

**FDP Research Subaward Agreement
Amendment (Number 3)**

Pass-Through Entity (PTE)

Subrecipient

University of Alaska Anchorage (UAA)

Entity Name Monterey Bay Aquarium Research Institute (MBARI)

UAA_Postaward@alaska.edu

Email Address danielle@mbari.org

Dr. Douglas Causey

Principal Investigator Mr. Brett Hobson

Project Title: Centers for Homeland Security

PTE Federal Award No:

formerly 2014ST061ML0002 new: 1&STADA00001-02-00

Federal Awarding Agency:

Department of Homeland Security

Revised Subaward Period of Performance:

Start Date: April 8, 2018

End Date: Jun 30, 2019

Amount Funded This Action:

\$ 79,126.00

Subaward No:

P516972A

Effective Date of Amendment:

Apr 8, 2019

Total Amount of Federal Funds Obligated to Date:

\$ 289,307.00

Subject to FFATA:

☐ Yes ☒ No

Automatic Carryover:

☐ Yes ☒ No

Amendment(s) to Original Terms and Conditions

This Amendment revises the above-referenced Research Subaward Agreement as follows:

This subaward is hereby revised to include any and all of the applicable changes as mandated by the Year 5 Notice of Award received from the Department of Homeland Security (DHS) for the Center of Excellence-Arctic Domain Awareness Center (ADAC) project.

The ADAC Work plan Program Year 5 Change Request was approved on April 8, 2019 which increases funding by \$79,126.

Included in this amendment are the following attachments:

- * Notice of Award
- * ADAC Work plan Program Year 5 Change Request as Approved by the Department of Homeland Security

For clarity: all amounts stated in this amendment are in United States Dollars.

All other terms and conditions of this Subaward Agreement remain in full force and effect.

By an Authorized Official of PTE:

Denny De Mesa

Digitally signed by
Indemesa@alaska.edu
DN: cn=Indemesa@alaska.edu
Date: 2019.05.10 10:32:16 -08'00'

May 10, 2019

Name: for Elizabeth Dickinson

Date

Title: Acting Director, Office of Sponsored Programs

By an Authorized Official of Subrecipient:

Basilio Martinez

5-21-19

Date

Name: Basilio Martinez

Title: CFO

Procurement Services

Date

FDP Bilateral Mod Sept.2017

1. DATE ISSUED MM/DD/YYYY 04/08/2019		1a. SUPERSEDES AWARD NOTICE dated 03/14/2019 except that any additions or restrictions previously imposed remain in effect unless specifically rescinded	
2. CFDA NO. 97.061 - Cooperative Agreements			
3. ASSISTANCE TYPE Cooperative Agreement			
4. GRANT NO. 17STADA00001-02-03 Formerly 2014ST061ML0002		5. TYPE OF AWARD Research	
4a. FAIN 17STADA00001		5a. ACTION TYPE Post Award Amendment	
6. PROJECT PERIOD MM/DD/YYYY From 09/01/2017		Through MM/DD/YYYY 06/30/2020	
7. BUDGET PERIOD MM/DD/YYYY From 07/01/2018		Through MM/DD/YYYY 06/30/2020	
8. TITLE OF PROJECT (OR PROGRAM) Centers for Homeland Security			

Department of Homeland Security

DHS Grants and Financial Assistance Division (GFAD)

245 Murray Lane, SW
Mail Stop 0115
Washington, DC 20528

NOTICE OF AWARD

AUTHORIZATION (Legislation/Regulations)
Homeland Security Act of 2002, Public Law 107-296, 6 U.S.C 188

9a. GRANTEE NAME AND ADDRESS UNIVERSITY OF ALASKA ANCHORAGE 3211 Providence Dr Anchorage, AK 99508-4614		9b. GRANTEE PROJECT DIRECTOR Mr. Douglas Causey 3211 PROVIDENCE DR ANCHORAGE, AK 99508-4645 Phone: 907-786-1021	
10a. GRANTEE AUTHORIZING OFFICIAL Elizabeth Dickinson 3211 Providence Dr Anchorage, AK 99508-4614 Phone: 9077861777		10b. FEDERAL PROJECT OFFICER Mr. Theo Gemelas 7th and D Street, SW Washington, DC 20407 Phone: 202-254-6108	

ALL AMOUNTS ARE SHOWN IN USD

11. APPROVED BUDGET (Excludes Direct Assistance)		12. AWARD COMPUTATION	
I Financial Assistance from the Federal Awarding Agency Only		a. Amount of Federal Financial Assistance (from item 11m) 5,733,319.78	
II Total project costs including grant funds and all other financial participation		b. Less Unobligated Balance From Prior Budget Periods 2,233,319.78	
a. Salaries and WageS 598,472.27		c. Less Cumulative Prior Award(s) This Budget Period 3,500,000.00	
b. Fringe Benefits 160,277.00		d. AMOUNT OF FINANCIAL ASSISTANCE THIS ACTION 0.00	
c. Total Personnel Costs 758,749.27		13. Total Federal Funds Awarded to Date for Project Period 13,432,081.00	
d. Equipment 0.00		14. RECOMMENDED FUTURE SUPPORT (Subject to the availability of funds and satisfactory progress of the project):	
e. Supplies 37,500.00		YEAR TOTAL DIRECT COSTS YEAR TOTAL DIRECT COSTS	
f. Travel 103,095.21		a. 3 b. 4 c. 5 d. 6 e. 7 f. 8	
g. Construction 0.00		15. PROGRAM INCOME SHALL BE USED IN ACCORD WITH ONE OF THE FOLLOWING ALTERNATIVES:	
h. Other 2,873,286.56		a. DEDUCTION	
i. Contractual 1,456,969.82		b. ADDITIONAL COSTS	
j. TOTAL DIRECT COSTS 5,229,600.86		c. MATCHING	
k. INDIRECT COSTS 503,718.92		d. OTHER RESEARCH (Add / Deduct Option)	
l. TOTAL APPROVED BUDGET 5,733,319.78		e. OTHER (See REMARKS)	
m. Federal Share 5,733,319.78		16. THIS AWARD IS BASED ON AN APPLICATION SUBMITTED TO, AND AS APPROVED BY, THE FEDERAL AWARDDING AGENCY ON THE ABOVE TITLED PROJECT AND IS SUBJECT TO THE TERMS AND CONDITIONS INCORPORATED EITHER DIRECTLY OR BY REFERENCE IN THE FOLLOWING:	
n. Non-Federal Share 0.00		a. The grant program legislation	
		b. The grant program regulations.	
		c. This award notice including terms and conditions, if any, noted below under REMARKS.	
		d. Federal administrative requirements, cost principles and audit requirements applicable to this grant.	
		In the event there are conflicting or otherwise inconsistent policies applicable to the grant, the above order of precedence shall prevail. Acceptance of the grant terms and conditions is acknowledged by the grantee when funds are drawn or otherwise obtained from the grant payment system.	

REMARKS (Other Terms and Conditions Attached - ☒ Yes ☐ No)

This modification approves overall programmatic changes as reflected in an email on April 1, 2019 and the Arctic Copepods Work Plan is approved with an approximate one and half year budget of \$288,246. No other funding is approved. Terms and conditions remain.

GRANTS MANAGEMENT OFFICIAL:

Jacqueline Greely, Grants Officer
7th And D Street SW
Washington, DC 20407-0001
Phone: (202)447-0724

17.OBJ CLASS	4102	18a. VENDOR CODE	92600047	18b. EIN	926000147	19. DUNS	076664986	20. CONG. DIST.	00
FY-ACCOUNT NO.		DOCUMENT NO.		ADMINISTRATIVE CODE		AMT ACTION FIN ASST		APPROPRIATION	
21. a.	U80B70800803	b.	STADA00001A	c.	ADA1	d.	\$0.00	e.	
22. a.	779A70790803	b.	STADA00001A	c.	ADA1	d.	\$0.00	e.	70790803
23. a.		b.		c.		d.		e.	

NOTICE OF AWARD (Continuation Sheet)

PAGE 2 of 2	DATE ISSUED 04/08/2019
GRANT NO. 17STADA00001-02-03	

Federal Financial Report Cycle			
Reporting Period Start Date	Reporting Period End Date	Reporting Type	Reporting Period Due Date
09/01/2017	12/31/2017	Annual	03/31/2018
01/01/2018	12/31/2018	Annual	03/31/2019
01/01/2019	12/31/2019	Annual	03/30/2020
01/01/2020	06/30/2020	Final	09/28/2020



Heather Paulsen <hpaulsen@alaska.edu>

RE: Highlighted sections for your review and approval ADAC Year 5 Program Change Request

1 message

Heather Paulsen <hpaulsen@alaska.edu>

Mon, Apr 8, 2019 at 10:28 AM

To: "Greely, Jacqueline" <Jacqueline.Greely@hq.dhs.gov>, "Gemelas, Theophilos" <theophilos.gemelas@hq.dhs.gov>

Cc: Douglas Causey <dcausey@alaska.edu>, Elizabeth Matthews <ematthews@alaska.edu>, Elizabeth Dickinson <esdickinson@alaska.edu>, Randy Kee <rakee@alaska.edu>, "Kamerer, Susan (CTR)" <susan.kamerer@associates.hq.dhs.gov>

Thank you so much Jacquie! Have a great day!

Respectfully-

Heather

From: Greely, Jacqueline <Jacqueline.Greely@HQ.DHS.GOV>**Sent:** Monday, April 8, 2019 10:27 AM**To:** Heather Paulsen <hpaulsen@alaska.edu>; Gemelas, Theophilos <theophilos.gemelas@HQ.DHS.GOV>**Cc:** Douglas Causey <dcausey@alaska.edu>; Elizabeth Matthews <ematthews@alaska.edu>; Elizabeth Dickinson <esdickinson@alaska.edu>; Randy Kee <rakee@alaska.edu>; Kamerer, Susan (CTR) <susan.kamerer@associates.hq.dhs.gov>**Subject:** RE: Highlighted sections for your review and approval ADAC Year 5 Program Change Request

All-

Modification 3 has been awarded covering the below and the Arctic Copepods. Thanks for your patience.

Thanks,

Jacquie

From: Heather Paulsen <hpaulsen@alaska.edu>**Sent:** Monday, April 8, 2019 1:14 PM**To:** Gemelas, Theophilos <theophilos.gemelas@HQ.DHS.GOV>; Greely, Jacqueline <Jacqueline.Greely@HQ.DHS.GOV>**Cc:** Douglas Causey <dcausey@alaska.edu>; Elizabeth Matthews <ematthews@alaska.edu>; Elizabeth Dickinson <esdickinson@alaska.edu>; Randy Kee <rakee@alaska.edu>; Kamerer, Susan (CTR) <susan.kamerer@associates.hq.dhs.gov>**Subject:** RE: Highlighted sections for your review and approval ADAC Year 5 Program Change Request

Hi Jacquie:

Just checking to see if you need anything from me to approve this request; I know you were out part of last week and I am sure still playing catchup.

Thank you in advance for your assistance; have a great day!

Respectfully-

Heather

From: Heather Paulsen <hpaulsen@alaska.edu>

Sent: Wednesday, March 27, 2019 11:24 AM

To: 'Gemelas, Theophilos' <theophilos.gemelas@HQ.DHS.GOV>; 'Greely, Jacqueline' <Jacqueline.Greely@HQ.DHS.GOV>

Cc: Douglas Causey <dcausey@alaska.edu>; Elizabeth Matthews <ematthews@alaska.edu>; Elizabeth Dickinson <esdickinson@alaska.edu>; Randy Kee <rakee@alaska.edu>; 'Kamerer, Susan (CTR)' <susan.kamerer@associates.hq.dhs.gov>

Subject: RE: Highlighted sections for your review and approval ADAC Year 5 Program Change Request

Thank you very much Theo.

Jacque please let me know what you need from me to secure your approval. There will be two subawards that need modification as soon as possible.

Thank you for your assistance; have a great day!

Respectfully-

Heather

Heather L. Paulsen

Director of Business Development and Grants and Contracts

Business Enterprise Institute

Finance Director

Arctic Domain Awareness Center

University of Alaska Anchorage

1901 Bragaw Street

Anchorage, AK 99508

907-786-1663

From: Gemelas, Theophilos <theophilos.gemelas@HQ.DHS.GOV>
Sent: Wednesday, March 27, 2019 11:19 AM
To: Heather Paulsen <hpaulsen@alaska.edu>; Kameron, Susan (CTR) <susan.kameron@associates.hq.dhs.gov>
Cc: Douglas Causey <dcausey@alaska.edu>; Elizabeth Matthews <ematthews@alaska.edu>; Elizabeth Dickinson <esdickinson@alaska.edu>; Randy Kee <rakee@alaska.edu>; Greely, Jacqueline <Jacqueline.Greely@HQ.DHS.GOV>
Subject: RE: Highlighted sections for your review and approval ADAC Year 5 Program Change Request

Heather, I approve the change request. Please work with Jacquie to finalize. V/r, Theo

From: Heather Paulsen <hpaulsen@alaska.edu>
Sent: Wednesday, March 27, 2019 2:30 PM
To: Kameron, Susan (CTR) <susan.kameron@associates.hq.dhs.gov>
Cc: Douglas Causey <dcausey@alaska.edu>; Elizabeth Matthews <ematthews@alaska.edu>; Elizabeth Dickinson <esdickinson@alaska.edu>; Randy Kee <rakee@alaska.edu>; Gemelas, Theophilos <theophilos.gemelas@HQ.DHS.GOV>
Subject: RE: Highlighted sections for your review and approval ADAC Year 5 Program Change Request

Hi Susan:

I can confirm that there are no additional funding needs to be taken from restricted funding and there are no impacts to the research projects and their outcomes. The funding was primarily natural employee attrition and salary savings.

Thank you for your assistance; please let me know if you will be routing approval to Jacquie or if you prefer that I do so?

Have a great day!

Respectfully-

Heather

Heather L. Paulsen

Director of Business Development and Grants and Contracts

Business Enterprise Institute

Finance Director

Arctic Domain Awareness Center

University of Alaska Anchorage

1901 Bragaw Street

Anchorage, AK 99508

907-786-1663

From: Kamerer, Susan (CTR) <susan.kamerer@associates.hq.dhs.gov>
Sent: Wednesday, March 27, 2019 5:37 AM
To: Heather Paulsen <hpaulsen@alaska.edu>; Gemelas, Theophilos <theophilos.gemelas@HQ.DHS.GOV>
Cc: Douglas Causey <dcausey@alaska.edu>; Elizabeth Matthews <ematthews@alaska.edu>; Elizabeth Dickinson <esdickinson@alaska.edu>; Randy Kee <rakee@alaska.edu>
Subject: RE: Highlighted sections for your review and approval ADAC Year 5 Program Change Request

Heather,

Theo spoke to Church about this yesterday. He agrees to the changes as long as no additional funding needs to be taken from restricted funding and there are no impact to the research projects and their outcomes.

Please let us know if you have any questions. Thanks!

V/R,

Susan Kamerer, PMP

Support Contractor

Science & Technology Directorate

U.S. Department of Homeland Security

(O) 202.254.6789

(C) 202.819.3999

From: Heather Paulsen <hpaulsen@alaska.edu>
Sent: Monday, March 25, 2019 12:59 PM
To: Kamerer, Susan (CTR) <susan.kamerer@associates.hq.dhs.gov>; Gemelas, Theophilos <theophilos.gemelas@HQ.DHS.GOV>
Cc: Douglas Causey <dcausey@alaska.edu>; Elizabeth Matthews <ematthews@alaska.edu>; Elizabeth Dickinson <esdickinson@alaska.edu>; Randy Kee <rakee@alaska.edu>
Subject: RE: Highlighted sections for your review and approval ADAC Year 5 Program Change Request

Hi Susan and Theo:



**ARCTIC DOMAIN
AWARENESS CENTER**
A DEPARTMENT OF HOMELAND SECURITY CENTER OF EXCELLENCE

Arctic Domain Awareness Center (ADAC)

A DHS Science and Technology Office of University Programs,

Center for Maritime Research

ADAC Work plan Program Year 5 Change Request to:

1 July 2018 - 30 June 2019

Version 2.5



Submitted by ADAC leadership team to DHS S&T OUP

4 March 2019

Douglas Causey, PhD, Principal Investigator, University of Alaska, Anchorage (UAA)

Larry Hinzman, PhD, Research Director, University of Alaska Fairbanks (UAF)

Randy Kee, Maj Gen (Ret.) USAF, MS, Executive Director, UAA

Heather Paulsen, MBA, Finance Director, UAA

LuAnn Piccard, MSE, PMP, Project Management Director, UAA

Elizabeth Mathews, MAS, Education and Administration Manager, UAA

The Arctic Domain Awareness Center (ADAC) is a U.S. Department of Homeland Security (DHS) Science and Technology (S&T) Office of University Programs (UP) Center of Excellence in Maritime Research (CMR).

ADAC supports the U.S. Coast Guard (USCG) and other DHS maritime missions in order to improve capability for Arctic search and rescue, humanitarian assistance, disaster response, and security. This includes efforts to “enable the decision maker” across those mission sets.

The Center is currently executing its Program Year 5 (1 July 2019-30 June 2019) DHS S&T UP approved workplan. The following information is made in reference to ADAC’s approved DHS S&T UP workplan from August 2018.

As a result of changes in personnel as previously communicated to DHS S&T UP by Center leadership, opportunities to advance approved investigations and facts learned through research investigations in partnership with USCG ADAC Project Champions or key USCG project supporters, ADAC submits the following Program Change Request (PCR) to DHS S&T UP Program Manager.

ADAC respectfully notes, this PCR does not request additional funding to be pulled from established reserves (specifically set aside for ADAC’s Arctic Incidents of National Significance 2017 (Arctic IoNS projects 2017) projects, but rather capitalizes on salary savings, changes in key personnel, and planned travel that will not be realized in this program year. Through approving this PCR, more funding can go to project content in year 5 than previously planned.

The following details these program and corresponding budgetary changes.

ADAC Center management change:

Education and Administration Manager (EAM), Elizabeth Matthews, MAS, University of Alaska Anchorage. Elizabeth replaces prior EAM, Malla Kukkonen who departed ADAC for employment at State of Alaska Department of Fish and Game. Elizabeth assumed ADAC’s Education and Administration Manager oversees ADAC’s student development program in early February 2019. Her duties include DHS Career Development Grant Scholarships and student research interns. ADAC’s EAM will oversee and support the Center’s student, summer internship program for ADAC Fellows and under-represented students from Minority Serving Institutions (MSI), Federal Tribal Designations (FTD), and Significant Minority Enrollment (SME) universities or colleges. ADAC’s EAM will lead efforts to recruit, enroll, and monitor student performance and to graduate entry into the Homeland Security Enterprise. The ADAC EAM leads administrative management functions and supports communications outreach.

Theme 1: Maritime Risk, Threat Analysis and Resilience Research

PROJECT: Developing Sea-Ice and Weather Forecasting Tools to Improve Situational Awareness and Crisis Response in the Arctic.

Project PI: Dr. Nathan Kettle

Lead Institution: University of Alaska Fairbanks

Supporting Team: Dr.'s Hajo Eicken, Andy Mahoney, and Lawson Brigham (UAF)

Project change request.

Assigned graduate student researcher, Dina Abdul-Fattah has requested a semester of study abroad at Stockholm University as a University of the Arctic exchange student with the Department of Computer and Systems Science and will spend the summer conducting final fieldwork for her PhD dissertation; therefore, she has requested that her fellowship be placed on hold at this time. This will result in cost savings that are applied elsewhere across the ADAC Year 5 program in support of student activities.

Note: ADAC is in work with research team and Alaska Ocean Observation System to support a research transition proof of principal sea-ice observation reporting protocol that utilizes research outcomes with a University of Alaska and Alaska Ocean Observation System (AOOS) jointly funded radar system at Point Barrow Alaska. Currently ADAC has procured UAA provided transition funding as a "program match" with AOOS to establish a new HF radar for the University of Alaska Fairbanks facility at Point Barrow.

PROJECT: High-Resolution Modeling of Arctic Sea Ice and Currents (HIOMAS)

Project PI: Dr. Jinlun Zhang

Lead Institution: University of Washington

Project change request. N/A.

Note: ADAC is establishing a transition destination Letter of Agreement between the University of Washington, Alaska Ocean Observation System, Axiom Data Sciences and the University of Alaska to transition HIOMAS from ADAC conducted research to an Arctic operational support program, with target transition of 30 June 2019.

Theme 2: Maritime Domain Awareness Projects

PROJECT: Arctic Oil Spill Modeling

Project PIs: Dr. Scott Socolofsky, Texas A&M University—College Station and Dr. Jifeng Peng University of Alaska Anchorage.

Project change request.

Dr. Jifeng replaces Dr. Thomas Ravens as project co-investigator. Dr. Ravens' removal from the program was determined as a result of confidential audit #18-438 conducted by the University of Alaska, Statewide Office of Audit and Consulting Services. Dr. Peng has needed project association, relevant research experience and skillset to meet the deliverables and milestones set forth in the Year 5 workplan. As explained in budget section, this change has resulted in project cost savings, which ADAC has planned for repurpose to meet a Year 5 project that needed additional funding.

Note: ADAC continues in transition research activities of AOSM to the General NOAA Operational Modeling Environment (GNOME).

PROJECT: Ice Condition Index (ICECON) for the Great Lakes

Project PI: Dr's. Jifeng Peng and Shawn Butler, University of Alaska Anchorage and Andrew Mahoney, University of Alaska Fairbanks.

Project change request.

Dr. Jifeng replaces Dr. Thomas Ravens as project co-investigator. Dr. Ravens' removal from the program was determined as a result of confidential audit #18-438 conducted by the University of Alaska, Statewide Office of Audit and Consulting Services. Dr. Peng has needed project association, relevant research experience and skillset to meet the deliverables and milestones set forth in the Year 5 workplan.

Additionally, as a result of the Project "Council of Experts" meeting, U.S. Coast Guard Great Lakes ICECON project leadership has requested ADAC to assess Canadian Pressurized Ice Model as a potential alternative approach to using environmental data from the Great Lakes Environmental Research Laboratory (GREL), as a new research task. Currently, USCG Project Support, Mr. Mark Van Haverbeke, USCG R&D Center, is in work to gain suitable permissions with the government of Canada in order for this assessment to proceed. Accordingly, depending on the timeframe in which USCG can provide the Canadian Pressurized Ice Model for assessment, this task may be conducted in Program Year 5, or if permission is delayed, may be conducted in Program Year 6. At this point, ADAC has directed the project investigators to conduct familiarization and develop a framework to assess the Canadian Pressurized Ice Model, while awaiting the formal permission of the government of Canada, as related by USCG project support. In order to support project development, ADAC is assigning a new Center Fellow to work in association with Dr. Peng on research investigations,

Note: Currently, the U.S. National Ice Center reports their Great Lakes region ice desk is utilizing the ADAC ICECON "Beta" version, provided previously.

PROJECT: Using Vessel Tracking Data to Prioritize Bathymetric Surveying in a Rapidly Changing Arctic

Project PI: Dr. Carol Janzen, Alaska Ocean Observing System.

Project change request. N/A.

Note: Project completed as planned and scheduled in DHS S&T UP approved Program Year 5 workplan. No changes requested to this project.

PROJECT: The Arctic All-Hazards GIS Platform

Project PI: Dr. Marcus Boyd, University of Maryland

Project change request. N/A.

Note: Project is executing as scheduled in DHS S&T UP approved Program Year 5 workplan. No changes requested to this project.

PROJECT: Arctic Vessel Monitoring Geofencing/Alert Awareness

Project Pls: Buddy Custard, CAPT, USCG (Ret), Alaska Maritime Prevention & Response Network and Dr. Shawn Butler, University of Alaska Anchorage.

Project change request.

In fall of 2018, UAA College of Engineering, Dr. Fred Barlow stepped down as Dean and Dr. Kenrick Mock was requested to replace him in an interim capacity. In assuming these new duties, Dr. Mock conveyed that he would not be able to continue research on the ADAC project and also be Interim Dean. Accordingly, ADAC reviewed suitable candidates to replace Dr. Mock, and determined Dr. Shawn Butler has exceptionally well qualified. She will serve as overall lead in the product development, integrating user requirements with technical application as described in the associated project workplan. This includes integration of stakeholder interactions in producing the vessel alert user application.

As a result of ADAC project interactions with USCG District 17, Dr. Butler is developing a new task to be conducted in Program Year 6, which is to investigate a version of the GeoFencing software for inclusion in USCG "CG-1View" visualization within the Homeland Security Information Network (HSIN).

Towards that end, Dr. Butler will conduct specified analytics to ensure product conforms to U.S. Coast Guard (USCG) Project Champion and other key USCG and non-USCG stakeholders specified needs. Dr. Butler will work with CAPT (Ret) Custard to execute conducting project level ADAC "research to capability process," and ensure training documentation and co-produce peer journal article at project's conclusion. Dr. Butler will also be responsible for supervision of the ADAC undergraduate student fellows detailed to the project. As explained in budget section, this change has resulted in project cost savings, which ADAC has planned for repurpose to meet a Year 5 project that needed additional funding. In order to support project development, ADAC is assigning a new Center Fellow to work in association with Dr. Butler on research investigations,

Additional Maritime Domain Awareness Projects in association with Arctic IoNS 2017. Currently, ADAC has reserved funding for projects awarded via the Arctic IoNS 2017 workshop from October 2017. Originally, 5 project proposals were accepted to develop into workplans. As a result of extensive discussions with HQ USCG, ADAC is awaiting formal cancellation of project proposal "Clean Oil Spill In-situ burning in Arctic." Further, ADAC has noted that the 4 remaining projects have grown in costs compared to the original submissions, essentially consuming the funds originally planned for all 5 projects. ADAC has covered the minor shortfall in these now mature proposed budgets as a result of applying other savings from across the Center. Note: as planned in the ADAC program Year 5 budget, \$1,211,053 is reserved for projects associated with Arctic IoNS 2017 workshop, and the sum total of all 4 proposed budgets requires an additional \$31, 884, which has been applied from realized savings principally from personnel and planned travel.

PROJECT (Proposed): Mitigating the Damage to Arctic Copepods from Surface Oil Spills: When to Apply Dispersants:

Project Pls: Dr. Christoph Aeppli, Dr. David Fields, Bigelow Laboratory for Ocean Sciences.

Note: Project Workplan and Budget are in review by DHS S&T UP and HQ USCG.

PROJECT (Proposed): Photo enhanced toxicity of dispersed and burned crude oil to Arctic mussels:

Project PI: Dr. Patrick L. Tomco, University of Alaska Anchorage.

Note: Project Workplan and Budget are in review by DHS S&T UP and HQ USCG.

PROJECT (Proposed): Marine Induced Polarization Methods for the Detection and Mapping of Oil in an Arctic Oil Spill, Including Investigation of Oil Within and Under Broken Ice Fields.

Project Pls: Ms. Kari Walker and Mr. Kevin Hand, IntelliSense Marine LLC, Dr's. Scott Socolofsky, Texas A&M-College Station, and Jeff Wynn, Williamson and Associates, Inc.

Note: Project Workplan and Budget are in review by DHS S&T UP and HQ USCG.

PROJECT (Proposed): Oil Spill Modeling for Improved Response to Arctic Maritime Spills: The Path Forward.

Project Pls: Dr Nancy Kinner, Director Coastal Response Research Center (CRRC) and Center for Spills and Environmental Hazards (CSE), University of New Hampshire.

Note: Project Workplan and Budget are in review by DHS S&T UP and HQ USCG.

Theme 3: Maritime Technology Research

PROJECT: Propeller-driven Long-Range AUV (LRAUV) for Under Ice Mapping of Oil Spills and Environmental Hazards

Project Pls: Dr. James Bellingham, Woods Hole Oceanographic Institute, Amy Kukulya Woods Hole Oceanographic Institution and Mr. Brett W. Hobson, Monterey Bay Aquarium Research Institute (MBARI)

Project change request.

While pursuing year 5 program investigations In order to take advantage of new breakthroughs in marine AUV technology that improves docking and under ice navigation, project team is underway is a large collaborative software development effort between MBARI, WHOI and a new software vendor (Intuaware). Accordingly, in order to add additional content to LRAUV, researchers are implementing and testing of a new USB modem (umodem) to include advanced navigation capabilities inclusive of long baseline (LBL) and ultrashort baseline (USBL) systems. Additionally, researchers developed new firmware at WHOI, tested in surrogate transponders and then sent to MBARI for testing with LRAUV. These 'special' transponders allow researchers to continue with vehicle testing in advance of completion of the LRAUV Arctic buoys. Both umodem, DUSBL and whisker box are new hardware and software capabilities provided to LRAUV to assist with under ice navigation and docking.



Achieving this additional content in ADAC Program Year 5 is achievable via Center's savings in salary and travel, and will create a more capable platform than originally envisioned in the Year 5 program. Additionally, through realized savings at being unable to recruit a suitable fellow in the vicinity of WHOI, project team has created three LRAUV Arctic buoys vs the originally planned two. Meanwhile, ADAC has compensated for this loss of a fellow at WHOI, through adding fellows at other institutions, including University of Alaska Anchorage, University of Texas El Paso and University of New Hampshire.

In order to achieve the new advances in LRAUV platform capability, research PI, Mr. Brett Hobson is requesting an additional effort for scientific leadership of the project, supervision of the MRARI team, and assisting with the assembly of the buoyancy system, assembly of the actuators, thruster motor, batter pack and assisting WHOI personnel with the LRAUV sea tests, and support the test and validation of the added DUSBL (homing array) and dynamic docking (whisker box) retrieval system.

Support is requested help with quality control, test and assembly the LRAUV, assembly and testing of the RF antenna system, assembly of the buoyancy system, assembly of the actuators, thruster motor, batter pack and assisting WHOI personnel with the AUV sea tests and design brackets to mount the WHOI Whisker Box and DUSBL into the nose of the LRAUV.

Lastly, as described in the budgetary session, additional research tasks are requested in order to complete the following actions:

- Work with IntuAware and create a new navigation mode to navigate using Long Base Line (LBL) acoustic beacons.
- Conduct at-sea tests using WHOI supplied LBL transponders.
- Help IntuAware modify existing MBARI plume tracking algorithm and LRAUV vehicle code to work for oil leak plumes.
- Conduct at least two multi-day sea tests of plume tracking missions from Moss Landing using chlorophyll as the oil proxy.
- Pack up the WHOI/DHS LRAU into shipping crates for WHOI to ship to Santa Barbara/channel islands oil sensing mission.
- Support five days of LRAUV operations offshore Santa Barbara, plus vehicle remote piloting from MBARI.
- Support a three-day deployment for freshwater under ice investigations.
- Modify existing LRAUV missions to perform acoustic homing using the WHOI DUSBL.
- Implement acoustic abort and return home mission.

PROJECT: Arctic Incidents of National Significance (IoNS) and Medium and Long Term Environment (MaLTE) workshops

Project PI: Randy (Church) Kee, ADAC Executive Director, University of Alaska Anchorage

Project change request. N/A.

No changes requested to this project.

Note: Due to partial U.S. government closure, the Arctic IoNS 2019 planned workshop has slipped from mid-March 2019 to mid-May 2019. While ADAC has already completed its planned Arctic MaLTE workshop in September 2018 (and released a comprehensive knowledge product on 9 Jan 2019), the Center is planning a small/scoped student led MaLTE workshop at Point Barrow Alaska, on/about 25-26 June 2019,

PROJECT: Arctic Incidents of National Significance (IoNS) 2019 RFP

Project PI: TBN

Project change request. N/A. No changes requested to this project.

Note: Due to partial U.S. government closure, ADAC anticipates completion of the planned Rapporteurs Report and associated Request for Proposal (RFP) by 30 June 2019. ADAC plans to receive proposals for review by 1 Sep 2019 and establish projects by 15 Jan 2020.

Theme 4: Integration of Science and Engineering with Maritime Security Governance and Policy Research

No projects currently awarded align to this Theme; therefore, no funding is dedicated to this theme and no change is being requested.

Theme 5: End to End (E2E)

No projects currently awarded align to this Theme; therefore, no funding is dedicated to this theme and no change is being requested.

Theme 6: Integrated Education

PROJECT: Education Outreach and Workforce Development

Project PI: Ms. Elizabeth Matthews, Education and Administration Manager, University of Alaska Anchorage.

Project change request. With the departure of the previous and the establishment of the new Education and Administration Manager (EAM), along with two additional graduate student who elected to discontinue further ADAC studies this program year (one via a deferment for study abroad), has resulted in salary savings which has been applied to program content across the center in the discussed in the budgetary section.

ADAC was able to recruit additional graduate students to support the Center's Arctic Summer Intern ASIP project, assist with upcoming ADAC Arctic IoNS 2019 project, and creating Center knowledge products, specifically an Arctic shipping paper and assigning research associated with the Alaska-Norway project. The Alaska-Norway project is in support of the Alaska-based Institute of the North, providing ADAC's STEM oriented students an opportunity to participate in an academically oriented broadening experience. ADAC has been remarkably successful at recruiting spring semester 2019, currently with 16 overall fellows, and planned in gaining an additional two undergraduate fellows.



The Center will meet DHS S&T UP threshold of \$200,000 of annual center funding dedicated to student programs.

PROJECT: Career Development Grant (CDG) Fellowships

Project PI: Ms. Elizabeth Matthews, Education and Administration Manager, University of Alaska Anchorage

Project change request. N/A. No changes requested to this project.

Note: CDG Fellowships are planned to conclude on 30 June 2019.

PROJECT: Arctic Summer Research Internship

Project PIs: Ms. Elizabeth Matthews, University of Alaska Anchorage and Dr. Craig Tweedie, University of Texas-El Paso

Project change request. ADAC requests increase this funding to allow for two UTEP students, two United States Naval Academy (USNA) midshipmen, one United States Coast Guard Academy (USCGA) cadet, two University of New Hampshire (UNH) students and three University of Alaska students, by re-allocating savings from across ADAC Program year 5. Request to increase support by reallocating funds from UTEP to UAA (fully agreed between both universities and increase funding by leveraging travel planned in Program Year 5 for the DHS Summit (which will not be held until Program Year 6). Additionally, two days have been added to allow a student led MaLTE workshop that includes younger representation and viewpoints addressed in Utqiagvik. This program change also allows for UTEP to have two MSI to be enrolled as ADAC fellows this spring semester and participate in the ASIP in the summer to include travel and per diem costs in Anchorage and Utqiagvik.

Conclusion/Summary.

Since the establishment of the Center leadership team in January 2016, ADAC has worked tirelessly to be exceptional stewards of the resources provided by DHS S&T UP to advance science & technology, education programs and Arctic-specific knowledge products useful for USCG and other DHS Arctic operators. The described ADAC Year 5 Program Change Requests provide a unique opportunity to further advance content of the overall ADAC Program Year 5 that addresses fact of life changes to the center and found opportunity in a manner that requires no additional resources to the center to accomplish. Further, incorporation of these changes as described advances ADAC's rate of return from 92 cents to 94 for each DHS S&T UP dollar invested in direct program content.

Budgetary details corresponding to the above programmatic discussions are described starting on the following page.

Rebudget Request and Justification by Theme by Project:

Theme	Project Name	Year 5 Funding	Rebudget Request	Total Costs
1-Maritime Risk, Threat Analysis, and Resilience Research	Developing Sea-Ice and Weather Forecasting Tools to Improve Situational Awareness and Crisis Response in the Arctic	\$ 258,300.26	\$ (21,886.34)	\$ 236,413.92
1-Maritime Risk, Threat Analysis, and Resilience Research	High resolution Modeling of Arctic Sea Ice and Currents	\$ 90,058.00	\$ -	\$ 90,058.00
	Theme 1: Subtotal	\$ 348,358.26	\$ (21,886.34)	\$ 326,471.92
2-Maritime Domain Awareness Research	Arctic Oil Spill Modeling	\$ 199,999.00	\$ (10,085.04)	\$ 189,913.96
2-Maritime Domain Awareness Research	Ice Conditions Index for the Great Lakes Region	\$ 246,062.45	\$ (21,795.90)	\$ 224,266.55
2-Maritime Domain Awareness Research	Using Vessel Tracking Data to Prioritize Bathymetric Surveying in a Rapidly Changing Arctic	\$ 91,444.79	\$ -	\$ 91,444.79
2-Maritime Domain Awareness Research	The Arctic All-Hazards GIS Platform	\$ 351,519.00	\$ -	\$ 351,519.00
2-Maritime Domain Awareness Research	Arctic Vessel Monitoring Geofencing/Alert Awareness	\$ 302,582.00	\$ 766.26	\$ 303,348.26
2-Maritime Domain Awareness Research	Reserve Funding (Issues RFP)	\$ 1,211,053.00	\$ 31,844.00	\$ 1,242,897.00
	Theme 2: Subtotal	\$ 2,402,660.24	\$ 729.32	\$ 2,403,389.56
3-Maritime Technology Research	Propeller Driven Long Range Autonomous Underwater Vehicle for Under-Ice Mapping of Oil Spills and Environmental Hazards	\$ 996,973.00	\$ 79,126.00	\$ 1,076,099.00
3-Maritime Technology Research	Arctic IoNS (2019) Oil Spill Focus RFP	\$ 989,548.17	\$ -	\$ 989,548.17
3-Maritime Technology Research	Arctic IoNS and MaLTE workshops (2019)	\$ 138,970.00	\$ -	\$ 138,970.00
	Theme 3: Subtotal	\$ 2,125,491.17	\$ 79,126.00	\$ 2,204,617.17
4-Integration of Science and Engineering with Maritime Security Governance and Policy Research		\$ -	\$ -	\$ -
	Theme 4: Subtotal	\$ -	\$ -	\$ -
5-End to End		\$ -	\$ -	\$ -
	Theme 5: Subtotal	\$ -	\$ -	\$ -
6-Integrated Education	Education and Outreach and Workforce Development	\$ 314,513.00	\$ (40,322.02)	\$ 274,190.98
6-Integrated Education	Career Development Grant Fellowships	\$ 24,871.56	\$ -	\$ 24,871.56
6-Integrated Education	Arctic Summer Research Internship	\$ 174,595.00	\$ 22,680.00	\$ 197,275.00
	Theme 6: Subtotal	\$ 513,979.56	\$ (17,642.02)	\$ 496,337.54
	Management and Center Administration Costs (includes Institutional Support Costs)	\$ 787,298.55	\$ (40,326.96)	\$ 746,971.59
Total		\$ 6,177,787.78	\$ -	\$ 6,177,787.78

Theme 1: Maritime Risk, Threat Analysis and Resilience Research

PROJECT: Developing Sea-Ice and Weather Forecasting Tools to Improve Situational Awareness and Crisis Response in the Arctic

Project PI: Dr. Nathan Kettle, University of Alaska Fairbanks

Total Project Budget Request: \$258,300.26 (see budget object class and justification below for project composite)

University of Alaska Anchorage: \$47,619 (request to rebudget \$21,886.34 to other project needs)

University of Alaska Fairbanks: \$210,621.26 (no change being requested)

Budget Request by Object Class:

Object Class	Year Five Propose	Rebudget Request	Total Funding
Salary and Fringe Benefits	\$156,533.51	(\$14,612.00)	\$141,921.51
Travel	\$5,121.21	\$0.00	\$5,121.21
Contractual	\$5,420.65	\$0.00	\$5,420.65
Commodities	\$1,500.00	\$0.00	\$1,500.00
Equipment	\$0.00	\$0.00	\$0.00
Other (Tuition)	\$4,194.00	\$207.00	\$4,401.00
Indirect	\$85,530.89	(\$7,481.34)	\$78,049.55
Total	\$258,300.26	(\$21,886.34)	\$236,413.92

University of Alaska Anchorage

Total Budget Request for University of Alaska Anchorage: \$25,732.66

Budget Request by Object Class for University of Alaska Anchorage:

Object Class	Year Five Propose	Rebudget Request	Total Funding
Salary and Fringe Benefits	\$28,720.00	(\$14,612.00)	\$14,108.00
Travel	\$0.00	\$0.00	\$0.00
Contractual	\$0.00	\$0.00	\$0.00
Commodities	\$0.00	\$0.00	\$0.00
Equipment	\$0.00	\$0.00	\$0.00
Other (Tuition)	\$4,194.00	\$207.00	\$4,401.00
Indirect	\$14,705.00	(\$7,481.34)	\$7,223.66
Total	\$47,619.00	(\$21,886.34)	\$25,732.66

Project Budget Justification and Narrative for the University of Alaska Anchorage:

Other Personnel:

Graduate student researcher, Dina Abdul-Fattah has requested a semester of study abroad at Stockholm University as a UArctic exchange student with the Department of Computer and Systems Science and will also need to spend the summer conducting final fieldwork for her dissertation; therefore, she has requested that her fellowship be placed on hold at this time.

Benefits are applied according to the University of Alaska Anchorage—approved federally negotiated fringe benefit rates. This also includes health insurance as required for graduate students.

Total request for salary and fringe benefits to rebudgeted: \$14,612

Other Costs (Student Support):

Graduate student tuition costs are included for the graduate student (academic year only). 18 hours of tuition (9 fall, 9 spring) @ \$466/credit hour at half of the tuition costs as per the DHS terms and conditions. Tuition costs were slightly higher than expected and therefore \$207 makes her tuition costs whole.

Total request for other costs: \$207

Indirect Costs:

Facilities and Administrative (F&A) Costs are negotiated with the University of Alaska Anchorage's cognizant federal authority and on sponsored research are calculated at 51.2% of the modified total direct costs (MTDC). MTDC includes total direct costs

(TDC) minus tuition, scholarships/fellowships, subaward amounts over \$25,000, participant support costs, and equipment over \$5,000. A copy of the rate agreement is available upon request.

Total request for indirect costs for rebudget: \$7,481.34

PROJECT: High Resolution Modeling of Arctic Sea Ice and Currents (HIOMAS)

Project PI: Dr. Jinlun Zhang, University of Washington

No changes requested to this project.

Theme 2: Maritime Domain Awareness Projects

PROJECT: Arctic Oil Spill Modeling

Project PIs: Dr. Scott Socolofsky, Texas A&M University—College Station and Dr. Jifeng Peng University of Alaska Anchorage

Total Project Request: \$199,999 (see budget object class and justification below for project composite)

Texas A&M University—College Station: \$100,000 (no changes requested)

University of Alaska Anchorage: \$99,999 (repurpose funding by \$10,085.04)

Project Budget Request by Object Class:

Object Class	Year Five Proposed	Rebudget Request	Total Funding
Salary and Fringe Benefits	\$63,363.00	(\$6,670.00)	\$56,693.00
Travel	\$0.00	\$0.00	\$0.00
Contractual	\$0.00	\$0.00	\$0.00
Commodities	\$0.00	\$0.00	\$0.00
Equipment	\$0.00	\$0.00	\$0.00
Other (Subaward to Texas A&M)	\$100,000.00	\$0.00	\$100,000.00
Other (Student Support)	\$4,194.00	\$0.00	\$4,194.00
Indirect	\$32,442.00	(\$3,415.04)	\$29,026.96
Total	\$199,999.00	(\$10,085.04)	\$189,913.96

Individual Project Budget Components:

University of Alaska Anchorage

Total Budget Request for the University of Alaska Anchorage: \$99,999 (reduce funding to be repurposed to another project by \$10,085.04)

Budget Request for the University of Alaska Anchorage by Object Class:

Object Class	Year Five Proposed	Rebudget Request	Total Funding
Salary and Fringe Benefits	\$63,363.00	(\$6,670.00)	\$56,693.00
Travel	\$0.00	\$0.00	\$0.00
Contractual	\$0.00	\$0.00	\$0.00
Commodities	\$0.00	\$0.00	\$0.00
Equipment	\$0.00	\$0.00	\$0.00
Other (Student Support)	\$4,194.00	\$0.00	\$4,194.00
Indirect	\$32,442.00	(\$3,415.04)	\$29,026.96
Total	\$99,999.00	(\$10,085.04)	\$89,913.96

Budget Justification for the University of Alaska Anchorage:

Senior Personnel Salaries:

Because of confidential audit #18-438 conducted by the University of Alaska, Statewide Office of Audit and Consulting Services, Dr. Tom Ravens has been removed as the Research PI from this project. ADAC has replaced Dr. Jifeng Peng replace Dr. Tom Ravens in his role. Dr. Peng has been with the project in past years and has the knowledge and skillset to meet the deliverables and milestones set forth in the Year 5 workplan. Dr. Ravens was not able to utilize summer funding and there is a substantial difference in pay between Drs. Ravens and Peng, ADAC is requesting that the salary difference be repurposed to another project that needs additional funding.

Other Personnel Salaries: (no changes requested)

Fringe Benefits:

Benefits are applied according to the University of Alaska Anchorage's approved federally negotiated fringe benefit rates. Fringe benefits also includes health insurance for graduate students at \$2,437 annually.

Total request for salary and fringe benefits for personnel to be rebudgeted: \$6,670

Other Costs (Student Support): (no changes requested)

Indirect Costs:

Facilities and Administrative (F&A) Costs are negotiated with the University of Alaska Anchorage's cognizant federal authority and on sponsored research are calculated at 51.2% of the modified total direct costs (MTDC). MTDC includes total direct costs (TDC) minus tuition, scholarships/fellowships, subaward amounts over \$25,000, participant support costs, and equipment over \$5,000. A copy of the rate agreement is available upon request. The indirect rate applied for this request is based on the current approved F&A Rate Agreement.

Total request for indirect costs to be rebudgeted: \$3,415.04

PROJECT: Ice Condition Index (ICECON) for the Great Lakes

Project PI: Drs. Jifeng Peng and Shawn Butler, University of Alaska Anchorage and Andrew Mahoney, University of Alaska Fairbanks

Total Project Budget Request: \$224,266.55 (decrease funding by \$21,795.90)

University of Alaska Anchorage: \$111,520.55 (decrease funding)

University of Alaska Fairbanks: \$112,746 (no change being requested)

Project Budget Request by Object Class:

Object Class	Year Five Proposed	Rebudget Request	Total Funding
Salary and Fringe Benefits	\$139,642.00	(\$19,117.00)	\$120,525.00
Travel	\$6,974.00	\$0.00	\$6,974.00
Contractual	\$0.00	\$0.00	\$0.00
Commodities	\$1,000.00	\$0.00	\$1,000.00
Equipment	\$0.00	\$0.00	\$0.00
Other (Student Support)	\$23,391.00	\$7,109.00	\$30,500.00
Indirect	\$75,055.45	(\$9,787.90)	\$65,267.55
Total	\$246,062.45	(\$21,795.90)	\$224,266.55

Individual Project Budget Components:

University of Alaska Anchorage:

Total Budget Request for University of Alaska Anchorage: \$111,520.55 (decrease funding by \$21,795.90 to repurpose funding to other projects)

Budget Request by Object Class for University of Alaska Anchorage:

Object Class	Year Five Proposed	Rebudget Request	Total Funding
Salary and Fringe Benefits	\$69,998.00	(\$19,117.00)	\$50,881.00
Travel	\$2,704.00	\$0.00	\$2,704.00
Contractual	\$0.00	\$0.00	\$0.00
Commodities	\$0.00	\$0.00	\$0.00
Equipment	\$0.00	\$0.00	\$0.00
Other (Student Support)	\$23,391.00	\$7,109.00	\$30,500.00
Indirect	\$37,223.45	(\$9,787.90)	\$27,435.55
Total	\$133,316.45	(\$21,795.90)	\$111,520.55

Budget Justification and Narrative for University of Alaska Anchorage:

Senior Personnel Salaries and Fringe Benefits:

Because of confidential project #18-438 conducted by the University of Alaska, Statewide Office of Audit and Consulting Services, Dr. Tom Ravens has been removed as the Research PI from this project. ADAC is requesting that Dr. Jifeng Peng replace Dr. Tom Ravens in his role. Dr. Peng has been with the project in past years and has the knowledge and skillset to meet the deliverables and milestones set forth in the Year 5 workplan. Dr. Ravens was not able to utilize summer funding and there is a substantial difference in pay between Drs. Ravens and Peng, ADAC is requesting that the salary difference be repurposed to allow for a computer science undergraduate student to be brought onto the project for the spring and summer semesters (2019) and then use the remaining savings to be applied to other projects that need additional funding.

Total request for senior personnel and fringe benefits to be rebudgeted: \$19,117

Other Personnel Salaries: (no changes requested)

Travel: (no changes requested)

Other Costs (Student Support): (increase funding by \$7,109)

Graduate student tuition costs are included for the graduate student (academic year only). 18 hours of tuition (9 spring) @ \$466/credit hour at half of the tuition costs as per the DHS terms and conditions. Support is also requested for undergraduate Kelsey Frazier (December graduation) to continue to assist Drs. Ravens and Mahoney with validation of the model at \$1,000 per month for six months. Support is requested for a TBN undergraduate student for 12 months' effort at \$1,000 per month. Tuition costs are \$2,196 per year per undergraduate student. Request is to increase funding to support another undergraduate student for five month with tuition costs at \$2,109 to help support the additional request to:

1. Assist to obtain the license of the Pressured Ice Model software from CRNC;
2. Run the model to generate ice source data for the ICECON calculation;
3. Re-calibrate ICECON algorithm based on the Pressured ICE Model data;
4. Evaluate adding extra ice parameters such as ice ridge, ice pressure available from the Pressured ICE Model;
5. Establish the new algorithm for ICECON calculation based on Pressured Ice Model;

6. Visualize the ICECON index on ArcGIS.

Total request for other costs to be rebudgeted: \$7,109

Indirect Costs:

Facilities and Administrative (F&A) Costs are negotiated with the University of Alaska Anchorage's cognizant federal authority and on sponsored research are calculated at 51.2% of the modified total direct costs (MTDC). MTDC includes total direct costs (TDC) minus tuition, scholarships/fellowships, subaward amounts over \$25,000, participant support costs, and equipment over \$5,000. A copy of the rate agreement is available upon request.

Total request for indirect costs to be rebudgeted: \$9,787.90

PROJECT: Using Vessel Tracking Data to Prioritize Bathymetric Surveying in a Rapidly Changing Arctic
Project PI: Dr. Carol Janzen, Alaska Ocean Observing System
No changes requested to this project.

PROJECT: The Arctic All-Hazards GIS Platform
Project PIs: Dr. Marcus Boyd, University of Maryland
No changes requested to this project.

PROJECT: Arctic Vessel Monitoring Geofencing/Alert Awareness
Project PIs: Buddy Custard, CAPT, USCG (Ret), Alaska Maritime Prevention & Response Network and Dr. Shawn Butler, University of Alaska Anchorage
Total Project Budget Request: \$302,582 (\$302,582 in carry forward funding)

Alaska Maritime Prevention & Response Network: \$98,283 (no change to budget being requested)

University of Alaska Anchorage: \$204,299 (increase funding by \$766.26)

Project Budget Request by Object Class:

Object Class	Year Five Proposed	Rebudget Request	Total Funding
Salary and Fringe Benefits	\$13,726.00	(\$4,187.00)	\$9,539.00
Travel	\$0.00	\$0.00	\$0.00
Contractual	\$94,280.00	\$0.00	\$94,280.00
Commodities	\$0.00	\$0.00	\$0.00
Other (Subaward)	\$98,283.00	\$0.00	\$98,283.00
Other (Student Support)	\$28,194.00	\$7,097.00	\$35,291.00
Indirect	\$68,099.00	(\$2,143.74)	\$65,955.26
Total	\$302,582.00	\$766.26	\$303,348.26

Individual Project Budget Components:

University of Alaska Anchorage:

Total Budget Request for University of Alaska Anchorage: \$205,065.26 (request to increase funding by \$766.26)

Budget Request by Object Class for University of Alaska Anchorage:

Object Class	Year Five Proposed	Rebudget Request	Total Funding
Salary and Fringe Benefits	\$13,726.00	(\$4,187.00)	\$9,539.00
Travel	\$0.00	\$0.00	\$0.00
Contractual	\$94,280.00	\$0.00	\$94,280.00
Commodities	\$0.00	\$0.00	\$0.00
Equipment	\$0.00	\$0.00	\$0.00
Other (Student Support)	\$28,194.00	\$7,097.00	\$35,291.00
Indirect	\$68,099.00	(\$2,143.74)	\$65,955.26
Total	\$204,299.00	\$766.26	\$205,065.26

Budget Justification for the University of Alaska Anchorage:

Senior Personnel Salaries:

The UAA College of Engineering Dean, Dr. Fred Barlow stepped down as Dean and Dr. Kenrick Mock was requested to replace him in an interim capacity. Dr. Mock conveyed that he would not be able to continue research on the ADAC project and also be Interim Dean; therefore, ADAC is requesting 120 hours of effort for co-scientific leadership of the project from Dr. Shawn Butler. She will serve as overall lead in the product development, integrating user requirements with technical application as described in the associated project workplan. This includes integration of stakeholder interactions in producing the vessel alert user application. Dr. Butler will conduct specified analytics to ensure product conforms to U.S. Coast Guard (USCG) Project Champion and other key USCG and non-USCG stakeholders specified needs. Dr. Butler will work with Mr. Custard to execute conducting project level ADAC "research to capability process," and ensure training documentation and co-produce peer journal article at project's conclusion. Dr. Butler will also be responsible for supervision of the ADAC undergraduate student fellows detailed to the project. This requested replacement has resulted in salary savings since Dr. Butler makes less per hour than Dr. Mock.

Fringe Benefits:

Benefits are applied according to the University of Alaska's fixed fringe benefit rates for FY18. Rates are 30.50% for faculty. A copy of the rate agreement is available at: <http://www.alaska.edu/cost-analysis/negotiation-agreements/>

Total salary and fringe benefits request for rebudget: \$4,187.00

Contractual: (no requested changes)

Other (Student Support Costs):

The University of Alaska Anchorage is requesting to support an additional undergraduate student at \$1,000 per month stipend for the remaining five months. Additionally, UAA is requesting in keeping with the other ADAC Fellows and previous DHS Terms and Conditions half the tuition costs for each student for a semester (\$2,097) to assist Dr. Butler with the project. These undergraduate student will continue development of the project as appropriately directed and be able to further additional milestones requested by USCG D-17.

Total request for other (Student Support) costs to be repurposed from other savings: \$7,097

Indirect Costs:

Facilities and Administrative (F&A) Costs are negotiated with the University of Alaska Anchorage's cognizant federal authority and on sponsored research are calculated at 51.2% of the modified total direct costs (MTDC). MTDC includes total direct costs (TDC) minus tuition, scholarships/fellowships, subaward amounts over \$25,000, participant support costs, and equipment over \$5,000. A copy of the rate agreement is available upon request. The indirect rate applied for this request is based on the current approved F&A Rate Agreement.

Total request for indirect costs to be rebudgeted: \$2,134.74

PROJECT: RFP Projects (Reserve Funding in Association with Arctic IoNS 2017)

Project Pls: TBN

Total Project Budget Request: \$1,211,053

Project Budget Request by Object Class:

Object Class	Year Five Proposed	Rebudget Request	Total Funding
Salary and Fringe Benefits	\$0.00	\$0.00	\$0.00
Travel	\$0.00	\$0.00	\$0.00
Contractual	\$0.00	\$0.00	\$0.00
Commodities	\$0.00	\$0.00	\$0.00
Equipment	\$0.00	\$0.00	\$0.00
Other (Participant Travel Stipends)	\$0.00	\$0.00	\$0.00
Other (Reserve Funding for RFP)	\$1,211,053.00	\$31,844.00	\$1,242,897.00
Other (Tuition)	\$0.00	\$0.00	\$0.00
Indirect	\$0.00	\$0.00	\$0.00
Total	\$1,211,053.00	\$31,844.00	\$1,242,897.00

Funding is being held in reserve for project budgets to be finalized.

Tentatively the following projects have been selected for funding if approved:

- Mitigating the Damage to Arctic Copepods from Surface Oil Spills: When to Apply Dispersants: \$288,246 (project total)
- Photo enhanced toxicity of dispersed and burned crude oil to Arctic mussels: \$293,571
- Marine Induced Polarization Methods for the Detection and Mapping of Oil in an Arctic Oil Spill, Including Investigation of Oil Within and Under Broken Ice Fields: \$484,254 (project total)
- Oil Spill Modeling for Improved Response to Arctic Maritime Spills: The Path Forward: \$176,826 (project total)

In order to fund fully these projects if approved at the current requested budgetary levels an additional \$31,844 is requested to be repurposed from salary savings from changes in personnel and from salary savings realized from normal turnover from departed staff in management costs.

Theme 3: Maritime Technology Research

PROJECT: Propeller-driven Long-Range AUV for Under Ice Mapping of Oil Spills and Environmental Hazards

Project Pls: Dr. James Bellingham, Woods Hole Oceanographic Institute, Amy Kukulya Woods Hole Oceanographic Institution

Monterey Bay Aquarium Research Institute: \$19,999; request is to increase funding by \$79,126

Woods Hole Oceanographic Institute: \$954,974 (no changes requested)

New Total Project Budget Request: \$974,973

Project Budget Request by Object Class:

Object Class	Year 5 Funding	Rebudget Request	Total Funding
Salary and Fringe Benefits	\$0.00	\$0.00	\$0.00
Travel	\$0.00	\$0.00	\$0.00
Contractual	\$0.00	\$0.00	\$0.00
Commodities	\$0.00	\$0.00	\$0.00
Equipment	\$0.00	\$0.00	\$0.00
Other (Subawards)	\$996,973.00	\$79,126.00	\$1,076,099.00
Indirect	\$0.00	\$0.00	\$0.00
Total	\$996,973.00	\$79,126.00	\$1,076,099.00

Individual Project Budget Components:

Monterey Bay Aquarium Research Institute (MBARI)

Total Budget Request for Monterey Bay Aquarium Research Institute: \$99,125 (request to increase funding by \$79,126)

Budget Request by Object Class for Monterey Bay Aquarium Research:

Object Class	Year 5 Funding	Rebudget Request	Total Funding
Salary and Fringe Benefits	\$13,114.00	\$45,886.00	\$59,000.00
Travel	\$0.00	\$0.00	\$0.00
Contractual	\$0.00	\$5,000.00	\$5,000.00
Commodities	\$0.00	\$1,000.00	\$1,000.00
Equipment	\$0.00	\$0.00	\$0.00
Other	\$0.00	\$0.00	\$0.00
Indirect	\$6,885.00	\$27,240.00	\$34,125.00
Total	\$19,999.00	\$79,126.00	\$99,125.00

Budget Justification and Narrative for Monterey Bay Aquarium for Increase in Funding:

Senior Personnel Salaries:

Research PI, Mr. Brett Hobson is requesting an additional 50 hours' effort for scientific leadership of the project, supervision of the MBARI team, and assisting with the assembly of the buoyancy system, assembly of the actuators, thruster motor, batter pack and assisting WHOI personnel with the AUV sea tests, and support the test and validation of the Whisker Box and DUSBL.

Other Personnel Salaries:

Support is requested for Research Keift for 165.5 hours to help with quality control, test and assembly the LRAUV, assembly and testing of the RF antenna system, assembly of the buoyancy system, assembly of the actuators, thruster motor, batter pack and assisting WHOI personnel with the AUV sea tests and design bracketry to mount the WHOI Whisker Box and BUSBL into the nose of the LRAUV. Additional hours (49 hours) are requested for Mr. Ben Raanan. 150 hours are requested for an LRAUV Op Engineer. The above mentioned personnel will complete the following with the additional funding:

- Work with IntuAware and create a new navigation mode to navigate using Long Base Line (LBL) acoustic beacons (16 hours)
- Conduct at-sea tests using WHOI supplied LBL transponders (49 hours)
- Help IntuAware modify existing MBARI plume tracking algorithm and LRAUV vehicle code to work for oil leak plumes (18 hours)



- Conduct at least two multi-day sea tests of plume tracking missions from Moss Landing using chlorophyll as the oil proxy (99 hours)
- Pack up the WHOI/DHS LRAU into shipping crates for WHOI to ship to Santa Barbara or TBD Gulf of Mexico Location (20 hours)
- Support five days of LRAUV operations offshore Santa Barbara or TBD Gulf of Mexico with at least one person on-site plus vehicle remote piloting from MBARI (86 hours)
- Support a three-day deployment at a TBD frozen lake with one person on-site (105 hours)
- Modify existing LRAUV missions to perform acoustic homing using the WHOI DUSBL (10 hours)
- Implement acoustic abort and return home mission (16 hours)

Fringe Benefits:

Benefits are applied according to the Monterey Bay Aquarium Research Institute set annually. The base is labor dollars and the pool costs consist of payroll taxes, health benefits, retirement benefits, workers' compensation and leave. The rate for full and part-time regular employees is 57.15%.

Total request for salary and fringe benefits: \$45,886

Materials and Supplies:

\$1,000 is requested for various cameras, lights, hardware, and connectors to complete the above outlined tasks.

Total request for materials and supplies: \$1,000

Contractual:

\$5,000 is requested for IntuAware for software engineering and acoustic communication services.

Total request for contractual: \$5,000

Indirect Costs:

Facilities and Administrative (F&A) Costs are negotiated with the Monterey Bay Aquarium Research Institute's cognizant federal authority and on sponsored research are calculated at 52.5% of the modified total direct costs (MTDC). MTDC includes total direct costs (TDC) minus tuition, scholarships/fellowships, subaward amounts over \$25,000, participant support costs, and equipment over \$5,000. A copy of the rate agreement is available upon request. The indirect rate applied for this request is based on the current approved F&A Rate Agreement.

Total request for indirect costs: \$27,240

PROJECT: Arctic Incidents of National Significance (IoNS) 2019 RFP

Project PI: TBN

Total Project Budget Request: \$989,548.17 (carryforward funding)

No changes requested to this project.

PROJECT: Arctic Incidents of National Significance (IoNS) and Medium and Long Term Environment (MaLTE) workshops

Project PI: Randy (Church) Kee

Total Project Budget Request: \$138,970 (see budget object class and justification below for project composite)

No changes requested to this project.

Theme 4: Integration of Science and Engineering with Maritime Security Governance and Policy Research

No projects currently awarded align to this Theme; therefore, no funding is dedicated to this theme and no change is being requested.

Theme 5: End to End (E2E)

No projects currently awarded align to this Theme; therefore, no funding is dedicated to this theme and no change is being requested.

Theme 6: Integrated Education

PROJECT: Education Outreach and Workforce Development

Project PI: Ms. Elizabeth Matthews, Education and Administration Manager, University of Alaska Anchorage

Total Project Budget Request: \$314,513 (request to rebudget funding into another project by \$40,322.02)

Project Budget Request by Object Class:

Object Class	Year Five Proposed	Rebudget Request	Total Funding
Salary and Fringe Benefits	\$160,026.76	(\$26,668.00)	\$133,358.76
Travel	\$0.00	\$0.00	\$0.00
Contractual	\$23,325.00	\$0.00	\$23,325.00
Commodities	\$4,000.00	\$0.00	\$4,000.00
Other (Student Support)	\$36,780.00	\$0.00	\$36,780.00
Other (Student Travel)	\$0.00	\$0.00	\$0.00
Indirect	\$90,381.24	(\$13,654.02)	\$76,727.22
Total	\$314,513.00	(\$40,322.02)	\$274,190.98

Project Budget Justification:

Senior Personnel Salaries:

Education and Administration Manager, Ms. Malla Kukkonen has been replaced by Ms. Elizabeth Matthews. Ms. Kukkonen resigned in December 2018 and Ms. Matthews was on boarded mid-February 2019. Additionally, Ms. Matthews' rate of pay is lower than the previous incumbent; therefore there is salary savings during this transition period. Ms. Matthews will oversee the activities of the students along with ADAC faculty mentors and ensure compliance for workplans. Ms. Matthews will arrange the Research Day Symposium in Anchorage where students will present their research and also be assisting with project evaluation and bringing recruitment efforts to workforce development capacity and opportunities for DHS and ADAC. Salary savings is being requested to be used on other project content to further deliverables and milestones for ADAC projects.

Other Personnel Salaries:

Support was requested for two graduate students to work on individual projects. Ms. Jessica Faust opted to fulfill her DHS commitment by teaching rather than pursue her PhD degree and defer her commitment; therefore funding originally budgeted for Ms. Faust was not utilized in the fall semester. ADAC was able to recruit additional graduate students on curriculum for the Center's Arctic Summer Intern ASIP project, assisting with upcoming ADAC Arctic IoNS 2019 project, and creating Center knowledge products, specifically an Arctic

shipping paper and assigning research associated with the Alaska-Norway project. The Alaska-Norway project is in support of the Alaska-based Institute of the North, providing ADAC's STEM oriented students an opportunity to participate in an academically oriented broadening experience. ADAC has been successful at recruiting spring semester 2019, currently at 16 overall fellows, and potentially gaining an additional two fellows. The Center will meet DHS S&T UP threshold of \$200,000 of center funding.

Fringe Benefits:

Since both the Education and Administrative Manager and graduate students are benefited position, there is savings from fringe benefits.

Total request for salary and fringe benefits for personnel requested to be rebudgeted:
\$26,668

Contractual Services: (no change requested)

Other Costs (Student Support): (no change requested)

Indirect Costs:

With the salary and fringe benefit savings, there is an offset in Facilities and Administrative (F&A) costs. F&A costs are negotiated with the University of Alaska Anchorage's cognizant federal authority and on sponsored research are calculated at 51.2% of the modified total direct costs (MTDC). MTDC includes total direct costs (TDC) minus tuition, scholarships/fellowships, subaward amounts over \$25,000, participant support costs, and equipment over \$5,000. A copy of the rate agreement is available upon request. The indirect rate applied for this request is based on the current approved F&A Rate Agreement.

Total request for indirect costs to be rebudgeted: **\$13,654.02**

PROJECT: Career Development Grant (CDG) Fellowships

Project PI: Ms. Elizabeth Matthews, Education and Administration Manager, University of Alaska Anchorage

Total Project Budget Request: \$24,671.56 (carryforward funding)

No changes requested to this project.

PROJECT: Arctic Summer Research Internship

Project PI: Ms. Elizabeth Matthews, University of Alaska Anchorage and Dr. Craig Tweedie, University of Texas-El Paso

Total Project Budget Request: **\$174,595 (request to increase funding by \$22,680 and rebudget among UTEP and UAA)**

Project Budget Request by Object Class:

Object Class	Year Five Proposed	Rebudget Request	Total Funding
Salary and Fringe Benefits	\$45,949.00	\$0.00	\$45,949.00
Travel	\$6,000.00	\$0.00	\$6,000.00
Contractual	\$0.00	\$0.00	\$0.00
Commodities	\$4,000.00	\$0.00	\$4,000.00
Other (Subaward)	\$50,000.00	\$22,680.00	\$72,680.00
Other (Participant Support)	\$40,000.00	\$0.00	\$40,000.00
Indirect	\$28,646.00	\$0.00	\$28,646.00
Total	\$174,595.00	\$22,680.00	\$197,275.00

University of Alaska Anchorage Budget Justification

Total Budget Request for the University of Alaska Anchorage: \$172,140 (request to increase funding by \$47,545 from management and UTEP budgets)

Budget Request for the University of Alaska Anchorage by Object Class:

Object Class	Year Five Proposed	Rebudget Request	Total Funding
Salary and Fringe Benefits	\$45,949.00	\$0.00	\$45,949.00
Travel	\$6,000.00	\$0.00	\$6,000.00
Contractual	\$0.00	\$0.00	\$0.00
Commodities	\$4,000.00	\$0.00	\$4,000.00
Other (Tuition)	\$0.00	\$0.00	\$0.00
Other (Participant Support)	\$40,000.00	\$47,545.00	\$87,545.00
Indirect	\$28,646.00	\$0.00	\$28,646.00
Total	\$124,595.00	\$47,545.00	\$172,140.00

Budget Justification for the University of Alaska Anchorage:

Senior Personnel Salaries:

Request to change the Education and Administration Manager from Ms. Malla Kukkonen to Ms. Elizabeth Matthews. Funding request for salary and fringe is still the same for this project. Ms. Kukkonen resigned from the Center in December 2018 and Ms. Matthews replaced her in February 2019. Hours and effort for leadership, development, and management of the ADAC and CDG Fellows program still remains the same for the ASIP. Ms. Matthews will oversee the activities of the students along with ADAC faculty mentors and ensure compliance for workplans.

Fringe Benefits:

Benefits are applied according to the University of Alaska's System approved federally negotiated fringe benefit rates. A copy can be provided upon request.

Total request for salary and fringe benefits for personnel: \$45,949

Travel: (no change requested)

Materials and Supplies Costs: (no change requested)

Participant Support/Travel Costs:

Funding is requested at \$8,000 per student for ten ADAC fellows to travel to Barrow and perform research for 14 days plus have an additional week in Anchorage and another seven week internship with remote participation. This participant support cost includes airfare, GSA lodging and per diem at base camp rates, and also includes associated research fees to conduct experiments.

Per the original workplan, each student during the summer months receives a \$1,000 monthly stipend (May, June, July, August) totaling \$4,000 which is has been separated from other monthly stipends. The \$8,000 is broken as follows per student:

- \$1,000 travel stipend for airfare to and from Anchorage, AK.
- Housing and meals (\$1,650) in Anchorage for the week prior to traveling to Barrow (approximate costs per student at (\$850 per student for housing, \$800 for meals; NOTE: these costs are significantly less than the GSA rates for the 10 days the students are in Anchorage)
- Airfare to and from Barrow (approximate costs per student are \$454.40—current price)
- Meals in Barrow (GSA rate is \$135 per day for 14 days, total \$1,890)
- Vehicle rental (done by UAA for the students is assessed at \$170 per day for ten days for ten students). Each cost assessed under this for students is \$170.
- UIC costs (permits, bear guard, snow machine rental, charter boat rental, vehicle rental and project supplies for their specific workplan, etc.) is assessed at \$2,500 per student for the 14 days in Barrow.
- NOTE: Housing costs are covered free of charge to all participants and ADAC personnel accompanying the trip by NOAA and Sandia National Labs
- Remaining \$335.60 is for incidental costs such as baggage fees, taxis, shuttles, laundry, etc.

Request is to increase this funding to allow for two UTEP students, two United States Naval Academy (USNA) midshipmen, one United States Coast Guard Academy (USCGA) cadet, two University of New Hampshire (UNH) students and three University of Alaska students. Request to increase support by reallocating funds from UTEP subaward (\$24,865) to UAA and increase funding in the travel line from the funding for the DHS Summit which will not be held in year six (\$15,000 was allocated to travel plus \$7,680 in F&A to reallocated to participant travel). UTEP was unable to work through their administration last year to make participant travel awards; therefore, UTEP requested that UAA make the awards to their participants and has requested a rebudget request to send funding back to UAA to allow their students to participate in the program. Additionally, two days have been added to have a MaLTE workshop that includes younger representation and viewpoints addressed in Utqiagvik. This increase in funding also allows for funding from UTEP to be given back to UAA to have two MSI students from UTEP be ADAC fellows this spring semester through summer (June 30, 2019). The funding for the UTEP students include (\$1,000 monthly stipend for each student plus \$4,000 in tuition and fee costs). Additional UTEP funding (returned to UAA) is to allow the two UTEP students to participate in the ASIP in the summer to include travel and per diem costs in Anchorage and Utqiagvik.

Total request for participant support: \$87,545

Indirect Costs:

Facilities and Administrative (F&A) Costs are negotiated with the University of Alaska Anchorage's cognizant federal authority and on sponsored research are calculated at 51.2% of the modified total direct costs (MTDC). MTDC includes total direct costs (TDC) minus tuition, scholarships/fellowships, subaward amounts over \$25,000, participant support costs, and equipment over \$5,000. A copy of the rate agreement

is available upon request. The indirect rate applied for this request is based on the current approved F&A Rate Agreement.

Total request for indirect costs: \$28,646

University of Texas-El Paso Budget Justification

Total Budget Request for the University of Texas-El Paso: \$25,135.00 (request from UTEP to rebudget and return funding to UAA)

Budget Request for the University of Texas-El Paso by Object Class:

Object Class	Year Five Proposed	Rebudget Request	Total Funding
Salary and Fringe Benefits	\$0.00	\$7,095.00	\$7,095.00
Travel	\$0.00	\$3,650.00	\$3,650.00
Contractual	\$0.00	\$3,250.00	\$3,250.00
Commodities	\$0.00	\$4,411.00	\$4,411.00
Other (Tuition)	\$0.00	\$0.00	\$0.00
Other (Participant Support)	\$50,000.00	(\$50,000.00)	\$0.00
Indirect	\$0.00	\$6,729.00	\$6,729.00
Total	\$50,000.00	(\$24,865.00)	\$25,135.00

Budget Justification for the University of Texas-El Paso:

Senior Personnel Salaries:

Request to charge Dr. Craig Tweedie's time for his effort (.5 months) to this project. Dr. Tweedie has provided the curriculum development, project design, and logistical support to this project. Dr. Tweedie will be present for the full three weeks of the internship with the students.

Fringe Benefits:

Benefits are applied according to the University of Texas-El Paso's approved federally negotiated fringe benefit rates. A copy can be provided upon request.

Total request for salary and fringe benefits for personnel: \$7,095

Travel:

Funding is requested in the amount of \$3,650 for Dr. Tweedie to stay in Anchorage for the introduction week for the students and then for two weeks in Barrow. This funding includes all travel costs (airfare, per diem, etc.).

Total request for travel: \$3,650

Materials and Supplies Costs:

Funds are requested in the amount of \$411 for Dr. Tweedie to print and copy necessary materials for the 10 students. Dr. Tweedie has also requested \$4,000 for materials and supplies for the two UTEP ADAC Fellows to start experimental design and projects for students in Barrow.

Total request for materials and supplies: \$4,411

Contractual:

Funds are requested for rental and leasing of equipment at Barrow from UIC. Last year's costs were split between UTEP and UAA for rental of snow machines, bear guards, boats, etc.

Total request for contractual: \$3,250

Participant Support Costs: (to be returned to UAA per the above justification)

Indirect Costs:

Facilities and Administrative (F&A) Costs are negotiated with the University of Texas El Paso's cognizant federal authority and off campus sponsored research are calculated at 26.0% of the modified total direct costs (MTDC). MTDC includes total direct costs (TDC) minus tuition, scholarships/fellowships, subaward amounts over \$25,000, participant support costs, and equipment over \$5,000. A copy of the rate agreement is available upon request. The indirect rate applied for this request is based on the current approved F&A Rate Agreement.

Total request for indirect costs: \$6,729

ADAC Management and Central Administration Costs:

Total Management and Central Administration Budget Request: \$343,002 (reduction in budget by \$40,326.96)

Management and Central Administration Budget Request by Object Class:

Object Class	Year Five Proposed	Rebudget Request	Total Funding
Salary and Fringe Benefits	\$117,853.00	(\$11,671.27)	\$106,181.73
Travel	\$85,000.00	(\$15,000.00)	\$70,000.00
Contractual	\$0.00	\$0.00	\$0.00
Commodities	\$24,000.00	\$0.00	\$24,000.00
Equipment	\$0.00	\$0.00	\$0.00
Other	\$0.00	\$0.00	\$0.00
Indirect	\$116,149.00	(\$13,655.69)	\$102,493.31
Total	\$343,002.00	(\$40,326.96)	\$302,675.04

Management Budget Justification:

Senior Personnel Salaries: (no change requested)

Other Personnel Salaries:

One of the members of the communications and media broadcast team resigned in November and his position has not currently been backfilled; therefore there is salary savings (approximately 349 hours) from this position that ADAC would like to request to be repurposed to project content. ADAC has been able to fill this position in a part-time temporary capacity and will seek to recruit for this position fully in July 2019.

Fringe Benefits:

Benefits are applied according to the University of Alaska Anchorage's approved federally negotiated fringe benefit rates. Due to salary savings, there is also been fringe benefits savings.

Total request for salary and fringe benefits for personnel to be repurposed: \$11,671.27

Travel:

Since the DHS Summit has been moved to year 6 of ADAC's funding cycle, ADAC is requesting the \$15,000 that was set aside for the summit be utilized to project content be allowed to be rebudgeted to another project instead of requesting carryforward funding this funding could be utilized this year to further some of the projects.

Total request for travel to be repurposed: \$15,000

Indirect Costs:

Facilities and Administrative (F&A) Costs are negotiated with the University of Alaska Anchorage's cognizant federal authority and on sponsored research are calculated at 51.2% of the modified total direct costs (MTDC). MTDC includes total direct costs (TDC) minus tuition, scholarships/fellowships, subaward amounts over \$25,000, participant support costs, and equipment over \$5,000. A copy of the rate agreement is available upon request. Total request for indirect costs to be repurposed: \$13,655.69