Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Office of the Secretary Of Defense	Date: May 2021
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603716D8Z / *Strategic Environmental Research and Development Program (SERDP)*

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	493.827	69.914	85.429	51.863	-	51.863	-	-	-	-	-	-
470: *Strategic Environmental Research and Development Program (SERDP)*	493.827	69.914	85.429	51.863	-	51.863	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

SERDP`s mission is to improve DoD mission readiness and environmental performance by providing new scientific knowledge and developing cost-effective technologies. SERDP does this by addressing high-priority DoD environmental technology requirements such as addressing per- and polyfluoroalkyl substance (PFAS) contamination, developing fluorine-free fire suppression formulations, and improving corrosion resistance for weapons systems and platforms. Technologies developed by SERDP enhance military operations, improve military systems' effectiveness, enhance military training/readiness, sustain DoD ‘straining and test ranges and installation infrastructure, and help ensure the safety and welfare of military personnel and their dependents. The keys to growing list of SERDP technological successes are the ability to respond aggressively and proactively to priority defense environmental needs; the pursuit of world-class technical excellence; and an emphasis on continuous technology transfer.

B. Program Change Summary ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	66.157	53.862	49.080	-	49.080
Current President's Budget	69.914	85.429	51.863	-	51.863
Total Adjustments	3.757	31.567	2.783	-	2.783
• Congressional General Reductions	-	-0.033			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	31.600			
• Congressional Directed Transfers	-	-			
• Reprogrammings	3.757	-			
• SBIR/STTR Transfer	-	-			
• Climate Adaptation Enhancements	-	-	2.783	-	2.783

Change Summary Explanation

Realigned funds to meet National Defense Strategy priorities. Increase in FY 2022 for climate adaptation enhancements.

The Congressional add in FY 2021 are for PFAS remediation and disposal technology, AFFF replacement, disposal, and cleanup technology, PFAS innovation award fund, and PFAS/PFOA response.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Office of the Secretary Of Defense			Date: May 2021
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603716D8Z / *Strategic Environmental Research and Development Program (SERDP)*	Project (Number/Name) 470 / *Strategic Environmental Research and Development Program (SERDP)*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
470: *Strategic Environmental Research and Development Program (SERDP)*	493.827	69.914	85.429	51.863	-	51.863	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

SERDP`s mission is to improve DoD mission readiness and environmental performance by providing new scientific knowledge and developing cost-effective technologies. SERDP does this by addressing high-priority DoD environmental technology requirements such as addressing per- and polyfluoroalkyl substance (PFAS) contamination, developing fluorine-free fire suppression formulations, and improving corrosion resistance for weapons systems and platforms. Technologies developed by SERDP enhance military operations, improve military systems' effectiveness, enhance military training/readiness, sustain DoD ‘straining and test ranges and installation infrastructure, and help ensure the safety and welfare of military personnel and their dependents. The keys to growing list of SERDP technological successes are the ability to respond aggressively and proactively to priority defense environmental needs; the pursuit of world-class technical excellence; and an emphasis on continuous technology transfer.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Title: Environmental Restoration (ER)	22.242	38.968	13.595
Description: Investments in Environmental Restoration (ER) reduces DoD’s environmental cleanup liability ($33B) by developing technologies for the cost-effective detection, characterization, containment, and remediation of contamination in soil, sediments, and water.			
FY 2021 Plans: Continue research on developing improved methodologies and technologies for managing PFAS contamination at DoD sites and investigation of forensic methods to ascertain origins of PFAS contamination, further develop technologies to improve sustainability of munitions constituent use on testing and training ranges, and improve methodologies for managing contaminated groundwater.			
FY 2022 Plans: Emphasis in this Program Area will continue to be heavily focused on PFAS contamination. Efforts addressing potential remediation technologies will continue as projects devoted to understanding destruction technologies, both thermal and non-thermal, will increase.			
FY 2021 to FY 2022 Increase/Decrease Statement:			

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Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603716D8Z / *Strategic Environmental Research and Development Program (SERDP)*	**Project (Number/Name)** 470 / *Strategic Environmental Research and Development Program (SERDP)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Continue emphasis on issues related to PFAS contamination at DoD installations. The decrease is the result of planned program changes in OUSD (A&S), and the one-time Congressional increase in FY 2021.			
Title: Munitions Response (MR) ***Description:*** Munitions Response (MR) develops detection, classification, and remediation technologies for Unexploded Ordnance (UXO) to address the significant DoD liability in the Military Munitions Response Program. Investments are also made to improve active range clearance and to reduce generation of UXO during live fire testing and training operations. ***FY 2021 Plans:*** Completion of engineering-level model of UXO burial, mobility, and re-exposure. Continued development of analysis algorithms for the detection and identification of unexploded ordnance at underwater ranges. ***FY 2022 Plans:*** Efforts in FY 2022 will begin to focus on multi-sensor platforms for underwater UXO detection and identification as well as algorithms to fuze multiple data sets collected from different platforms. ***FY 2021 to FY 2022 Increase/Decrease Statement:*** The decrease is the result of planned program changes in OUSD (A&S). Reprioritization of funding to PFAS remediation (ER) and alternative formulations for AFFF (WP).	9.729	5.348	5.035
Title: Resource Conservation and Resiliency (RC) ***Description:*** Resource Conservation and Resiliency (RC) develops the science and technologies required to sustain training and testing ranges. This includes management strategies and tools to enable Installation staff to carry out their duties more effectively and development of data and models to enable base planners to increase resilience of their facilities. ***FY 2021 Plans:*** Mature the fire science required for management of DoD test and training ranges. Develop planning tools aimed at resilient installations. ***FY 2022 Plans:*** Work will continue on technologies and methods to address wildland fire on DoD installations. Efforts on understanding the impacts of invasive species on strategic mobility will mature as will models for installation infrastructure resilience in response to multiple stressors. ***FY 2021 to FY 2022 Increase/Decrease Statement:***	19.458	14.423	20.141

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
The increase is for climate adaptation enhancements will be used for additional projects focusing on climate sustainability of installation infrastructure.			
Title: Weapons Systems and Platforms (WP) ***Description:*** Weapons Systems and Platforms (WP) develops technologies and materials that reduce the waste and emissions associated with the manufacturing, maintenance, and use of DoD weapons systems and platforms to reduce future environmental liabilities and their associated costs and impacts. ***FY 2021 Plans:*** Increased emphasis on development of alternative Aqueous Film Forming Foam (AFFF) formulations that do not contain PFAS and alternative fire-fighting technologies that do not employ foams. Continued emphasis on predictive modelling and enhanced testing related to corrosion of DoD weapons systems. ***FY 2022 Plans:*** Projects on alternative delivery methods for fire-fighting formulations will mature. Focus on new corrosion resistant coatings as the regulatory and ESOH environment makes current solutions unavailable or dramatically more expensive. Continued work on sustainable energetics with higher performance than existing formulations. ***FY 2021 to FY 2022 Increase/Decrease Statement:*** The decrease is the result of planned program changes in OUSD (A&S), and one-time Congressional increase in FY 2021.	18.485	26.690	13.092
Accomplishments/Planned Programs Subtotals	69.914	85.429	51.863

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A