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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Navy **Date:** February 2020

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	0.000	370.229	522.972	446.960	-	446.960	444.077	453.976	449.706	425.042	Continuing	Continuing
0541: <i>AUTEC</i>	0.000	52.080	54.507	54.213	-	54.213	55.175	56.288	57.413	58.562	Continuing	Continuing
0566: <i>NAVAIR Environmental Compliance</i>	0.000	4.402	4.572	4.158	-	4.158	5.059	5.053	4.948	5.047	Continuing	Continuing
0653: <i>NAWC Weapons Division</i>	0.000	141.269	155.097	152.741	-	152.741	157.458	156.402	158.971	162.152	Continuing	Continuing
0654: <i>NAWC Acft Division</i>	0.000	95.496	100.281	101.753	-	101.753	103.733	105.776	108.853	111.028	Continuing	Continuing
2511: <i>Natural Disaster Relief</i>	0.000	0.000	130.444	54.136	-	54.136	39.655	47.000	33.000	0.000	0.000	304.235
2921: <i>Pacific Missile Range Facility</i>	0.000	5.139	5.394	5.413	-	5.413	5.523	5.634	5.746	5.862	Continuing	Continuing
2922: <i>MRTFB Maint & Repair</i>	0.000	44.685	41.382	37.246	-	37.246	47.743	47.506	49.695	50.690	Continuing	Continuing
2958: <i>Cyberspace Activities</i>	0.000	0.000	0.433	0.445	-	0.445	0.445	0.445	0.454	0.463	Continuing	Continuing
3154: <i>Nanoose and Dabob Bay Ranges</i>	0.000	11.833	12.714	12.899	-	12.899	12.741	12.996	13.412	13.680	Continuing	Continuing
3386: <i>MRTFB Marine Vessels</i>	0.000	15.325	18.148	23.956	-	23.956	16.545	16.876	17.214	17.558	Continuing	Continuing

A. Mission Description and Budget Item Justification

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RESEARCH, DEVELOPMENT, TEST and EVALUATION MANAGEMENT SUPPORT because it supports efforts directed toward sustaining or modernizing installations or operations required for general research, development, test and evaluation.

This program provides institutional maintenance and operations support for: the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center, Andros Island, Bahamas; the Environmental Compliance Program; Naval Air Warfare Center Weapons Division, Point Mugu and China Lake, CA; Naval Air Warfare Center Aircraft Division, Patuxent River, MD; Test and Evaluation related capabilities at the Pacific Missile Range Facility, Barking Sands, HI; Maintenance and Repair at Naval Air Warfare Center Weapons Division, Naval Air Warfare Center Aircraft Division, and Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center. The program also provides marine vessels overhauls and preventative maintenance in support of the 23 Major Range and Test Facility Base marine vessels located at Naval Air Warfare Center Weapons Division, Point Mugu, CA, Pacific Missile Range Facility, Honolulu, HI, Naval Undersea Warfare Center Keyport Nanoose and Dabob Bay Ranges, Keyport, WA, Naval Air Warfare Center Aircraft Division, Patuxent River, MD, and Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center. The Test and Evaluation activities make up the Navy portion of the Department of Defense's Major Range and Test Facility Base. These activities are chartered to perform Test and Evaluation for the development and acquisition of technologically advanced weapons systems. Core Test and Evaluation capabilities and capacity are operated to obtain weapons system performance documentation for acquisition program milestone decisions to provide operational forces with effective weapons systems. This program provides Navy Acquisition Program Managers required test capabilities; lowers cost of Test

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Navy	Date: February 2020
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and Evaluation; removes cost and scheduling impact of developing and providing their own Test and Evaluation capabilities; and retains the physical airspace, land space and sea space needed to conduct testing.

B. Program Change Summary (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	373.834	394.020	400.395	-	400.395
Current President's Budget	370.229	522.972	446.960	-	446.960
Total Adjustments	-3.605	128.952	46.565	-	46.565
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-1.492			
• Congressional Rescissions	-	-			
• Congressional Adds	-	130.444			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.687	0.000			
• SBIR/STTR Transfer	-1.919	0.000			
• Program Adjustments	0.000	0.000	46.603	-	46.603
• Rate/Misc Adjustments	0.001	0.000	-0.038	-	-0.038

Change Summary Explanation

New Project 2511 was created in support of Natural Disaster Relief starting in FY 2020. \$54.136M was added in FY 2021 to project 2511 for damages caused by the Searles Valley Earthquake to MRTFB facilities, infrastructure and instrumentation at Naval Weapons Station China Lake.

The FY 2021 funding request was reduced by \$6.544 million to account for the availability of prior year execution balances.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy										Date: February 2020		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>				Project (Number/Name) 0541 / <i>AUTEC</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
0541: <i>AUTEC</i>	0.000	52.080	54.507	54.213	-	54.213	55.175	56.288	57.413	58.562	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

As a detachment of Naval Undersea Warfare Center, Division Newport, the mission of the Atlantic Undersea Test and Evaluation Center is to provide the US Navy an underwater range facility for full-spectrum test and evaluation of Undersea Warfare systems and for Fleet training and readiness assessment. The Atlantic Undersea Test and Evaluation Center Program Office is headquartered at Newport, RI. Atlantic Undersea Test and Evaluation Center's administrative offices are located at West Palm Beach, Florida. Test facilities are located at Andros Island, Sites 1 through 4, and the Berry Islands in the Bahamas. Atlantic Undersea Test and Evaluation Center aircraft make scheduled daily flights between West Palm Beach and Andros Town Airport.

Atlantic Undersea Test and Evaluation Center manages and, under service contract, maintains and operates a 500 square nautical miles deep-water and a 100 square nautical miles shallow-water range; air-target tracking capabilities; sonobuoy simulation systems; electronic warfare threat simulation systems; rotary wing aircraft; aircraft ground support facilities; acoustic targets; torpedo retrieval and flushing capabilities; open-ocean range craft; marine support facilities; and data processing and analysis capabilities.

Major test facilities on Andros Island are located at Site 1. The Command Control Building houses the range tracking displays and replay centers, the computer center, operations support functions, communications center, and the central timing system. The Range Support Facility houses a torpedo post-run workshop, Mark 46 /Mark 50 and Mark 54 lightweight torpedo Intermediate Maintenance Activity, a Mark 30 undersea target Intermediate Maintenance Activity, a Mark 48 heavyweight torpedo Research and Development Turnaround facility and related technical facilities. The complex includes electrical and physical calibration labs, a complete electronics maintenance shop, a dive locker, a precision machine shop, and logistics support areas.

Atlantic Undersea Test and Evaluation Center has a 285-foot concrete pier with a controlling depth of 17 feet (5.2 meters) at mean low tide. An adjacent wharf is approximately 240 feet in length (72 meters) with a controlling depth of 15 feet at mean low tide. Power is available at both locations. Facilities at the pier/marine area include fully equipped machine /fabrication and marine overhaul shops. Also at Site 1, six Range User Buildings are maintained for assembling test equipment and equipment check-out during test mobilization or dockside periods. These staging areas are equipped with a variety of power sources, gantry cranes, compressed air and security features. A fully equipped range user hanger for ground maintenance and storage of helicopters is located at the Atlantic Undersea Test and Evaluation Center helicopter airstrip. Sites 2, 3, and 4 are small instrumented areas located south of Site 1 used to extend tracking of sonobuoys, communications, and air target track. This project funds costs that are not chargeable to customers.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Atlantic Undersea Test and Eval Ctr Facility	40.324	42.751	42.457	0.000	42.457
Articles:	-	-	-	-	-

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy **Date:** February 2020

Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 0541 / <i>AUTEC</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<p>Description: Atlantic Undersea Test and Evaluation Center is a Test and Evaluation facility for collecting selected underwater, surface and air tracking data on test participants. This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility capabilities at Atlantic Undersea Test and Evaluation Center in accordance with Department of Defense Directive 3200.11.</p> <p>FY 2020 Plans: Continue to maintain and operate mission essential/core test support resources, instrumentation systems and marine craft required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain Major Range and Test Facility Base operations. Reimburse the Command for General and Administrative support services. Continue to support resolution of policy compliance issues resulting from a Naval Sea Systems Command Inspector General/Newport Office of Counsel and Contracting review.</p> <p>FY 2021 Base Plans: Continue to maintain and operate mission essential/core test support resources, instrumentation systems and marine craft required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain Major Range and Test Facility Base operations. Reimburse the Command for General and Administrative support services. Continue to support resolution of policy compliance issues resulting from a Naval Sea Systems Command Inspector General/Newport Office of Counsel and Contracting review.</p> <p>FY 2021 OCO Plans: N/A</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: The funding decrease from FY 2020 to FY 2021 is due to realignment of funds for Cyber Pure Line project unit 2958.</p>					
<p>Title: Bahamian Lease</p> <p align="right">Articles:</p> <p>Description: Rental payments to the Bahamian government for use of land and ocean in the Bahamas.</p> <p>FY 2020 Plans:</p>	11.756 -	11.756 -	11.756 -	0.000 -	11.756 -

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy	Date: February 2020
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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 0541 / <i>AUTEC</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Continue to provide rental payments to the Bahamian government for use of land and ocean in the Bahamas. <i>FY 2021 Base Plans:</i> Continue to provide rental payments to the Bahamian government for use of land and ocean in the Bahamas. <i>FY 2021 OCO Plans:</i> Not applicable					
Accomplishments/Planned Programs Subtotals	52.080	54.507	54.213	0.000	54.213

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not applicable.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy										Date: February 2020		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>				Project (Number/Name) 0566 / <i>NAVAIR Environmental Compliance</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
0566: <i>NAVAIR Environmental Compliance</i>	0.000	4.402	4.572	4.158	-	4.158	5.059	5.053	4.948	5.047	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This continuing project supports environmental compliance, conservation and pollution prevention related efforts at the Navy Major Range and Test Facility Base located at Patuxent River, MD, China Lake, CA, Point Mugu, CA, and Atlantic Undersea Test and Evaluation Center, Bahamas. The Navy Major Range and Test Facility Base environmental projects include ongoing efforts to comply with Federal, State, and local environmental requirements.

The Major Range and Test Facility Base are test and evaluation facilities that provide for Department of Defense test and evaluation support missions. These missions include: Weapons system testing, military operational squadron training on new weapon systems, and validation of performance or operational characteristics.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Environmental Compliance	4.402	4.572	4.158	0.000	4.158
Articles:	-	-	-	-	-
<p>Description: Projects supporting level 1 compliance requirements at Naval Air Systems Command Ranges inclusive of hazardous waste disposal, Resource Conservation & Recovery Act, Subtitle C - 40 CFR 260 through 279, and Emergency Planning and Community Right-to-Know Act, Sections 311-312; solid waste disposal, Resource Conservation & Recovery Act, Subtitle D - 40 CFR Parts 239 through 259; natural & cultural resources programs, National Environmental Policy Act, Environmental Protection Act, Marine Mammal Protection Act, Endangered Species Act, Archeological and Historic Preservation Act, maintenance of environmental permits, Clean Air Act, Clean Water Act, and environmental monitoring. Resource Conservation & Recovery Act, 42 U.S.C. Section 6901 et sequens 1976; Emergency Planning and Community Right-to-Know Act, 42 U.S.C. Section 11001-11050 et sequens 1986; National Environmental Policy Act, 42 U.S.C. Section 4331 et sequens 1969; Marine Mammal Protection Act, 16 U.S.C. Section 1361 et sequens 1972; Clean Water Act, 33 U.S.C. Section 1251-1387 1972; ESA, 7 U.S.C. Section 136, 16 U.S.C. Section 1531 et sequens 1973; Archeological and Historic Preservation Act, 16 USC Section 469-469c-2 1960; and Clean Air Act, Title V, 33 U.S.C. Section 1251 et sequens 1972.</p> <p>FY 2020 Plans:</p>					

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy		Date: February 2020
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 0566 / <i>NAVAIR Environmental Compliance</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Continue the identification and funding of level 1 requirements that support compliance projects at Naval Air Systems Command Ranges to ensure applicable laws and regulations are met and Range mission/operations proceed unencumbered. Global Information Systems Encroachment Data Supporting Testing & Training, 0.2 Cultural Surveys Supporting Testing & Training, 0.1					
<i>FY 2021 Base Plans:</i> Continue the identification and funding of level 1 requirements that support compliance projects at Naval Air Systems Command Ranges to ensure applicable laws and regulations are met and Range mission/operations proceed unencumbered. Support Testing for Global Information Systems Encroachment and Cultural Surveys.					
<i>FY 2021 OCO Plans:</i> N/A					
<i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> The FY 2021 funding request was reduced to account for the availability of prior year execution balances.					
Accomplishments/Planned Programs Subtotals	4.402	4.572	4.158	0.000	4.158

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not applicable.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy										Date: February 2020		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>				Project (Number/Name) 0653 / <i>NAWC Weapons Division</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
0653: <i>NAWC Weapons Division</i>	0.000	141.269	155.097	152.741	-	152.741	157.458	156.402	158.971	162.152	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project provides continuing maintenance and operational support for the Naval Air Warfare Center Weapons Division Test and Evaluation capabilities. These capabilities include the Pacific Ranges and Facilities, consisting of China Lake Ranges and the Point Mugu Sea Range, aerial and surface target launch and recovery, target test instrumentation and Test and Evaluation aircraft. The Pacific Ranges use China Lake's 1.1 million acres of land and 17,000 square miles of military restricted (R-2508) airspace together with Point Mugu's 125,000 square miles of instrumented sea range and 36,000 square miles of controlled overlying airspace, and airfield and test instrumentation at San Nicolas Island to perform its Test and Evaluation mission. Included in the China Lake ranges is the Electronic Combat Range, which provides outdoor free space developmental and operational testing of airborne electronic warfare systems and tactics against shipboard and land based air defense systems. These ranges perform metric radar, multilateration and optical tracking of test objects; command, control, and destruct for range safety purposes; communications; frequency interference control and analysis; collection processing and display of telemetered data; real-time data processing and display; and the operation of a sub scale aerial target launch capability. Other test capabilities include sled tracks, measurement facilities; propulsion, warhead, environmental, rocket motor, and other missile component test facilities; and gun ranges. This project funds costs that are not chargeable to customers.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Pacific Ranges	59.339	63.221	62.917	0.000	62.917
Articles:	-	-	-	-	-
Description: In accordance with Department of Defense Directive 3200.11., this project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities at the Pacific Ranges and Facilities located at China Lake and Point Mugu, CA. These facilities provide safe, instrumented, controlled open air testing utilizing the Land Range, Sea Range, Electronic Combat Ranges, and San Nicholas Island.					
FY 2020 Plans: Continue to maintain and operate mission essential/core test support resources. These resources include test article instrumentation and/or modification for Flight Test Aircraft and Weapons Undersea Test as well as ground and flight test instrumentation systems, range instrumentation systems and data processing and communication systems required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations. Maintenance will begin on five					

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy	Date: February 2020
--	----------------------------

Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 0653 / <i>NAWC Weapons Division</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
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Radar Signal Emulators (RSEs) and a battlespace shaping capability that requires Special Access Program (SAP) facilities.

FY 2021 Base Plans:

Continue to maintain and operate mission essential/core test support resources. These resources include test article

instrumentation as well as ground and flight test instrumentation systems, range instrumentation systems and data processing and communication systems required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations. Sustain maintenance activities associated with five Radar Signal Emulators (RSEs) and a battlespace shaping capability that requires Special Access Program (SAP) facilities. Initiate maintenance activities to sustain warfare battle shaping capability.

FY 2021 OCO Plans:

Not applicable

FY 2020 to FY 2021 Increase/Decrease Statement:

No significant changes from FY 2020 to FY 2021

Title: Navy Test Wing Pacific

Articles:

22.521	27.118	24.595	0.000	24.595
-	-	-	-	-

Description: This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities of the Naval Test Wing Pacific located at China Lake and Point Mugu, CA. These facilities provide the Navy's principal Pacific test activity for Naval Aviation Systems Team aircraft, engaged in or supporting Test & Evaluation of aircraft, weapons and weapons systems.

FY 2020 Plans:

Continue to maintain and operate mission essential/core test support resources associated with airborne and seaborne targets required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations. Stand up maintenance activity for the new Gulf Stream C-20 aircraft.

FY 2021 Base Plans:

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy **Date:** February 2020

Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 0653 / <i>NAWC Weapons Division</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<p>Continue to maintain and operate mission essential/core test support aircraft associated with aviation platform and weapon system test and evaluation. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain Naval Test Wing Pacific operations.</p> <p>FY 2021 OCO Plans: Not applicable.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: Funding decrease from FY 2020 to FY 2021 reflects the completion of stand up for the Gulf Stream Maintenance Operations Base support C-20 Aircraft.</p>					
<p>Title: Threat/Target Systems</p> <p align="right">Articles:</p> <p>Description: This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities of the Threat/Target Systems facilities. These facilities provide the airborne and seaborne target presentations for test and evaluation.</p> <p>FY 2020 Plans: Continue to maintain and operate mission essential/core test support resources associated with airborne and seaborne targets required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations.</p> <p>FY 2021 Base Plans: Continue to maintain and operate mission essential/core test support resources associated with airborne and seaborne target operations required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base target operations.</p> <p>FY 2021 OCO Plans: Not applicable.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: There are no significant change from FY 2020 to FY 2021.</p>	11.454	11.804	11.713	0.000	11.713
Articles:	-	-	-	-	-
<p>Title: Test and Evaluation Ordnance</p> <p align="right">Articles:</p>	3.540	3.500	3.590	0.000	3.590
Articles:	-	-	-	-	-

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy	Date: February 2020
--	----------------------------

Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 0653 / <i>NAWC Weapons Division</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
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Description: This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities of the Test and Evaluation Ordnance facilities. These facilities provide test and evaluation of All-Up live ordnance and components.

FY 2020 Plans:
Continue to maintain and operate mission essential/core test support resources associated propulsion, warhead, environmental, rocket motor, and other missile component test facilities required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain Major Range and Test Facility Base operations.

FY 2021 Base Plans:
Continue to maintain and operate mission essential/core test support resources associated propulsion, warhead, environmental, rocket motor, and other missile component test facilities required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain Major Range and Test Facility Base ordnance test and evaluation operations.

FY 2021 OCO Plans:
Not applicable.

FY 2020 to FY 2021 Increase/Decrease Statement:
There are no significant changes from FY 2020 to FY 2021.

Title: Naval Air Warfare Center Weapons Division Command	44.415	49.454	49.926	0.000	49.926
Articles:	-	-	-	-	-

Description: This project funds the overhead/institutional costs required to sustain the Naval Air Warfare Center Weapons Division Major Range and Test Facility Base Test and Evaluation capabilities.

FY 2020 Plans:
Continue to reimburse the Command for General and Administration Support services. Continue to fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities, Navy Marine Corps Intranet, and any costs necessary to manage and sustain Major Range and Test Facility Base operations.

FY 2021 Base Plans:

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy	Date: February 2020
--	----------------------------

Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 0653 / <i>NAWC Weapons Division</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Continue to reimburse the Command for General and Administration Support services. Continue to fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities, Navy Marine Corps Intranet, and any costs necessary to manage and sustain Major Range and Test Facility Base operations. <i>FY 2021 OCO Plans:</i> Not applicable <i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> Increase from FY 2020 to FY 2021 is due to FAA rate increase for Air Traffic Control Services in R2508.					
Accomplishments/Planned Programs Subtotals	141.269	155.097	152.741	0.000	152.741

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not applicable.

UNCLASSIFIED

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Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>				Project (Number/Name) 0654 / <i>NAWC Acft Division</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
0654: <i>NAWC Acft Division</i>	0.000	95.496	100.281	101.753	-	101.753	103.733	105.776	108.853	111.028	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides funds for the maintenance and operations of the Naval Air Warfare Center Aircraft Division's Major Range and Test Facility Base capabilities used to conduct test and evaluation for air platforms. Naval Air Warfare Center Aircraft Division has extensive airfield, flight test ranges, aircraft systems test facilities and simulation laboratories to support aircraft Research Development Test and Evaluation. This includes 50,000 square miles of airspace, 39,375 square miles of sea space, and 7,950 acres of land space. Product areas include aircraft systems flight test and evaluation, carrier suitability certification, test article preparation, installed system test and evaluation, and modeling and simulation support of the acquisition program test requirements. The Test and Evaluation Group, Patuxent River, performs development and operational test and evaluation of manned and unmanned air vehicle systems, including mission systems, equipment, subsystems, components, and support systems. This project also provides test and evaluation facilities for air-breathing propulsion systems and extensive facilities for conducting both installed and uninstalled aircraft engine development and test and evaluation. This project funds costs that are not chargeable to customers.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Atlantic Ranges	23.349	24.871	25.257	0.000	25.257
Articles:	-	-	-	-	-
Description: This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities associated with the Atlantic Ranges and Facilities and Air Vehicle Modification and Instrumentation. These facilities provide safe, instrumented, controlled flight testing and training in air, sea, and land arenas.					
FY 2020 Plans: Continue to maintain and operate mission essential/core test support resources. These resources include test article instrumentation and/or modification for Flight Test Aircraft and Weapons Undersea Test as well as ground and flight test instrumentation systems, range instrumentation systems and data processing and communication systems required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations. Maintenance will begin for two new control rooms that operate at the Special Access Program (SAP) level, including the IT equipment required to perform test and evaluation operations from the control rooms.					
FY 2021 Base Plans:					

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy	Date: February 2020
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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 0654 / <i>NAWC Acft Division</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<p>Continue to maintain and operate mission essential/core test support resources. These resources include test article instrumentation and/or modification for Flight Test Aircraft and Weapons Undersea Test as well as ground and flight test instrumentation systems, range instrumentation systems and data processing and communication systems required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations. Continue maintenance for two new control rooms that operate at the Special Access Program (SAP) level, including the IT equipment required to perform test and evaluation operations from the control rooms.</p> <p>FY 2021 OCO Plans: Not applicable</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: There is no significant change from FY 2020 to FY 2021.</p>					
<p>Title: Electromagnetic Environmental Effects and Air Combat Environment Test and Evaluation Facility</p> <p align="right">Articles:</p> <p>Description: This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities associated with Electromagnetic Environmental Effects and Air Combat Environment Test and Evaluation Facility. These facilities provide Test and Evaluation support with integrated, interactive, and repeatable synthetic environments and reduce the risk and cost for programs with the use of installed systems tests to include simulation and stimulation tools, techniques and technologies.</p> <p>FY 2020 Plans: Continue to maintain and operate mission essential/core test support resources required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations.</p> <p>FY 2021 Base Plans: Continue to maintain and operate mission essential/core test support resources required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Electromagnetic Environmental Effects and Air Combat Environment Test and Evaluation Facility operations.</p> <p>FY 2021 OCO Plans:</p>	20.188	21.084	21.794	0.000	21.794
	-	-	-	-	-

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy	Date: February 2020
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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 0654 / <i>NAWC Acft Division</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Not applicable					
<i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> Increase from FY 2020 to FY 2021 supports increase in maintenance requirements associated with Air Combat Environment Test and Evaluation Facility Electronic Warfare test capabilities.					
<i>Title:</i> Propulsion Systems Evaluation Facility	4.498	4.587	4.646	0.000	4.646
<i>Articles:</i>	-	-	-	-	-
<i>Description:</i> This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities of the Propulsion Systems Evaluation Facility. These facilities perform Test and Evaluation of propulsion systems in the laboratories, engine test chambers and component test rigs of the Propulsion Systems Evaluation Facility and the Aircraft Test and Evaluation Facility. Propulsion Systems consists of engines, engine components and accessories.					
<i>FY 2020 Plans:</i> Continue to maintain and operate mission essential/core test support resources required to meet customer test requirements. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations.					
<i>FY 2021 Base Plans:</i> Continue to maintain and operate mission essential/core test support resources required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Propulsion System Evaluation Facility operations.					
<i>FY 2021 OCO Plans:</i> Not applicable.					
<i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> There is no significant change from FY 2020 to FY 2021.					
<i>Title:</i> Threat/Target Systems	2.284	2.329	2.376	0.000	2.376
<i>Articles:</i>	-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy **Date:** February 2020

Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 0654 / <i>NAWC Acft Division</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<p>Description: This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base. Threat/Target Systems operations provide the airborne and seaborne target presentations for test and evaluation.</p> <p>FY 2020 Plans: Continue to maintain and operate mission essential/core test support resources associated with airborne and seaborne targets required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations.</p> <p>FY 2021 Base Plans: Continue to maintain and operate mission essential/core test support resources associated with airborne and seaborne target operations required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base target operations.</p> <p>FY 2021 OCO Plans: Not applicable.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: There is no significant change from FY 2020 to FY 2021.</p>					
<p>Title: Naval Test Wing Atlantic</p> <p align="right">Articles:</p> <p>Description: This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities of the Naval Test Wing Atlantic. These facilities provide support for Naval Aviation Systems Team aircraft, engaged in or supporting aircraft system test and evaluation.</p> <p>FY 2020 Plans: Continue to maintain and operate mission essential/core test support resources associated with 11 aircraft and related systems and flight test safety required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations.</p> <p>FY 2021 Base Plans:</p>	22.320	22.757	22.747	0.000	22.747
	-	-	-	-	-

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy **Date:** February 2020

Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 0654 / <i>NAWC Acft Division</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<p>Continue to maintain and operate mission essential/core test support resources associated with 11 aircraft and related systems and flight test safety required to meet customer test operations. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Naval Test Wing Atlantic.</p> <p>FY 2021 OCO Plans: Not applicable.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: There is no significant change from FY 2020 to FY 2021.</p>					
<p>Title: Naval Air Warfare Center Aircraft Division Command</p> <p align="right">Articles:</p> <p>Description: This project funds the overhead/institutional costs required to sustain the Naval Air Warfare Center Aircraft Division Major Range and Test Facility Base Test and Evaluation capabilities.</p> <p>FY 2020 Plans: Continue to reimburse the Command for General and Administrative support services. Continue to fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations.</p> <p>FY 2021 Base Plans: Continue to reimburse the Command for General and Administrative support services. Continue to fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Naval Air Warfare Center Aircraft Division Range and Test Facility Base operations.</p> <p>FY 2021 OCO Plans: Not applicable</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: No significant change from FY 2020 to FY 2021.</p>	22.857	24.653	24.933	0.000	24.933
	-	-	-	-	-
Accomplishments/Planned Programs Subtotals	95.496	100.281	101.753	0.000	101.753

C. Other Program Funding Summary (\$ in Millions)
N/A

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy **Date:** February 2020

Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 0654 / <i>NAWC Acft Division</i>
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C. Other Program Funding Summary (\$ in Millions)

Remarks

D. Acquisition Strategy

Not applicable.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy										Date: February 2020		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>				Project (Number/Name) 2511 / <i>Natural Disaster Relief</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
2511: <i>Natural Disaster Relief</i>	0.000	0.000	130.444	54.136	-	54.136	39.655	47.000	33.000	0.000	0.000	304.235
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

New Project 2511 created in support of Natural Disaster Relief.

A. Mission Description and Budget Item Justification

This project was created in response to the 2019 Searles Valley Earthquakes at Naval Weapons Station China Lake to support repairs at Navy MRTFB sites that have been damaged by natural disasters to include earthquakes, wildfires, hurricanes, tornadoes, landslides and floods.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Natural Disaster Relief	0.000	130.444	54.136	0.000	54.136
Articles:	-	-	-	-	-
FY 2020 Plans:					
Funds provided in support of repairing damage caused by the July 2019 Searles Valley Earthquake to the MRTFB facilities, infrastructure and instrumentation at Naval Weapons Station China Lake. FY20 plans include repair of Class-3 property; Propulsion Lab Repairs at Cal Tech Sites 1 and 4, the Environmental Test Area and Burro Canyon. Plans also include network fiber optic repairs to instrumentation on North and South Range complexes; Replacement and integration of Optical Systems; Replacement and integration of Communications Systems; and Repairs to Remotely Operated Tracking Radars Instrumentation; Energetic Material mixers; and Laser equipment.					
FY 2021 Base Plans:					
This is a continuation of repairing damage caused by natural disasters at Navy MRTFB sites. FY21 repairs will include: Class-3 property; Propulsion Lab Repairs at Cal Tech Sites 1 and 4, the Environmental Test Area and Burro Canyon. Plans also include network fiber optic repairs to instrumentation on North and South Range complexes; Replacement and integration of Optical Systems; Replacement and integration of Communications Systems; and Repairs to Remotely Operated Tracking Radars Instrumentation; Energetic Material mixers; and Laser equipment					
FY 2021 OCO Plans:					
N/A					
FY 2020 to FY 2021 Increase/Decrease Statement:					

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy	Date: February 2020
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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 2511 / <i>Natural Disaster Relief</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Decrease from FY20 to FY21 is due to a large number of priority repair projects having been addressed in FY20.					
Accomplishments/Planned Programs Subtotals	0.000	130.444	54.136	0.000	54.136

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy										Date: February 2020		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support				Project (Number/Name) 2921 / Pacific Missile Range Facility			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
2921: Pacific Missile Range Facility	0.000	5.139	5.394	5.413	-	5.413	5.523	5.634	5.746	5.862	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program provides continuing maintenance and operations support for Test and Evaluation related capabilities at the Pacific Missile Range Facility located at Barking Sands on Kauai, HI. Pacific Missile Range Facility's Test and Evaluation capabilities include precision radar and telemetry assets, the Mobile Aerial Target Support System, and Stabilized High-accuracy Optical Tracking System. These assets support Navy, Department of Defense, and Missile Defense Agency Test and Evaluation. This project funds costs not chargeable to customers.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Pacific Missile Range Facility	5.139	5.394	5.413	0.000	5.413
Articles:	-	-	-	-	-
Description: This project funds the overhead/institutional costs required to sustain the recognized Major Range and Test Facility Base capabilities at Pacific Missile Range Facility in accordance with Department of Defense Directive 3200.11.					
FY 2020 Plans: Continue to maintain and operate mission essential/core test support resources including three precision radars and eight telemetry antennas, the Mobile Aerial Target Support System barge, and the four Optical Systems required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations. Reimburse the Command for General and Administrative support services.					
FY 2021 Base Plans: Continue to maintain and operate mission essential/core test support resources including three precision radars and eight telemetry antennas, the Mobile Aerial Target Support System barge, and the four Optical Systems required to meet customer test requirements. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations. Reimburse the Command for General and Administrative support services.					
FY 2021 OCO Plans:					

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy	Date: February 2020
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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 2921 / <i>Pacific Missile Range Facility</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Not applicable					
<i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> There is no significant change from FY 2020 to FY 2021.					
Accomplishments/Planned Programs Subtotals	5.139	5.394	5.413	0.000	5.413

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not applicable.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy										Date: February 2020		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support				Project (Number/Name) 2922 / MRTFB Maint & Repair			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
2922: MRTFB Maint & Repair	0.000	44.685	41.382	37.246	-	37.246	47.743	47.506	49.695	50.690	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides funding for the maintenance and repair of the Major Range and Test Facility Base Real Property Maintenance Activities at the Naval Air Warfare Center Weapons Division, the Naval Air Warfare Center Aircraft Division, and the Atlantic Undersea Test and Evaluation Center. Funds mission critical emergency services, recurring maintenance and repair, and major repair projects. In addition it addresses priority items on the Backlog of Maintenance and Repair list.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Facility Maintenance and Repair	44.685	41.382	37.246	0.000	37.246
Articles:	-	-	-	-	-
Description: Maintenance and repair of the Major Range and Test Facility Base Real Property Maintenance Activities at Naval Air Warfare Center Weapons Division, Naval Air Warfare Center Aircraft Division, and the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center.					
FY 2020 Plans: Continue to support mission critical emergency services, recurring maintenance and repair, and minor and major repair efforts at Naval Air Warfare Center Weapons Division, Naval Air Warfare Center Aircraft Division, and the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center. FY20 budget funds Major Range and Test Facility Base facility to 75% of Department of Defense Facility Sustainment Model v19.1 with \$9M to continue the Naval Air Systems Command Hangar recapitalization efforts and complete Atlantic Undersea Test and Evaluation Center Inspector General Compliance projects to improve security.					
FY 2021 Base Plans: Continue to support mission critical emergency services, recurring maintenance and repair, and minor and major repair efforts at Naval Air Warfare Center Weapons Division, Naval Air Warfare Center Aircraft Division, and the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center. FY21 budget funds Major Range and Test Facility Base facility to 65% of Department of Defense Facility Sustainment Model v19.1 with \$11M to continue the Naval Air Systems Command Hangar recapitalization efforts and complete Atlantic Undersea Test and Evaluation Center Inspector General Compliance projects to improve perimeter security.					
FY 2021 OCO Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy	Date: February 2020
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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 2922 / <i>MRTFB Maint & Repair</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Not applicable.					
<i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> The FY 2021 funding request was reduced to account for the availability of prior year execution balances.					
Accomplishments/Planned Programs Subtotals	44.685	41.382	37.246	0.000	37.246

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not applicable.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy **Date:** February 2020

Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support				Project (Number/Name) 2958 / Cyberspace Activities			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
2958: <i>Cyberspace Activities</i>	0.000	0.000	0.433	0.445	-	0.445	0.445	0.445	0.454	0.463	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides funding for cyber requirements for the Major Range and Test Facility Base Real Property at the Atlantic Undersea Test and Evaluation Center. Funds critical cybersecurity upgrades to instrumentation and networks to ensure capabilities are secure and available to support customer test requirements.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Cyberspace Activities	0.000	0.433	0.445	0.000	0.445
Articles:	-	-	-	-	-
Description: This project funds network and instrumentation compliance with cybersecurity requirements at the Atlantic Undersea Test and Evaluation Center.					
FY 2020 Plans: Maintain critical cyber requirements and equipment at Atlantic Undersea Test and Evaluation Center as required to support test and evaluations operations at the Atlantic Undersea Test and Evaluation Center.					
FY 2021 Base Plans: Maintain compliance with cybersecurity requirements at Atlantic Undersea Test and Evaluation Center as required to support test and evaluations operations at the Atlantic Undersea Test and Evaluation Center.					
FY 2021 OCO Plans: Not applicable.					
FY 2020 to FY 2021 Increase/Decrease Statement: Increase is no significant change from FY 2020 to FY 2021.					
Accomplishments/Planned Programs Subtotals	0.000	0.433	0.445	0.000	0.445

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not applicable.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy										Date: February 2020		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>				Project (Number/Name) 3154 / <i>Nanoose and Dabob Bay Ranges</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
3154: <i>Nanoose and Dabob Bay Ranges</i>	0.000	11.833	12.714	12.899	-	12.899	12.741	12.996	13.412	13.680	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides maintenance and operations support for the Nanoose and Dabob Bay Ranges along with associated support systems to provide Test and Evaluation and readiness assessment services for acquisition programs and the Fleet. Operates ocean-based environment, measurement and support systems. Maintains and repairs systems that measure warfare system performance. Oversees test, training, and measurement facilities, equipment, operations and maintenance processes. Satisfies customer exercise and measurement requirements through the operation of ocean based test and measurement systems. Assures the readiness of systems through the implementation of calibration, maintenance, repair and life cycle processes. Performs exercise planning, exercise interpretation and development of surrogate environments, for system performance measurement. Assists in the design, fabrication and testing of systems for Undersea Warfare applications. Oversees the manning and maintenance of Naval Undersea Warfare Center Division Keyport range craft and range craft systems. This project funds costs not chargeable to customers.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Undersea Ranges	11.833	12.714	12.899	0.000	12.899
Articles:	-	-	-	-	-
Description: This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities at the Nanoose and Dabob Bay undersea tracking ranges.					
FY 2020 Plans: Continue to maintain and operate mission essential/core test support resources associated with the unique test environments for Test and Evaluation of undersea weapons, sensors, submarines and other undersea systems required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations. Reimburse the Command for General and Administrative support services.					
FY 2021 Base Plans: Continue to maintain and operate mission essential/core test support resources associated with the unique test environments for Test and Evaluation of undersea weapons, sensors, submarines and other undersea systems required to meet customer test requirements. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary					

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy	Date: February 2020
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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 3154 / <i>Nanoose and Dabob Bay Ranges</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
to manage and sustain the Major Range and Test Facility Base operations. Reimburse the Command for General and Administrative support services. <i>FY 2021 OCO Plans:</i> Not applicable. <i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> There is no significant change from FY 2020 to FY 2021.					
Accomplishments/Planned Programs Subtotals	11.833	12.714	12.899	0.000	12.899

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not applicable.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy										Date: February 2020		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>				Project (Number/Name) 3386 / <i>MRTFB Marine Vessels</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
3386: <i>MRTFB Marine Vessels</i>	0.000	15.325	18.148	23.956	-	23.956	16.545	16.876	17.214	17.558	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project funds the overhauls and preventative maintenance of the 23 Major Range and Test Facility Base marine vessels located at Naval Air Warfare Center Weapons Division, Point Mugu, CA, Pacific Missile Range Facility, Honolulu, HI, Naval Undersea Warfare Center Keyport, WA, Naval Air Warfare Center Aircraft Division, Patuxent River, MD, and Atlantic Undersea Test and Evaluation Center. These vessels are used to launch and recover torpedoes, acoustic systems, and other weapons, provide range surveillance and clearance, and can be configured for target services. Overhauls are required to operate ships over 300 tons overseas in compliance with American Bureau of Shipping "Load Line" certification requirements. Major preventative maintenance requiring shipyard support is also performed during these periods to mitigate risks of failures and sustain critical, Hull, Mechanical and Electrical systems to support operations at sea.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: MRTFB Marine Vessels	15.325	18.148	23.956	0.000	23.956
Articles:	-	-	-	-	-
Description: This project funds the overhauls and preventative maintenance of the 23 Major Range and Test Facility Base marine vessels located at Naval Air Warfare Center Weapons Division, Point Mugu, CA, Pacific Missile Range Facility, Honolulu, HI, Naval Undersea Warfare Center Keyport Keyport Nanoose and Dabob Bay Ranges, Keyport, WA, Naval Air Warfare Aircraft Division, Patuxent River, MD, and Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center.					
FY 2020 Plans: Perform overhauls of a Naval Undersea Warfare Center Keyport, Atlantic Undersea Test and Evaluation Center, Naval Air Warfare Center Aircraft Division, and Naval Air Warfare Center Weapons Division vessel. Continue purchase of the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation center Rover replacement vessel.					
FY 2021 Base Plans: Perform overhauls of a Naval Undersea Warfare Center Keyport, Atlantic Undersea Test and Evaluation Center, Naval Air Warfare Center Aircraft Division, and Naval Air Warfare Center Weapons Division vessel. Purchase replacement of Naval Air Warfare Center Weapons Division Mobile Ship Target.					
FY 2021 OCO Plans:					

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy	Date: February 2020
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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test & Evaluation Support</i>	Project (Number/Name) 3386 / <i>MRTFB Marine Vessels</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Not applicable.					
<i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> Increase from FY 2020 to FY 2021 reflects replacement of the Mobile Ship Target at Naval Air Warfare Center Weapons Division.					
Accomplishments/Planned Programs Subtotals	15.325	18.148	23.956	0.000	23.956

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
Not applicable.