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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army **Date:** April 2022

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0604713A / Combat Feeding, Clothing, and Equipment
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	2.734	1.658	1.566	-	1.566	2.270	1.652	1.653	1.669	0.000	13.202
548: Mil Subsistence Sys	-	2.734	1.658	1.566	-	1.566	2.270	1.652	1.653	1.669	0.000	13.202

A. Mission Description and Budget Item Justification

Projects under this Program Element support the development, demonstration and Non-Developmental Item (NDI) Commercial Off The Shelf (COTS) evaluation of combat feeding equipment to enhance soldier efficiency, improve soldier survivability, and reduce food service logistics requirements for all four services. These Projects support multi-fuel, rapidly deployable field food service equipment initiatives. Efforts also support the Engineering and Manufacturing Development (EMD) phase of programs to improve equipment, enhance safety in food service, and decrease fuel and water requirements. The Projects develop critical enablers that support the Joint Future Capabilities and Joint Expeditionary mindset, by maintaining readiness through integrating new equipment, enhancing the field soldier's well-being, and providing soldiers usable equipment. The Projects also reduce sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands on lift, the combat zone footprint, and costs for logistical support.

This PE/Project supports Field Feeding programs for all the services.

B. Program Change Summary (\$ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	2.734	1.658	0.000	-	0.000
Current President's Budget	2.734	1.658	1.566	-	1.566
Total Adjustments	0.000	0.000	1.566	-	1.566
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	1.566	-	1.566

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	Project (Number/Name) 548 / <i>Mil Subsistence Sys</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
548: <i>Mil Subsistence Sys</i>	-	2.734	1.658	1.566	-	1.566	2.270	1.652	1.653	1.669	0.000	13.202
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project enables system development and demonstration of Joint Service combat rations and field feeding equipment/systems designed to improve warfighter performance and reduce the logistics burden of subsistence support. Efforts funded in this Project support all four Services, the Special Operations Command, and the Defense Logistics Agency (DLA). The Army serves as the Executive Agent for this Department of Defense (DoD) program, with oversight and coordination provided by the DoD Combat Feeding Research and Engineering Board (CFREB) as required by DoD Directive (DoDD) 3235.02E. Centralized execution of the DoD Combat Feeding Research and Engineering Program (CFREP) with Joint Service review and approval eliminates unnecessary duplication of efforts across the Services and maximizes use of common materiel solutions.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2021	FY 2022	FY 2023
Title: Joint Service Combat Ration System Development	1.687	0.884	1.285
<p>Description: This effort integrates and demonstrates mature Joint Service combat ration systems that enable warfighter maneuver, readiness and effectiveness during highly mobile, dispersed operations. Prototypes are transitioned from APE 0603747A Project 610 to develop individual and group combat rations with improved capabilities including improved warfighter physical and cognitive performance through optimized nutrition and reduced logistics burden through weight and cube reduction. This effort completes operational test and evaluation (OT&E) to confirm system level performance, and develops ration specifications for transition to Defense Logistics Agency - Troop Support (DLA - Troop Support) for procurement.</p> <p>FY 2022 Plans: For existing ration platforms (Meal, Ready-to-Eat; First Strike Ration; Meal, Cold Weather, Modular Operational Ration Enhancement; Unitized Group Rations - A/M/H&S), will continue to integrate prototype components/technologies into menu systems and ration assembly processes to improve quality, optimize nutritional content, decrease weight/cube/cost and/or improve modularity and field utility; will continue to conduct OT&E on ration systems to validate system level performance; will present recommendations to the Joint Services for Milestone C approval; will finalize procurement documents and initiate transition to DLA-Troop Support; will obtain US Army, Surgeon General approval of revised menus; will execute production testing with industry to ensure consistent ration quality, validate documents, and resolve vendor/supplier technical production issues; and conduct confirmatory sensory, chemical, physical and shelf life testing.</p> <p>FY 2023 Plans: For existing ration platforms (Meal, Ready-to-Eat; Close Combat Assault Ration; Unitized Group Rations - A/M/H&S), will integrate prototype components/technologies into menu systems and ration assembly processes to improve quality, optimize</p>			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
<p>nutritional content, decrease weight/cube/cost and/or improve modularity and field utility; will continue to conduct OT&E on ration systems to validate system level performance; will present recommendations to the Joint Services for Milestone C approval; will finalize procurement documents and initiate transition to DLA-Troop Support; will obtain US Army, Surgeon General approval of revised menus; will execute production testing with industry to ensure consistent ration quality, validate documents, and resolve vendor/supplier technical production issues; and conduct confirmatory sensory, chemical, physical and shelf life testing. For developmental EGR, will present to the JSORF for Milestone C approval and develop Technical Data Packages (TDP?s) for procurement documents. Will conduct OT&E of through the mask feeding system to enable safe feeding capabilities in hazardous environments</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Increase in funding supports changes in OT&E for Joint Services Expeditionary Group Ration.</p>				
<p>Title: Joint Service Field Feeding Systems Development</p> <p>Description: This effort integrates and demonstrates field feeding equipment systems in support of the Navy (USN), Air Force (USAF), and Marine Corps (USMC) that reduce the logistics burden, improve efficiency, and decrease operation and support costs as directed by the DoD CFREB and Joint Service partners. Validated systems, specifications, and technical data packages are transitioned to the appropriate Service partner for procurement and fielding. Service partners include Product Manager Combat Support Equipment (PdM-CSE), Naval Sea Systems Command (NAVSEA), Naval Supply Systems Command (NAVSUP), Navy Expeditionary Combat Command (NECC) and USAF Basic Expeditionary Airfield Resources (BEAR) Program Office.</p> <p>FY 2022 Plans: Will complete OT&E of Inflatable Refrigerated Space (IRefS); will complete OT&E of expeditionary equipment with embedded sense and respond technology to track reliability, maintenance, and current health of equipment assets; will develop reports, Engineering Change Proposals (ECPs) and logistical data to reduce overall fuel and water consumption in support of the USMC; and will transition validated prototype equipment and technical data to USN, USMC and USAF.</p> <p>FY 2023 Plans: Will conduct OT&E the Expeditionary Field Feeding Equipment System to reduce logistics requirements for squad feeding; and will transition validated prototype equipment and technical data to USMC.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Decrease in funding supports completion of OT&E for Inflatable Refrigerated Space and expeditionary equipment with embedded sense and respond technology.</p>		1.047	0.714	0.281
<p>Title: FY22 SBIR/STTR Transfer</p>		-	0.060	-

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2021	FY 2022	FY 2023
Description: Funding transferred in accordance with Title 15 USC ?638			
FY 2022 Plans: Funding transferred in accordance with Title 15 USC ?638			
FY 2022 to FY 2023 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC ?638			
Accomplishments/Planned Programs Subtotals	2.734	1.658	1.566

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u> <u>Base</u>	<u>FY 2023</u> <u>OCO</u>	<u>FY 2023</u> <u>Total</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 610: <i>Food Adv Development</i>	3.028	2.897	4.060	-	4.060	3.625	4.237	4.239	4.280	0.000	26.366

Remarks

D. Acquisition Strategy

Complete Engineering and Manufacturing Development (EMD) and Demonstration of food items and equipment for transition into competitive procurement contract.
Complete advanced research efforts to support Engineering Change Proposals for previously developed equipment.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army												Date: April 2022			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)					Project (Number/Name)						
2040 / 5				PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>					548 / <i>Mil Subsistence Sys</i>						
Management Services (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Combat Feeding Program Management	C/FP	CCDC Soldier Center : Natick, MA	3.863	0.601	Oct 2020	0.388	Oct 2021	0.363	Oct 2022	-		0.363	Continuing	Continuing	Continuing
FY 2018 NDAA SEC 825 MDAP Cost Overrun	TBD	N/A : N/A	0.002	-		-		-		-		-	0.000	0.002	-
FY2022 SBIR/STTR Transfer	TBD	Various : Various	-	-		0.060	Mar 2022	-		-		-	0.000	0.060	-
Subtotal			3.865	0.601		0.448		0.363		-		0.363	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Joint Service Rations and Combat Feeding Equipment	Various	Various : Various	6.831	0.240	Oct 2020	0.163	Oct 2021	0.154	Oct 2022	-		0.154	Continuing	Continuing	Continuing
Subtotal			6.831	0.240		0.163		0.154		-		0.154	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Joint Service Rations and Combat Feeding Equipment	Allot	CCDC Soldier Center : Natick, MA	2.081	1.893	Oct 2020	1.047	Oct 2021	1.049	Oct 2022	-		1.049	Continuing	Continuing	Continuing
Subtotal			2.081	1.893		1.047		1.049		-		1.049	Continuing	Continuing	N/A
Project Cost Totals			12.777	2.734		1.658		1.566		-		1.566	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army		Date: April 2022
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Event Name	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Conduct operational testing of combat ration systems	[Blue bar]																											
Conduct OT&E of Close Combat Assault Ration (CCAR)	[Blue bar]																											
Obtain Joint Service and Army Surgeon General approval of first generation	[Blue bar]																											
Develop CCAR Technical Data Package and contract for Low Rate Initial Pr	[Blue bar]																											
Develop and transition CCAR documents to DLA-TS for procurement	[Blue bar]																											
Conduct OT&E of Expeditionary Group Ration (EGR)	[Blue bar]																											
Develop and transition EGR documents to DLA-TS for procurement	[Blue bar]																											
Obtain Joint Service and Army Surgeon General approval of EGR	[Blue bar]																											
Conduct OT&E of through the mask feeding system	[Blue bar]																											
Develop and transition individual and group ration documents a	[Blue bar]																											
Obtain Joint Service and Army Surgeon General approval of MCRE Performance Pack	[Blue bar]																											
Conduct OT&E of Energy Conversation technologies for BEAR kitchens to USAF	[Blue bar]																											
Conduct OT&E & transition labor & energy saving galley/sculler	[Blue bar]																											

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Event Name	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Conduct OT&E of expeditionary kitchen systems for shore-based Navy units																												
Conduct OT&E of Improved Tray Ration Heater and transition to																												
Obtain Aerial Delivery Certification of Inflatable Refrigerated Sp																												
Conduct OT&E of IRefS and transition to Services																												
Conduct OT&E of EFK upgrades and transition to USMC																												
Conduct OT&E of intuitive kitchen and galley equipment; transiti																												
Conduct OT&E of EFFES at the squad/platoon level																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Army **Date:** April 2022

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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Conduct operational testing of combat ration systems	1	2018	4	2026
Conduct OT&E of Close Combat Assault Ration (CCAR)	1	2020	4	2022
Obtain Joint Service and Army Surgeon General approval of first generation CCAR	3	2021	2	2022
Develop CCAR Technical Data Package and contract for Low Rate Initial Production	3	2021	1	2022
Develop and transition CCAR documents to DLA-TS for procurement	1	2022	2	2022
Conduct OT&E of Expeditionary Group Ration (EGR)	1	2023	4	2023
Develop and transition EGR documents to DLA-TS for procurement	2	2023	4	2024
Obtain Joint Service and Army Surgeon General approval of EGR	2	2024	3	2024
Conduct OT&E of through the mask feeding system	1	2023	4	2025
Develop and transition individual and group ration documents annually to DLA-TS	1	2018	4	2027
Obtain Joint Service and Army Surgeon General approval of MORE Performance Pack	2	2022	3	2022
Conduct OT&E of Energy Conversation technologies for BEAR kitchens to USAF	1	2025	4	2025
Conduct OT&E and transition Mobile Feeding Galley to USN	1	2020	3	2020
Conduct OT&E & transition labor & energy saving galley/scullery upgrades to USN	1	2020	4	2021
Conduct OT&E of expeditionary kitchen systems for shore-based Navy units	1	2022	4	2022
Conduct OT&E of Improved Tray Ration Heater and transition to USMC	1	2020	4	2021
Obtain Aerial Delivery Certification of Inflatable Refrigerated Space (IRefS)	1	2020	4	2021
Conduct OT&E of IRefS and transition to Services	1	2021	4	2022
Conduct OT&E of EFK upgrades and transition to USMC	1	2024	4	2025
Conduct OT&E of intuitive kitchen and galley equipment; transition to Services	1	2021	4	2022
Conduct OT&E of EFFES at the squad/platoon level	1	2022	4	2024