

**UNCLASSIFIED**

**Exhibit R-2, RDT&E Budget Item Justification:** PB 2024 Defense Advanced Research Projects Agency **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 2: Applied Research</i>	<b>R-1 Program Element (Number/Name)</b> PE 0602383E / <i>BIOLOGICAL WARFARE DEFENSE</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	28.073	23.059	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
BW-01: <i>BIOLOGICAL WARFARE DEFENSE</i>	-	28.073	23.059	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-

**A. Mission Description and Budget Item Justification**

The Biological Warfare Defense project is budgeted in the Applied Research budget activity because its focus is on the underlying technologies associated with the detection, prevention, treatment and remediation of biological, chemical, and radionuclide threats.

Efforts to counter existing and emerging biological, chemical and radiological threats include countermeasures to stop the pathophysiologic processes that occur as a consequence of an attack, collection of environmental trace constituents to support chemical mapping, tactical and strategic biological, chemical, and radiological sensors, and integrated defense systems.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	31.421	23.059	10.536	-	10.536
Current President's Budget	28.073	23.059	0.000	-	0.000
Total Adjustments	-3.348	0.000	-10.536	-	-10.536
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	-2.527	0.000			
• SBIR/STTR Transfer	-0.821	0.000			
• TotalOtherAdjustments	-	-	-10.536	-	-10.536

**Change Summary Explanation**

FY 2022: Decrease reflects SBIR/STTR transfer and reprogrammings.

FY 2023: N/A

FY 2024: Decrease reflects completion of the Defense Against Mass Terror Threats program in FY 2023.

<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Title:</b> Defense Against Mass Terror Threats	28.073	23.059	-

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<p><b>Description:</b> The objective of the Defense Against Mass Terror Threats program is to identify and develop technologies that have the potential to significantly improve the United States' ability to reduce the risk of mass casualties in the wake of a Weapons of Mass Terror (WMT) attack. Challenges in reducing U.S. vulnerability to these attacks include developing new sensors and systems that afford early warning and opportunities to interdict these threats before they can be employed in urban areas and other population centers. A major goal of this program is to develop new sensors and sensing networks that can economically and reliably provide these wide-area monitoring capabilities for WMT threat signatures.</p> <p><b>FY 2023 Plans:</b></p> <ul style="list-style-type: none"> <li>- Complete spiral development of chemical and biological sensors validated in independent government testing.</li> <li>- Conclude utility assessment of worn physiological sensors using developments associated with infectious disease detection and reporting, coupled with integrated algorithms.</li> <li>- Finalize suite of augmented, commercial-off-the-shelf chemical and biological sensors that will compose a system including fully scaled, integrated sensors and operationalized algorithms.</li> <li>- Complete spiral development of a network backbone and operating system supporting sensor, contextual and transactional data ingestion with a focus operating within stakeholder system environments.</li> <li>- Mature end-to-end beta build of the network, including data model, pipeline, and analytics engine capable of ingestion and automated analytics of heterogeneous sensor data, with contextual and law enforcement transactional data focusing on incorporating law enforcement feedback.</li> <li>- Present system concept of operations to local municipality and Federal Government partners to outline how developed capabilities can support relevant interdiction and response operations.</li> <li>- Demonstrate system in large-scale field trials (&gt;10 square kilometers) with objective metrics or better.</li> </ul> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> The FY2024 decrease reflects program completion.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	28.073	23.059	-

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**E. Acquisition Strategy**

N/A