWMD Sensor Backbone CBA to begin the development of a follow-on sensor integration and analysis platform to replace the outdated Cognitive Sensor Network technology. Any work beyond the CBA will be a new project.
- **Impact:** Upon completion of this program, CWMD will have demonstrated interoperability and networking of CBRN sensors to support future requirements for detector communications. The program will also document the gaps needed to be addressed in future programs.

**Type of Research**

Developmental

**Technology Readiness Level**

TRLs 6-7

**Transition Plans**

Upon completion of this program, CWMD will have demonstrated interoperability and networking of CBRN sensors to support future requirements for detector communications. The technology will transition to a new program if warranted by the results of the Sensor Backbone CBA.

**Project Schedule**

Research & Development Description	Planned Start Date	Planned Completion	TRL Level(s)
<b>FY 2023</b>			
Integration of new sensor capabilities into the GATE-U AWS environment, to complement or supplant portions of the prior Cognitive Sensor Network (CSN) technology.	FY 2023 Q2	FY 2024 Q2	6
Initiate a CWMD Sensor Backbone Capability Based Assessment (CBA) to begin the development of a follow-on sensor integration and analysis platform to replace the outdated CSN technology,	FY 2023 Q3	FY 2024 Q3	5
<b>FY 2024</b>			
Complete a CWMD Sensor Backbone Capability Based Assessment (CBA) to begin the development of a follow-on sensor integration and analysis platform to replace the outdated CSN technology,	FY 2024 Q3	FY 2024 Q4	6-7
<b>FY 2025</b>			
N/A	N/A	N/A	N/A

**Mobile Active Interrogation Using Neutrons (MAIN)**

- **Problem:** Current capabilities for scanning conveyances for shielded nuclear material (SNM) involve the use of individual platforms and technologies specifically designed to penetrate shielding materials and detect SNM. These systems have the advantage that they are also able to detect explosives or contraband. There exists a requirement for a single platform capable of scanning conveyances for multiple items of concern to DHS Components and SLTT partners.
- **Solution:** Development and demonstration of a mobile system using neutron interrogation to scan conveyances for SNM and chemicals (including drugs and explosives) in both CBP and TSA applications.
- **Justification:** The FY 2025 President’s Budget provides no funding for this project. The MAIN project is included as a part of the Advanced Technology Demonstration research project in FY 2025. Funding for this research initiative will be used for spiral development of the developed capability for both CBP and TSA applications. This includes spiral development of hardware and algorithms for the optimized system.
- **Impact:** Completion of this project will result in a demonstration of a technology for scanning conveyances for SNM and chemicals (including drugs and explosives) in both CBP and TSA applications.

**Type of Research**

Developmental

**Technology Readiness Level**

TRL 5-7

**Transition Plans**

Technologies developed under the MAIN project will transition to a future acquisition supporting TSA and CBP applications.

**Project Schedule**

Research & Development Description	Planned Start Date	Planned Completion	TRL Level(s)
	<b>FY 2023</b>		
Carry out government-led characterization and evaluate results.	FY 2023 Q1	FY 2023 Q4	6
	<b>FY 2024</b>		
Initiate spiral development and integration of hardware and algorithms for optimized system leading to data collection and analysis.	FY 2024 Q1	FY 2024 Q4	7
	<b>FY 2025</b>		
N/A	N/A	N/A	N/A

**RPM Enterprise (RPME) Capability Development and Maturation**

- **Problem:** Since 2003, DHS has deployed approximately 1,400 RPM systems at Land and Sea ports of entry, airports, and mail facilities within the U.S., with an original estimated operational life of 10 to 13 years. Many of the deployed RPMs have surpassed their intended design life. Due to the age of the deployed systems, several known obsolescence issues exist, including limited state of health reporting, no automatic gain stabilization, no automatic calibration, nuisance alarms, and limited capability to inform users when systems are no longer operating within the required performance envelope.
- **Solution:** CWMD will support CBP’s legislative requirement to maintain nearly 100 percent R/N screening of conveyances entering the U.S. at land and seaports of entry. The anticipated solution will be influenced by CBP’s strategy to deploy NII systems extensively and be documented in terms of CBP’s Port of the Future concept. In the near term, this will involve CWMD supporting CBP’s efforts to document mission needs/gaps/requirements and enhancing the existing fleet of RPMs via Service Life Extension Program (SLEP) efforts and modular upgrades until a fleet recapitalization is justified. Specific activities include:
  - Next Gen Mobile: Develop Acquisition Program Documentation (Functional Requirements Document, Integrated Logistics Support Plan, Requirements Traceability Matrix, etc.), System Definition Review/ADE-2B. Award the Development/Integration Contract and begin systems engineering efforts for the proposed vendor solution.
  - Checkpoint R/N Detection: Initiate Alternatives Analysis and Planning activities.
  - Future RPM Enhancements: Develop Advanced RPM Maintenance Operating Reporter (ARMOR) state-of-health/maintenance software to deployed RPM Replacement Program (RPM-RP) systems; Continued support to CBP Data Analysis Center-Threat Evaluation and Reduction (DAC-TER) to support ARMOR deployment.
- **Justification:** The FY 2025 President’s Budget provides \$6.5M for this project. RPMs, both mobile and fixed systems, are the front-line systems to protecting the Nation from R/N threats at Land and Sea Ports of Entry and mail facilities. It is critical that CWMD continue to support technological enhancements to keep existing RPM systems operational and effective, and to begin activities for expanding into new operational environments.
- **Impact:** CWMD will be able to provide CBP enhanced capabilities and state-of-health situational analysis for the combined fleet of legacy RPMs and newly deployed RPM-RP systems. CWMD will also conduct development/integration of solutions to enable replacing the aging fleet of mobile RPMs and provide enhanced capabilities at interior border patrol checkpoints.

**Type of Research**

Developmental

**Technology Readiness Level**

TRL 6-7

**Transition Plans**

- Next Gen Mobile: Systems will be procured by CWMD and delivered to CBP for operational usage.
- Checkpoint R/N Detection: Systems will be procured by CWMD and delivered to CBP for operational usage.
- Future RPM Enhancements: ARMOR software will be developed for RPM-RP systems by CWMD and delivered to CBP for operational usage.

**Project Schedule**

<b>Research &amp; Development Description</b>	<b>Planned Start Date</b>	<b>Planned Completion</b>	<b>TRL Level(s)</b>
	<b>FY 2025</b>		
Perform program planning and develop acquisition program documentation to award the development/integration contract for the Next Gen Mobile program.	FY 2025 Q1	FY 2025 Q3	6
Initiate an Alternatives Analyses (AA) to identify and examine potential materiel solutions for Checkpoint R/N Detection.	FY 2025 Q2	FY 2025 Q4	7
Initiate spiral development of ARMOR prototype for RPM-RP systems.	FY 2025 Q1	FY 2025 Q4	6

# Department of Homeland Security

## *Countering Weapons of Mass Destruction*

### *Federal Assistance*



**Fiscal Year 2025**

**Congressional Justification**

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**Federal Assistance**

**Budget Comparison and Adjustments**

**Comparison of Budget Authority and Request**

*(Dollars in Thousands)*

	FY 2023 Enacted			FY 2024 Annualized CR			FY 2025 President's Budget			FY 2024 to FY 2025 Total Changes		
	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount
Training, Exercises, and Readiness	-	-	\$19,559	-	-	\$19,559	-	-	\$23,261	-	-	\$3,702
Securing the Cities	-	-	\$34,628	-	-	\$34,628	-	-	\$36,366	-	-	\$1,738
Biological Support	-	-	\$84,996	-	-	\$84,996	-	-	\$103,897	-	-	\$18,901
<b>Total</b>	-	-	<b>\$139,183</b>	-	-	<b>\$139,183</b>	-	-	<b>\$163,524</b>	-	-	<b>\$24,341</b>
Subtotal Discretionary - Appropriation	-	-	\$139,183	-	-	\$139,183	-	-	\$163,524	-	-	\$24,341

The Countering Weapons of Mass Destruction Office (CWMD) supports the frontline operations of its State, local, tribal, and territorial (SLTT) partners. This office addresses critical vulnerabilities to help local communities prepare and build capacity in detecting, identifying, responding to, and mitigating chemical, biological, radiological, and nuclear threats and incidents. With the Federal Assistance appropriation and mission, CWMD aligns operational programs and activities across the weapons of mass destruction (WMD) threat space and allows for consistent and persistent engagement. Federal Assistance supports advancement of environmental biodetection (EBD) capabilities.

The FA appropriation includes the following Programs, Projects, and Activities (PPAs):

**Training, Exercises, and Readiness:** This PPA provides support to local and regional jurisdictions, partners, and DHS operating Components to reduce the risk of a deployment of a weapon of mass destruction and the movement of chemical, biological, radiological, and nuclear materials within the homeland. This includes readiness programs and activities that provide mission-related training, exercises, technical assistance, subject matter expertise, and capability enhancement for local jurisdictions and DHS Component personnel to support preparedness for chemical, biological, radiological, and nuclear events. This PPA also provides funding for Chemical Support activities and the Mobile Detection Deployment Program (MDDP).

**Securing the Cities (STC):** This PPA enhances the ability of the United States to detect and prevent terrorist attacks and other high-consequence events utilizing nuclear or other radiological materials that pose a risk to homeland security in high-risk urban areas.

**Biological Support:** This PPA supports the Nation’s primary biodetection capability, BioWatch, which provides early warning of bioterrorism and helps communities across the Nation prepare and respond. Supporting detection, rapid notification, preparedness, and planning efforts helps Federal, State, and local decision-makers take steps to save lives and mitigate consequences. BioWatch provides early warning of a bioterrorism attack in over

30 densely populated jurisdictions and over 80 special events each year across the country. BioWatch is the core of environmental biodetection execution to bring additional capability to State and local stakeholders and to improve readiness by incorporating improved threat and risk-based approaches to biodetection activities.

**Federal Assistance  
Budget Authority and Obligations**

*(Dollars in Thousands)*

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Enacted/Request</b>	<b>\$139,183</b>	<b>\$139,183</b>	<b>\$163,524</b>
Carryover - Start of Year	\$8,237	\$28,616	-
Recoveries	\$2,020	-	-
Rescissions to Current Year/Budget Year	-	-	-
Net Sequestered Resources	-	-	-
Reprogramming/Transfers	-	-	-
Supplementals	-	-	-
<b>Total Budget Authority</b>	<b>\$149,440</b>	<b>\$167,799</b>	<b>\$163,524</b>
Collections - Reimbursable Resources	\$221	\$225	\$228
Collections - Other Sources	-	-	-
<b>Total Budget Resources</b>	<b>\$149,661</b>	<b>\$168,024</b>	<b>\$163,752</b>
Obligations (Actual/Estimates/Projections)	\$121,045	\$168,024	\$163,752
<b>Personnel: Positions and FTE</b>			
Enacted/Request Positions	-	-	-
Enacted/Request FTE	-	-	-
<b>Onboard and Actual FTE</b>			
Onboard (Actual/Estimates/Projections)	-	-	-
FTE (Actual/Estimates/Projections)	-	-	-

**Federal Assistance  
Collections – Reimbursable Resources**  
*(Dollars in Thousands)*

	FY 2023 Enacted			FY 2024 Annualized CR			FY 2025 President's Budget		
	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount
Department of Homeland Security - Management Directorate	-	-	\$221	-	-	\$225	-	-	\$228
<b>Total Collections</b>	-	-	\$221	-	-	\$225	-	-	\$228

**Federal Assistance  
Summary of Budget Changes**  
*(Dollars in Thousands)*

	<b>Positions</b>	<b>FTE</b>	<b>Pay Amount</b>	<b>Non-Pay Amount</b>	<b>Amount</b>
<b>FY 2023 Enacted</b>	-	-	-	<b>\$139,183</b>	<b>\$139,183</b>
<b>FY 2024 Annualized CR</b>	-	-	-	<b>\$139,183</b>	<b>\$139,183</b>
<b>FY 2025 Base Budget</b>	-	-	-	<b>\$139,183</b>	<b>\$139,183</b>
<b>Total Technical Changes</b>	-	-	-	-	-
<b>Total Annualizations and Non-Recurs</b>	-	-	-	-	-
BioWatch Current Services Adjustment	-	-	-	\$4,660	\$4,660
Training and Exercises Current Services Adjustment	-	-	-	\$409	\$409
<b>Total Pricing Changes</b>	-	-	-	<b>\$5,069</b>	<b>\$5,069</b>
<b>Total Adjustments-to-Base</b>	-	-	-	<b>\$5,069</b>	<b>\$5,069</b>
<b>FY 2025 Current Services</b>	-	-	-	<b>\$144,252</b>	<b>\$144,252</b>
<b>Total Transfers</b>	-	-	-	-	-
BioWatch Operations	-	-	-	\$14,241	\$14,241
Chemical Support	-	-	-	\$1,300	\$1,300
Securing the Cities (STC)	-	-	-	\$1,738	\$1,738
Training & Exercises	-	-	-	\$1,993	\$1,993
<b>Total Program Changes</b>	-	-	-	<b>\$19,272</b>	<b>\$19,272</b>
<b>FY 2025 Request</b>	-	-	-	<b>\$163,524</b>	<b>\$163,524</b>
<b>FY 2024 TO FY 2025 Change</b>	-	-	-	<b>\$24,341</b>	<b>\$24,341</b>

**Federal Assistance  
Justification of Pricing Changes**

*(Dollars in Thousands)*

	FY 2025 President's Budget				
	Positions	FTE	Pay Amount	Non-Pay Amount	Amount
<b>Pricing Change 1 - BioWatch Current Services Adjustment</b>	-	-	-	<b>\$4,660</b>	<b>\$4,660</b>
Biological Support	-	-	-	\$4,660	\$4,660
<b>Pricing Change 2 - Training and Exercises Current Services Adjustment</b>	-	-	-	<b>\$409</b>	<b>\$409</b>
Training, Exercises, and Readiness	-	-	-	\$409	\$409
<b>Total Pricing Changes</b>	-	-	-	<b>\$5,069</b>	<b>\$5,069</b>

**Pricing Change 1 – BioWatch Current Services Adjustment:**

Base Activity Funding: The \$4.7M pricing change impacts the Base non-pay cost drivers for the Biological Support PPA, which totals \$103.9M.

Pricing Change Explanation: This pricing change reflects BioWatch operating cost increase of \$4.7M, largely associated with daily field sample collection, laboratory staffing, purchases of critical reagents, and other supplies/consumables for field and lab operations, and the staffing associated with the quality assurance program and jurisdictional coordination. The growth was calculated based on changes in contract costs, consumables acquisition, and field collection costs. This adjustment represents a 2.75 percent year-over-year increase from the FY 2023 and FY 2024 current services cost.

**Pricing Change 2 – Training and Exercises Current Services Adjustment:**

Base Activity Funding: The \$0.4M pricing change impacts the Base non-pay cost drivers for Training and Exercises activities within the Training, Exercises, and Readiness PPA, which totals \$23.3M.

Pricing Change Explanation: This pricing change reflects an increase of 5.4 percent for Training, Exercises, and Readiness operating costs largely associated with spectral analysis software, staffing for training and threat materials management, and exercise implementation. The increase of \$0.4M was calculated by changes in contract costs and increases for deployment costs. Collectively, the changes represent a 5.4 percent increase.

**Federal Assistance  
Justification of Program Changes**  
*(Dollars in Thousands)*

	FY 2025 President's Budget				
	Positions	FTE	Pay Amount	Non-Pay Amount	Amount
<b>Program Change 1 - BioWatch Operations</b>	-	-	-	<b>\$14,241</b>	<b>\$14,241</b>
Biological Support	-	-	-	\$14,241	\$14,241
<b>Program Change 2 - Chemical Support</b>	-	-	-	<b>\$1,300</b>	<b>\$1,300</b>
Training, Exercises, and Readiness	-	-	-	\$1,300	\$1,300
<b>Program Change 3 - Securing the Cities (STC)</b>	-	-	-	<b>\$1,738</b>	<b>\$1,738</b>
Securing the Cities	-	-	-	\$1,738	\$1,738
<b>Program Change 4 - Training &amp; Exercises</b>	-	-	-	<b>\$1,993</b>	<b>\$1,993</b>
Training, Exercises, and Readiness	-	-	-	\$1,993	\$1,993
<b>Total Program Changes</b>	-	-	-	<b>\$19,272</b>	<b>\$19,272</b>

**Program Change 1 – BioWatch Operations**

<i>(\$ in thousands)</i>	Pos	FTE	Amount
Base: Current Services & Transfers	-	-	\$84,996
Program Change	-	-	\$14,241

**Description**

As part of CWMD’s adaptive approach to environmental biodetection to enhance capabilities and target areas of highest residual national security risk, the BioWatch program office is taking steps to better address the dynamic threat environment, shrink detection times, expand program coverage, and bolster operational stakeholder engagement. The FY 2025 Budget includes an increase of \$14.2M for risk-informed program enhancements to 1) introduce advanced testing techniques for emerging biothreats, 2) optimize laboratory workflows, 3) expand surge detection capacity for special events and non-BioWatch jurisdictions, and 4) provide State and local stakeholders with training and exercising of broadened biodefense capabilities.

**Justification**

Threats: Consistent with recent biological threat and risk assessments and strategic biodefense guidance, testing for additional threat agents is prudent. Expanded coverage of the biothreat spectrum requires additional advisory and assistance services (A&AS) and supplies/consumables for lab operations and quality assurance (QA). Polymerase chain reaction analysis that tests for both RNA and DNA genetic material requires new assays,

## Countering Weapons of Mass Destruction

Federal Assistance

reagents, and test plates, along with additional lab staff and test equipment. Additional reagents and A&AS labor are also needed for QA proficiency testing and audits of the additional threat agents to ensure continued accuracy and reliability of sample test results. An expanded sample set better covers the spectrum of potential aerosolized threats that could be weaponized (\$12.3M).

Timeliness: Technical studies & analysis to perform workflow testing and optimization are needed to reduce the time required to analyze air samples and increase testing throughput. End-user feedback and engagement in the optimization process is critical to ensure process improvements function as intended (\$0.7M).

Coverage: Deployment to cover special events in non-BioWatch jurisdictions requires significant planning, movement, positioning, and recovery of biodetection assets, Federal employees, and support staff. Because there is no infrastructure already in place, portable sample unit (PSU) arrays must be modeled and deployed according to site surveys/visits. Estimated costs, based largely on past event coverage, allow the program to cover one additional major (5-day) event and one additional minor (2-day) event per year (\$0.4M).

Engagement: Cooperative agreements with State and local jurisdictions will provide backfill and overtime funding for staff to develop and maintain robust response plans and participate in training and scaled exercises related to biodefense for improved operational proficiency (\$0.8M).

### Performance

An expanded sample set better covers the spectrum of potential aerosolized threats that could be weaponized. Workflow optimization shrinks overall detection timelines, thereby enabling more rapid incident response. Expanded coverage of high-visibility special events protects more people and enhances the agility and unpredictability of the program, thereby serving as a strategic deterrent to drive down national security risk. Increased State and local participation in biodefense exercises improves operational proficiency and response effectiveness to save lives and mitigate consequences.

### Program Change 2 – Chemical Support:

<i>(\$ in thousands)</i>	<b>Pos</b>	<b>FTE</b>	<b>Amount</b>
Base: Current Services & Transfers	-	-	\$5,080
Program Change	-	-	\$1,300

### Description

The FY 2025 Budget includes an increase of \$1.3M for Chemical Support to expand the implementation of the program's work with SLTT partners to assess and optimize jurisdictional capabilities through engagements and assessment methodologies to one additional jurisdiction for a total of three jurisdictions.

### Justification



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The engagements and assessment methodologies are building off the legacy Chemical Defense Demonstration Initiative to deliver a comprehensive methodology for all cities to evaluate local chemical threats and defensive capability gaps at the community level. Engaging with and assessing a single jurisdiction requires providing technical assistance to CWMD's SLTT partners. Technical Assistance for a single jurisdiction includes subject matter experts, training and engagement, administrative support, and travel. Technical Assistance is provided to a jurisdiction for a year at an average cost of \$1.3M.

### Performance

Expanded engagements and assessments to one additional jurisdiction each year will accelerate community preparedness across the Nation for chemical attacks. Timely identification and closure of local detection and response capability gaps will improve defensive postures in these jurisdictions to help save lives and mitigate damage.

### Program Change 3 – Securing the Cities (STC):

<i>(\$ in thousands)</i>	Pos	FTE	Amount
Base: Current Services & Transfers	-	-	\$34,628
Program Change	-	-	\$1,738

### Description

The FY 2025 Budget includes an increase of \$1.7M for recapitalization and sustainment of equipment and to expand regional capabilities.

### Justification

STC engages and supports State and Local (S&L) operators in the development, sustainment and expansion of radiological/nuclear (R/N) Detection capability in, around, and leading to High-Risk Urban Areas (HRUAs) across the Nation. This results in an extensive cadre of well trained and equipped personnel within the regions who have the capability to support R/N detection search/locate operations (i.e. increase probability of detection of threat material) and a rapid and seamless transition of operations to national-level assets if deemed necessary. Increasing R/N detection coverage across the Nation and ensuring the interoperability and coordination of Federal, State, and local assets reduces overall R/N risk to the Nation.

### Performance

This funding will recapitalize and sustain equipment, support proficiency training and exercises, and expand regional capabilities in STC jurisdictions.

### Program Change 4 – Training & Exercises:

<i>(\$ in thousands)</i>	Pos	FTE	Amount
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**Countering Weapons of Mass Destruction****Federal Assistance**

Base: Current Services & Transfers	-	-	\$7,613
Program Change	-	-	\$1,993

**Description**

The FY 2025 Budget includes an increase of \$2.0M to enable FSLTT operators to search, screen, and detect WMD threats in realistic operational training environments and exercises.

**Justification**

This program change will allow increased training and exercise support for the STC program. A robust training and exercise program is essential to preparing State and local jurisdictions and their responders to prevent/or respond to WMD threats and integrate with Federal and DHS component partners. Additionally, this provides a method for SLTT and Federal partners to assess, validate and enhance their capabilities; identifying best practices and shortcomings in resources, training and protocols.

**Performance**

Enhanced training and exercise support will ensure FSLTT partners are provided a consistent and measurable evaluation mechanism to sustain or improve performance.

**Federal Assistance  
Non Pay Budget Exhibits**

**Non Pay Summary**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
Training, Exercises, and Readiness	\$19,559	\$19,559	\$23,261	\$3,702
Securing the Cities	\$34,628	\$34,628	\$36,366	\$1,738
Biological Support	\$84,996	\$84,996	\$103,897	\$18,901
<b>Total</b>	<b>\$139,183</b>	<b>\$139,183</b>	<b>\$163,524</b>	<b>\$24,341</b>
Subtotal Discretionary - Appropriation	\$139,183	\$139,183	\$163,524	\$24,341

**Non Pay by Object Class**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
21.0 Travel and Transportation of Persons	\$618	\$618	\$1,913	\$1,295
23.3 Communications, Utilities, & Miscellaneous	\$7	\$7	\$4,246	\$4,239
25.1 Advisory & Assistance Services	\$45,456	\$45,456	\$64,517	\$19,061
25.2 Other Services from Non-Federal Sources	\$2,558	\$2,558	\$5,818	\$3,260
25.3 Other Purchases of goods and services	\$2,204	\$2,204	\$2,304	\$100
25.7 Operation & Maintenance of Equipment	\$3,973	\$3,973	\$11,086	\$7,113
26.0 Supplies & Materials	\$21,894	\$21,894	\$30,293	\$8,399
31.0 Equipment	\$17,066	\$17,066	\$391	(\$16,675)
41.0 Grants, Subsidies, and Contributions	\$45,407	\$45,407	\$42,956	(\$2,451)
<b>Total - Non Pay Budget Object Class</b>	<b>\$139,183</b>	<b>\$139,183</b>	<b>\$163,524</b>	<b>\$24,341</b>

*Training, Exercises, and Readiness – PPA***Budget Comparison and Adjustments****Comparison of Budget Authority and Request***(Dollars in Thousands)*

	FY 2023 Enacted			FY 2024 Annualized CR			FY 2025 President's Budget			FY 2024 to FY 2025 Total Changes		
	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount
Training, Exercises, and Readiness	-	-	\$19,559	-	-	\$19,559	-	-	\$23,261	-	-	\$3,702
<b>Total</b>	-	-	<b>\$19,559</b>	-	-	<b>\$19,559</b>	-	-	<b>\$23,261</b>	-	-	<b>\$3,702</b>
Subtotal Discretionary - Appropriation	-	-	\$19,559	-	-	\$19,559	-	-	\$23,261	-	-	\$3,702

**PPA Level I Description**

The Training, Exercises, and Readiness PPA prepares local jurisdictions and DHS Components to prevent, protect against, and respond to chemical, biological, radiological, and nuclear (CBRN) events in the homeland. This includes readiness programs and activities that provide mission-related training, exercises, technical assistance, subject matter expertise, and capability building for local jurisdictions and DHS Component personnel to support preparedness for CBRN events. The PPA consists of three separate programs: Training and Exercises, Chemical Support, and Mobile Detection Deployment Program (MDDP).

**Training and Exercises:** CWMD's Training and Exercises program provides the requisite knowledge, technical skills, and resources to Federal, State, and local law enforcement, public health, and first responder stakeholders to ensure communities are effective and proficient in preparing for, preventing, protecting against, and responding to CBRN threats to the homeland. Working with CWMD program offices like Chemical Support, BioWatch, STC, and MDDP, Training delivers in-person and virtual courses in detection, identification, and response to DHS operational Components including Customs and Border Protection (CBP), the Transportation Security Administration (TSA), and US Coast Guard (USCG) as well as local, and regional mission partners across the entire spectrum of CBRN threats. CWMD's Training and Exercise program provides technical assistance services to enable partners and stakeholders to assess capability-related training and skills in realistic threat environments, including using CBRN threat source material (e.g., special nuclear material) simulated adversaries and mock device training aids. Using the Homeland Security Exercise and Evaluation Program (HSEEP) methodology, Exercises works with partners to identify strengths and weaknesses in the overall effectiveness of plans, policies, procedures, and stakeholder knowledge to ensure operator proficiency, promote readiness, and evaluate program and operational efficacy across all levels. Additionally, the Readiness and Technical Assistance team works directly with SLTT and Federal partners to integrate their operations.

**Chemical Support:** Chemical Support facilitates collaboration and coordination with Homeland Security Enterprise (HSE) partners which enables them to prevent, protect against, and rapidly respond to chemical incidents. The program provides technical expertise on current, emerging, and

forecasted chemical risks (threats, vulnerabilities, consequences, and related health security matters) and advises Federal and SLTT stakeholders on policy, plans, and operational requirements for a robust chemical defense and security posture. The program works with SLTT jurisdictions through the CWMD ChemPREP technical assistance program to assess and optimize jurisdictional capabilities through engagements and assessment methodologies. CWMD delivers analytic decision support directly to local jurisdictions for defensive capability building and resourcing necessary to address identified shortfalls.

**Mobile Detection Deployment Program:** MDDP supplements CBRN detection and reporting capabilities for Federal and SLTT authorities. Using six pre-positioned Mobile Detection Deployment Units (MDDU) outfitted with an extensive suite of advanced CBRN detection equipment and communications, MDDP supports domestic law enforcement and first responder capabilities throughout the continental U.S. and its territories to detect chemical/biological agents and R/N material and devices (e.g., improvised nuclear device, radiological dispersal device, radiological exposure device). MDDU deploy to locations across the country to support a full range of mission postures, from steady-state operations to intelligence/incident-driven search operations.

## Training, Exercises, and Readiness – PPA Budget Authority and Obligations

*(Dollars in Thousands)*

	FY 2023	FY 2024	FY 2025
<b>Enacted/Request</b>	<b>\$19,559</b>	<b>\$19,559</b>	<b>\$23,261</b>
Carryover - Start of Year	\$4,762	\$4,579	-
Recoveries	\$1,045	-	-
Rescissions to Current Year/Budget Year	-	-	-
Net Sequestered Resources	-	-	-
Reprogramming/Transfers	-	-	-
Supplementals	-	-	-
<b>Total Budget Authority</b>	<b>\$25,366</b>	<b>\$24,138</b>	<b>\$23,261</b>
Collections - Reimbursable Resources	-	-	-
Collections - Other Sources	-	-	-
<b>Total Budget Resources</b>	<b>\$25,366</b>	<b>\$24,138</b>	<b>\$23,261</b>
Obligations (Actual/Estimates/Projections)	\$20,787	\$24,138	\$23,261
<b>Personnel: Positions and FTE</b>			
Enacted/Request Positions	-	-	-
Enacted/Request FTE	-	-	-
<b>Onboard and Actual FTE</b>			
Onboard (Actual/Estimates/Projections)	-	-	-
FTE (Actual/Estimates/Projections)	-	-	-

## Training, Exercises, and Readiness – PPA Summary of Budget Changes

*(Dollars in Thousands)*

	Positions	FTE	Pay Amount	Non-Pay Amount	Amount
<b>FY 2023 Enacted</b>	-	-	-	\$19,559	\$19,559
<b>FY 2024 Annualized CR</b>	-	-	-	\$19,559	\$19,559
<b>FY 2025 Base Budget</b>	-	-	-	\$19,559	\$19,559
<b>Total Technical Changes</b>	-	-	-	-	-
<b>Total Annualizations and Non-Recurs</b>	-	-	-	-	-
Training and Exercises Current Services Adjustment	-	-	-	\$409	\$409
<b>Total Pricing Changes</b>	-	-	-	\$409	\$409
<b>Total Adjustments-to-Base</b>	-	-	-	\$409	\$409
<b>FY 2025 Current Services</b>	-	-	-	\$19,968	\$19,968
<b>Total Transfers</b>	-	-	-	-	-
Chemical Support	-	-	-	\$1,300	\$1,300
Training & Exercises	-	-	-	\$1,993	\$1,993
<b>Total Program Changes</b>	-	-	-	\$3,293	\$3,293
<b>FY 2025 Request</b>	-	-	-	\$23,261	\$23,261
<b>FY 2024 TO FY 2025 Change</b>	-	-	-	\$3,702	\$3,702

**Training, Exercises, and Readiness – PPA  
Non Pay Budget Exhibits**

**Non Pay Summary**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
Training, Exercises, and Readiness	\$19,559	\$19,559	\$23,261	\$3,702
<b>Total</b>	<b>\$19,559</b>	<b>\$19,559</b>	<b>\$23,261</b>	<b>\$3,702</b>
Subtotal Discretionary - Appropriation	\$19,559	\$19,559	\$23,261	\$3,702

**Non Pay by Object Class**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
21.0 Travel and Transportation of Persons	\$265	\$265	\$493	\$228
23.3 Communications, Utilities, & Miscellaneous	-	-	\$29	\$29
25.1 Advisory & Assistance Services	\$14,327	\$14,327	\$13,661	(\$666)
25.2 Other Services from Non-Federal Sources	\$2,558	\$2,558	\$5,818	\$3,260
25.3 Other Purchases of goods and services	\$2,204	\$2,204	\$2,304	\$100
25.7 Operation & Maintenance of Equipment	\$205	\$205	\$865	\$660
31.0 Equipment	-	-	\$91	\$91
<b>Total - Non Pay Budget Object Class</b>	<b>\$19,559</b>	<b>\$19,559</b>	<b>\$23,261</b>	<b>\$3,702</b>



## Non Pay Cost Drivers

*(Dollars in Thousands)*

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget	FY 2024 to FY 2025 Total Changes
Training and Exercises	\$7,613	\$7,613	\$10,015	\$2,402
Mobile Detection Deployment Program	\$6,866	\$6,866	\$6,866	-
Chemical Support	\$5,080	\$5,080	\$6,380	\$1,300
<b>Total - Non-Pay Cost Drivers</b>	<b>\$19,559</b>	<b>\$19,559</b>	<b>\$23,261</b>	<b>\$3,702</b>

### Explanation of Non-Pay Cost Drivers

**Training and Exercises:** Cost drivers for the Training and Exercises program include technical assistance, advisory and assistance services, and Federal staff travel. Shared program costs include technical assistance for CBRN source material storage, transport, and handling and the development of training aids (e.g., mock devices) for realistic training and exercise environments; Federal staff travel is needed to provide oversight and participant/stakeholder coordination, as well as advisory and assistance services for program management support. In addition, Training provides technical assistance for course design, development, and administration through FEMA’s National Domestic Preparedness Consortium, U.S. Department of Energy National Laboratories, and contracted training providers. Exercise costs stem primarily from advisory and assistance services needed to plan, develop, execute, and report on the broad range of CBRN exercises (tabletop to full-scale) conducted across the country. The FY 2025 increase is a result of an increase to the number of training/exercises provided within the realistic operational threat environment and is described in Program Change #4.

**Mobile Detection Deployment Program:** MDDP cost drivers include storage, fuel, and maintenance of the distributed MDDU fleet; procurement, maintenance, calibration, and logistics hub of CBRN detection equipment for the program; and advisory and assistance services for just-in-time tailgate training, steady-state, enhanced steady-state, intelligence, and incident-driven search operations deployment support and program management. Interagency Agreements (IAA) with the USCG, TSA, and CBP for providing office space and storage of personnel, fleet vehicles, and CBRN detection equipment. IAA with CBP Laboratories and Scientific Services (LSS) provides in-field support for spectral analysis of all radiological alarms and Lawrence Livermore National Laboratory(LLNL) currently provides support for Special Nuclear Materials alerts/alarms. USCG IAA provides surge support to the program. Other IT-related costs include mobile devices and cellular service for deployed communications; cloud-based cognitive sensor network; and licensing of spectral analysis software for technical reach-back that is used by all FSLTT partners. This includes operating costs for a full time MDDP Technical Strike Team (TST) that manages, trains, and maintains a robust rapidly deployable secure comms and IT package. CBRN subject matter expertise, advisory, assistance services, and program management support will expand for each MDDU Region with all operational costs covered allowing pathway and critical infrastructure CBRN detection and monitoring beyond the 13 highest

risk urban areas as part of its enhancement strategy, the CWMD MDDP acquires and deploys advanced state-of-the-art CBRN detection technologies that strengthen partner agency threat detection and interdiction programs.

**Chemical Support:** Cost drivers include contract costs for advisory and assistance services for process and subject matter expertise analysis to support the program’s efforts to enhance chemical defense efforts of SLTT and Federal Partners, including Operationalizing Technical Information and Share Emerging Threat Info. Contract costs for ChemPREP are also included, which will provide technical assistance to SLTT public safety authorities to assess and optimize jurisdictional capabilities through engagements and assessment methodologies. Chemical Support also uses Interagency Agreements support development of National level guidance. To support all of these efforts with SLTT stakeholders, the cost drivers also include Federal personnel travel to SLTT locations to train and support capability building. The FY 2025 increase is a result of expanding the implementation of ChemPREP to one additional jurisdiction per year and is described in Program Change #2.

*Securing the Cities – PPA***Budget Comparison and Adjustments****Comparison of Budget Authority and Request***(Dollars in Thousands)*

	FY 2023 Enacted			FY 2024 Annualized CR			FY 2025 President's Budget			FY 2024 to FY 2025 Total Changes		
	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount
Securing the Cities	-	-	\$34,628	-	-	\$34,628	-	-	\$36,366	-	-	\$1,738
<b>Total</b>	-	-	<b>\$34,628</b>	-	-	<b>\$34,628</b>	-	-	<b>\$36,366</b>	-	-	<b>\$1,738</b>
Subtotal Discretionary - Appropriation	-	-	\$34,628	-	-	\$34,628	-	-	\$36,366	-	-	\$1,738

**PPA Level I Description**

**Securing The Cities:** Through the STC PPA, CWMD enhances the Nation’s ability to detect and prevent terrorist attacks and other high-consequence events utilizing nuclear or radiological materials that threaten high-risk urban areas. STC is a critical component of CWMD’s defense-in-depth strategy to maximize detection opportunities from the furthest distance practicable to the intended target area. STC provides funding, equipment, sustainment support, and training and exercise support through cooperative agreements to ensure that radiological detection is integrated into day-to-day operations. Using regional program offices, STC procures detection equipment, guides the development of contingency operations and standard operating procedures, and integrates STC partner programs into a national R/N detection architecture.

## Securing the Cities – PPA Budget Authority and Obligations

*(Dollars in Thousands)*

	FY 2023	FY 2024	FY 2025
<b>Enacted/Request</b>	<b>\$34,628</b>	<b>\$34,628</b>	<b>\$36,366</b>
Carryover - Start of Year	\$3,410	\$6,603	-
Recoveries	\$912	-	-
Rescissions to Current Year/Budget Year	-	-	-
Net Sequestered Resources	-	-	-
Reprogramming/Transfers	-	-	-
Supplementals	-	-	-
<b>Total Budget Authority</b>	<b>\$38,950</b>	<b>\$41,231</b>	<b>\$36,366</b>
Collections - Reimbursable Resources	-	-	-
Collections - Other Sources	-	-	-
<b>Total Budget Resources</b>	<b>\$38,950</b>	<b>\$41,231</b>	<b>\$36,366</b>
Obligations (Actual/Estimates/Projections)	\$32,347	\$41,231	\$36,366
<b>Personnel: Positions and FTE</b>			
Enacted/Request Positions	-	-	-
Enacted/Request FTE	-	-	-
<b>Onboard and Actual FTE</b>			
Onboard (Actual/Estimates/Projections)	-	-	-
FTE (Actual/Estimates/Projections)	-	-	-

## Securing the Cities – PPA Summary of Budget Changes

*(Dollars in Thousands)*

	Positions	FTE	Pay Amount	Non-Pay Amount	Amount
<b>FY 2023 Enacted</b>	-	-	-	\$34,628	\$34,628
<b>FY 2024 Annualized CR</b>	-	-	-	\$34,628	\$34,628
<b>FY 2025 Base Budget</b>	-	-	-	\$34,628	\$34,628
<b>Total Technical Changes</b>	-	-	-	-	-
<b>Total Annualizations and Non-Recurs</b>	-	-	-	-	-
<b>Total Pricing Changes</b>	-	-	-	-	-
<b>Total Adjustments-to-Base</b>	-	-	-	-	-
<b>FY 2025 Current Services</b>	-	-	-	\$34,628	\$34,628
<b>Total Transfers</b>	-	-	-	-	-
Securing the Cities (STC)	-	-	-	\$1,738	\$1,738
<b>Total Program Changes</b>	-	-	-	\$1,738	\$1,738
<b>FY 2025 Request</b>	-	-	-	\$36,366	\$36,366
<b>FY 2024 TO FY 2025 Change</b>	-	-	-	\$1,738	\$1,738

**Securing the Cities – PPA  
Non Pay Budget Exhibits**

**Non Pay Summary**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
Securing the Cities	\$34,628	\$34,628	\$36,366	\$1,738
<b>Total</b>	<b>\$34,628</b>	<b>\$34,628</b>	<b>\$36,366</b>	<b>\$1,738</b>
Subtotal Discretionary - Appropriation	\$34,628	\$34,628	\$36,366	\$1,738

**Non Pay by Object Class**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
21.0 Travel and Transportation of Persons	\$113	\$113	\$123	\$10
23.3 Communications, Utilities, & Miscellaneous	-	-	\$4,209	\$4,209
25.1 Advisory & Assistance Services	\$4,455	\$4,455	\$5,532	\$1,077
25.7 Operation & Maintenance of Equipment	-	-	\$6,061	\$6,061
31.0 Equipment	\$17,066	\$17,066	\$300	(\$16,766)
41.0 Grants, Subsidies, and Contributions	\$12,994	\$12,994	\$20,141	\$7,147
<b>Total - Non Pay Budget Object Class</b>	<b>\$34,628</b>	<b>\$34,628</b>	<b>\$36,366</b>	<b>\$1,738</b>

## Non Pay Cost Drivers

*(Dollars in Thousands)*

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget	FY 2024 to FY 2025 Total Changes
Equipment	\$17,241	\$17,241	\$22,461	\$5,220
Regional Program Management	\$7,008	\$7,008	\$4,939	(\$2,069)
Backfill and Overtime	\$4,732	\$4,732	\$4,780	\$48
Other Costs	\$5,647	\$5,647	\$4,186	(\$1,461)
<b>Total - Non-Pay Cost Drivers</b>	<b>\$34,628</b>	<b>\$34,628</b>	<b>\$36,366</b>	<b>\$1,738</b>

### Explanation of Non-Pay Cost Drivers

**Equipment:** The Equipment Cost Driver supports new R/N equipment procurement, IT equipment procurement/wireless networks (IT equipment and networks in support of R/N equipment), and operations and maintenance of all fielded assets. STC continues to develop and implement an Integrated Logistics Support capability to provide long-term logistics support to regional partners. The increase is associated with the Securing the Cities Program Change #3 and also reflects the movement of wireless services for equipment communication to this cost driver from “Other Costs.”

**Regional Program Management:** Includes costs for local program management of 13 regional offices such as: administrative management, governance structure, and salaries for the program manager and staff at each region. The decrease is associated with the maturation of program management in the newer STC cites as the start-up costs decrease.

**Backfill and Overtime:** Includes funding for initial training of non-Federal personnel in new STC regions as well as initial and refresher training for regional partners in sustainment to maintain capability. This level of funding supports the continuation of training in all 13 STC regions and varies slightly year to year based on planned activities in each STC region.

**Other Costs:** Includes costs to develop and administer the STC program at the National level. Also includes a Global Information Infrastructure providing a common operating picture to Federal, State, and local agencies for STC regions, and travel costs for in-field support by the National program team. The reduction reflects the movement of wireless support to equipment to the Equipment cost driver in FY 2025.

*Biological Support – PPA***Budget Comparison and Adjustments****Comparison of Budget Authority and Request***(Dollars in Thousands)*

	FY 2023 Enacted			FY 2024 Annualized CR			FY 2025 President's Budget			FY 2024 to FY 2025 Total Changes		
	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount
Biological Support	-	-	\$84,996	-	-	\$84,996	-	-	\$103,897	-	-	\$18,901
<b>Total</b>	-	-	<b>\$84,996</b>	-	-	<b>\$84,996</b>	-	-	<b>\$103,897</b>	-	-	<b>\$18,901</b>
Subtotal Discretionary - Appropriation	-	-	\$84,996	-	-	\$84,996	-	-	\$103,897	-	-	\$18,901

**PPA Level I Description**

**Biological Support:** The Biological Support PPA encompasses CWMD efforts to detect and safeguard against biological threats to the Homeland. Biological support is routinely delivered through BioWatch steady-state and special event detection operations across the country. As the Nation's primary biodetection capability, BioWatch provides early warning of bioterrorism and helps local communities prepare to respond. The combination of detection, rapid notification, preparedness, and planning helps FSLTT decision-makers take steps to save lives and mitigate consequences.

While centrally managed by the CWMD Office, the program is locally operated through cooperative agreements by a network of field staff, scientists, laboratory technicians, emergency managers, and public health officials. In each of the 30+ BioWatch jurisdictions, collectors draw air through filters to capture particles, and field technicians transport those filters to labs, where scientists process and analyze the samples for evidence of biological threat agents.

In the event a potential threat is identified, the BioWatch program office within CWMD alerts FSLTT subject matter experts and decision-makers using a robust notification system and facilitates a national coordination call to confirm the threat. By establishing a pre-coordinated local stakeholder community in each jurisdiction and by training and exercising proper stakeholder response actions to realistic threat scenarios and biological simulants, the BioWatch program office ensures local jurisdictions are prepared to take prompt response actions that minimize casualties and protect the public.

Spanning the entire local collection and testing cycle is a rigorous quality assurance program that ensures the overall reliability and accuracy of sample results for the BioWatch program. This allows decision-makers to respond with confidence in the event of a positive test result. The program office also provides significant logistics support to local field and laboratory operations for the continuous operation and maintenance of portable sampling units and the replenishment of supplies and consumables like air filters and laboratory reagents.



As part of CWMD's adaptive approach to environmental biodetection to enhance capabilities and target areas of highest residual national security risk, the BioWatch program office is taking steps to better address the dynamic threat environment, reduce detection times, expand program coverage, and bolster operational stakeholder engagement. This includes the introduction of advanced testing techniques for emerging biotreats, optimization of field operations and laboratory workflows, consideration of novel screening technologies, expansion of surge detection capacity for special events and non-BioWatch jurisdictions, and training/exercising of expanded State and local biodefense capabilities.

## Biological Support – PPA Budget Authority and Obligations

*(Dollars in Thousands)*

	FY 2023	FY 2024	FY 2025
<b>Enacted/Request</b>	<b>\$84,996</b>	<b>\$84,996</b>	<b>\$103,897</b>
Carryover - Start of Year	\$65	\$17,434	-
Recoveries	\$63	-	-
Rescissions to Current Year/Budget Year	-	-	-
Net Sequestered Resources	-	-	-
Reprogramming/Transfers	-	-	-
Supplementals	-	-	-
<b>Total Budget Authority</b>	<b>\$85,124</b>	<b>\$102,430</b>	<b>\$103,897</b>
Collections - Reimbursable Resources	\$221	\$225	\$228
Collections - Other Sources	-	-	-
<b>Total Budget Resources</b>	<b>\$85,345</b>	<b>\$102,655</b>	<b>\$104,125</b>
Obligations (Actual/Estimates/Projections)	\$67,911	\$102,655	\$104,125
<b>Personnel: Positions and FTE</b>			
Enacted/Request Positions	-	-	-
Enacted/Request FTE	-	-	-
<b>Onboard and Actual FTE</b>			
Onboard (Actual/Estimates/Projections)	-	-	-
FTE (Actual/Estimates/Projections)	-	-	-

**Biological Support – PPA  
Collections – Reimbursable Resources**  
*(Dollars in Thousands)*

	FY 2023 Enacted			FY 2024 Annualized CR			FY 2025 President's Budget		
	Pos.	FTE	Amount	Pos.	FTE	Amount	Pos.	FTE	Amount
Department of Homeland Security - Management Directorate	-	-	\$221	-	-	\$225	-	-	\$228
<b>Total Collections</b>	-	-	\$221	-	-	\$225	-	-	\$228

## Biological Support – PPA Summary of Budget Changes

*(Dollars in Thousands)*

	Positions	FTE	Pay Amount	Non-Pay Amount	Amount
<b>FY 2023 Enacted</b>	-	-	-	<b>\$84,996</b>	<b>\$84,996</b>
<b>FY 2024 Annualized CR</b>	-	-	-	<b>\$84,996</b>	<b>\$84,996</b>
<b>FY 2025 Base Budget</b>	-	-	-	<b>\$84,996</b>	<b>\$84,996</b>
<b>Total Technical Changes</b>	-	-	-	-	-
<b>Total Annualizations and Non-Recurs</b>	-	-	-	-	-
BioWatch Current Services Adjustment	-	-	-	\$4,660	\$4,660
<b>Total Pricing Changes</b>	-	-	-	<b>\$4,660</b>	<b>\$4,660</b>
<b>Total Adjustments-to-Base</b>	-	-	-	<b>\$4,660</b>	<b>\$4,660</b>
<b>FY 2025 Current Services</b>	-	-	-	<b>\$89,656</b>	<b>\$89,656</b>
<b>Total Transfers</b>	-	-	-	-	-
BioWatch Operations	-	-	-	\$14,241	\$14,241
<b>Total Program Changes</b>	-	-	-	<b>\$14,241</b>	<b>\$14,241</b>
<b>FY 2025 Request</b>	-	-	-	<b>\$103,897</b>	<b>\$103,897</b>
<b>FY 2024 TO FY 2025 Change</b>	-	-	-	<b>\$18,901</b>	<b>\$18,901</b>

**Biological Support – PPA  
Non Pay Budget Exhibits**

**Non Pay Summary**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
Biological Support	\$84,996	\$84,996	\$103,897	\$18,901
<b>Total</b>	<b>\$84,996</b>	<b>\$84,996</b>	<b>\$103,897</b>	<b>\$18,901</b>
Subtotal Discretionary - Appropriation	\$84,996	\$84,996	\$103,897	\$18,901

**Non Pay by Object Class**  
*(Dollars in Thousands)*

	<b>FY 2023 Enacted</b>	<b>FY 2024 Annualized CR</b>	<b>FY 2025 President's Budget</b>	<b>FY 2024 to FY 2025 Change</b>
21.0 Travel and Transportation of Persons	\$240	\$240	\$1,297	\$1,057
23.3 Communications, Utilities, & Miscellaneous	\$7	\$7	\$8	\$1
25.1 Advisory & Assistance Services	\$26,674	\$26,674	\$45,324	\$18,650
25.7 Operation & Maintenance of Equipment	\$3,768	\$3,768	\$4,160	\$392
26.0 Supplies & Materials	\$21,894	\$21,894	\$30,293	\$8,399
41.0 Grants, Subsidies, and Contributions	\$32,413	\$32,413	\$22,815	(\$9,598)
<b>Total - Non Pay Budget Object Class</b>	<b>\$84,996</b>	<b>\$84,996</b>	<b>\$103,897</b>	<b>\$18,901</b>

## Non Pay Cost Drivers

*(Dollars in Thousands)*

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget	FY 2024 to FY 2025 Total Changes
Logistics Supplies and Consumables	\$22,968	\$22,968	\$29,803	\$6,835
Field Collection	\$32,522	\$32,522	\$25,900	(\$6,622)
Laboratory Staffing and Waste Management	\$16,137	\$16,137	\$23,328	\$7,191
Operational Enhancements - Threat Agent	-	-	\$13,822	\$13,822
Quality Assurance and Program Management	\$10,446	\$10,446	\$8,889	(\$1,557)
Other Costs	\$2,923	\$2,923	\$2,155	(\$768)
<b>Total - Non-Pay Cost Drivers</b>	<b>\$84,996</b>	<b>\$84,996</b>	<b>\$103,897</b>	<b>\$18,901</b>

### Explanation of Non-Pay Cost Drivers

**Logistic Supplies and Consumables:** BioWatch provides local field operations with a supply of air filters and collector spare parts. This cost driver also provides jurisdiction laboratories and the rapidly deployable lab with sample testing supplies, critical reagents, and other consumables. The change from FY2024 annualized CR to FY2025 request reflects two years of inflation as well as an increase in quantity of supplies due to the additional deployments of the mobile lab and surge efforts.

**Field Collection:** BioWatch uses cooperative agreements with State and local jurisdictions to operate and maintain biodetection capabilities, including personnel for the collection and delivery of detection unit samples to laboratories, maintenance of the detection equipment, and coverage of additional resources as needed for special events in existing jurisdictions. BioWatch also conducts operational evaluations and models indoor and outdoor collector arrays to optimize field collection in each jurisdiction and special event venue. The change reflects an adjustment resulting from reconciliation of actual expenditures versus estimated need.

**Laboratory Staffing and Waste Management:** BioWatch funds laboratory staff and biological waste disposal needed to process, test, report on, and dispose of over 250,000 air samples per year. The change reflects two years of increase for current services (inflation) as well as increase in demand for specialized lab staff capable of processing the BioWatch samples in a post-COVID laboratory industry.

**Operational Enhancements(Threat Agent, Time-to-Detect, Expanded Coverage, Preparedness):** Enhancements to operations include the introduction of advanced testing techniques for emerging biothreats, optimization of field operations and laboratory workflows, consideration of

novel screening technologies, expansion of surge detection capacity for special events and non-BioWatch jurisdictions, and training/exercising of expanded State and local biodefense capabilities. This cost driver is added in FY 2025 for accuracy and clarity.

**Quality Assurance and Program Management:** Quality Assurance provides proficiency testing and audits of State and local field and lab operators to ensure the overall reliability and accuracy of sample test results. The advisory and assistance services provided by the Program Office help coordinate State and local authorities within and across jurisdictions. These services enable the integration and exercising of field collection, laboratory analysis, supply chain logistics, and incident response. The Program Office also administers the BioWatch program. The change reflects an adjustment for additional quality assurance work being accomplished as part of the Operational Enhancement effort.

**Other Costs:** Other program costs include information technology (e.g., communications portal, air sample tracking tool, laboratory information management system), network collector array upgrades, and Federal travel for special event coverage and program performance monitoring in local jurisdictions. The change reflects the completion of the Smart PSU prototyping efforts scheduled to end in FY2024.