

University of Alaska
Revised Program Application for the
Partitioned Auke Bay Marine Station Property

Federal Real Property Assistance Program
United States Department of Education
August 11, 2017



Aerial view of the NOAA Auke Bay Marine Station property
and the adjoining
University of Alaska Southeast Anderson Building

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Identification of Applicant

Applicant Information

1. Legal Name: University of Alaska
2. Address: Box 75500, Fairbanks AK 99775-5000
3. Telephone Number: 907-450-8000
4. Email Address: ua.president@alaska.edu

Authorized Representative

1. Name: Dr. James R. Johnsen
2. Title: President
3. Telephone Number: 907-450-8000
4. Email Address: ua.president@alaska.edu

The Authorized Representative is identified in the University of Alaska Board of Regents resolution included as Exhibit 1.

Legal Authority

1. The citation of legal authority to acquire and hold title to real property is the Constitution of the State of Alaska, Art. VII, sec. 2; Alaska Statute 14.40.040(a)(2); the reference document is included as Exhibit 2.
2. The University of Alaska's IRS tax-exempt status determination letter is included as Exhibit 3.

Description of Partitioned Property

Real Property Specifics

1. Federal name of property: Auke Bay Marine Station (ABMS)
11305 Glacier Highway, Juneau AK 99801
2. Partition approximate acres: Property = 1.63 Acres
3. Improvements, including building reference names:
 1. Main Building

Personal Property Specifics

The University of Alaska (UA) believes that any personal property on the surplus site is the personal property of the U.S. Coast Guard (USCG), which the Coast Guard will be removing when it vacates. UA is not requesting any of that personal property.

Description of Current Properties

The table with the UA Regional Summary of Property as of August 9, 2016 (in acres) is included in Exhibit 8.

Proposed Educational Program

University of Alaska (UA) System Profile

Alaska was still a territory in 1915 when the United States Congress set aside federal lands near Fairbanks for a land-grant college. In 1917 the Alaska territorial legislature approved a statute establishing the Alaska Agricultural College and School of Mines which opened in 1922. In 1935 the institution was renamed the University of Alaska.

The University of Alaska (UA)¹ system, which covers an area one-fifth the size of the contiguous United States, is governed by an 11-member Board of Regents, appointed by the governor and confirmed by the legislature. All but the student regent, who serves a two-year term, serve eight-year staggered terms. The board reviews and approves educational policy, degree programs, campus development, and budget requests. The board appoints the president, who is responsible for the administration of the system and serves as executive officer of the Board of Regents.

There are three regionally-accredited universities in the UA system: UA Anchorage, UA Fairbanks and UA Southeast; each university has extended community campus sites across the state. A chancellor who reports to the president heads each university. These three regional universities, along with UA Statewide, make up the four major administrative units of the UA system.

University of Alaska Southeast (UAS) Profile

The University of Alaska Southeast² (UAS) mission is student learning enhanced by faculty scholarship, undergraduate research and creative activities, community engagement, and the cultures and environment of Southeast Alaska. UAS' vision is to be recognized as a destination of choice for students seeking excellent academic programs and engaging learning opportunities that integrate the environment and cultures of Southeast Alaska. UAS vigorously pursues this mission and vision in alignment with the UAS Strategic and Assessment Plan 2010-2017 (see Exhibit 9).³

UAS is a regional institution accredited by the Northwest Commission on Colleges and Universities (NWCCU). UAS has campuses in Juneau, Ketchikan, and Sitka. UAS faculty and staff place a special emphasis on supporting student success by providing personalized services, proactive advising, and student support. With no community colleges in the area, UAS is presented with the regional challenge of providing community college, baccalaureate, and graduate programs from one institution.

UAS regional academic units include the School of Arts & Sciences, School of Education, and School of Career Education. In fall semester of 2015, the UAS regional enrollment headcount was 967 full-time and 2,429 part-time students (Table 1.02b, p. 14);⁴ 15 percent of UAS students are Alaska Native and/or

¹ <https://www.alaska.edu/alaska/>

² <http://uas.alaska.edu/>

³ http://www.uas.alaska.edu/UAS_StrategicPlan/

⁴ UA in Review 2016, available through <https://www.alaska.edu/swbir/ir/>

American Indian (Table 1.04, p. 16).⁵ Southeast Alaska is the ancestral home of the Tlingit, Haida, and Tsimshian peoples; their presence extends back several thousand years. The preservation and advancement of Tlingit, Haida, and Tsimshian cultures and languages are increasingly reflected in UAS programs and campus activities.

UAS in the Juneau Community

UAS offers distinctive baccalaureate programs on the Juneau Campus, including marine biology, biology, environmental sciences, geography, mathematics, social sciences, liberal arts, Alaska Native studies and outdoor studies. Juneau is Alaska's capital city (population 31,300) and is the largest city and borough in Southeast Alaska (regional population 74,400). Juneau is geographically remote from the rest of the state and accessible only by water or air travel. The Alaska Marine Highway System connects Juneau to the road system by ferry; Alaska Airlines is the major air carrier serving the region.

UAS is a vital part of Juneau's economy, which is based upon government, mining, fishing, tourism, and services. In February 2015 the City and Borough of Juneau adopted the Juneau Economic Development Plan⁶ of which UAS is an integral part of two of the plan's strategy initiatives to: (a) Attract and Prepare the Next Generation Workforce; and (b) Recognize and Expand Juneau's Position as a Research Center. Both of these initiatives strengthen Juneau's community commitment to support teaching and research at UAS, particularly in Science, Technology, Engineering and Math (STEM) fields for workforce and economic development. UAS participates actively in the Juneau Economic Development Council's Research & Development Cluster Working Group.⁷ In March 2016 the working group spearheaded a community effort to have Southeast Alaska recognized as a "Community of Excellence in Research" by the Statewide Committee on Research (SCoR).⁸

In March 2015 the City and Borough of Juneau adopted the Auke Bay Area Plan.⁹ The plan highlights that the "University of Alaska Southeast (UAS) provides a breadth of higher education and outdoor programs that attract students from around the globe." The Auke Bay vision recognizes the importance of UAS students and programs to the community:

"Auke Bay is a community that offers: gateways to many outdoor activities, including fishing, kayaking, boating, hiking, and bicycling; study and programs at the University of Alaska Southeast; and history and cultural significance for the Aak'w Kwáan who have made Auke Bay their home for millennia."

UAS Juneau Campus Master Plan

The UAS Juneau Campus is situated on a spectacular setting between Auke Lake and Auke Bay with stunning views of water, mountains and glaciers. The Juneau Campus is the largest of the three UAS campuses and is the only campus with student housing; it has both a freshman dormitory and student apartments. The UAS Master Plan¹⁰ was revised and updated in 2012 to better align it with UAS' mission; the Master Plan shapes the UAS campuses to take strategic advantage of the physical and cultural environments of Southeast Alaska (see Exhibit 10).

⁵ Ibid

⁶ <http://www.juneau.org/archive/pdfs/20150226040900.pdf>

⁷ <http://www.jedc.org/southeast-cluster-initiative-rd>

⁸ <http://juneauempire.com/neighbors/2016-03-12/southeast-alaska-recognized-states-first-community-excellence-research>

⁹ <http://www.juneau.org/aukebayplan/>

¹⁰ http://www.uas.alaska.edu/facilities_services/master-plan.html

The revised UAS 2012 Master Plan was approved by the UA Board of Regents in 2013¹¹ and serves as a dynamic document that engages the broader UAS community in identification of existing facility needs and to take advantage of anticipated opportunities in light of changing educational program needs. As the primary planning tool for campus development, the UAS Master Plan invites “continuous improvement” in responding quickly and flexibly to emerging needs and opportunities. The Master Plan is used by faculty and administration for guiding, developing, and evaluating capital funding needs, designing new facilities, re-purposing those facilities already in place, and in enhancing the built and natural campus environments.

UAS is proposing to acquire the NOAA Auke Bay Marine Station (ABMS) to meet program needs and space priorities identified in the UAS 2012 Master Plan. The opportunity to acquire the ABMS property aligns well with the analysis and institutional priorities described in the 2012 Master Plan. The ABMS property was not identified as an opportunity for acquisition in the 2012 Master Plan because the property was leased by NOAA to the US Coast Guard (USCG) in 2007 when the NOAA Alaska Fisheries Science Center's Auke Bay Laboratories moved from the ABMS to the Ted Stevens Marine Research Institute (TSMRI) at Lena Point. Under the lease, the USCG assumed control of the ABMS property and the NOAA Auke Bay Laboratories (ABL) retained access to the site for use of office space, dive locker, and docking facilities. After the USCG occupied the ABMS, UAS did not have reason to believe this property would be available for future university acquisition so it was not included in the 2012 Master Plan.

In 2015 the UAS Master Plan Implementation Committee¹² reviewed the Juneau Auke Lake Strategy¹³ for orienting new development of facilities around the campus center. This strategy envisioned that UAS would: (a) lease or sell the Natural Sciences Research Lab (NSRL) building and move programs to a new science space on the main campus; and (b) create a new physical home for environmental science and geography programs. The strategy also included recognizing and interpreting the Tlingit cultural heritage of the Auke Lake and Auke Bay area.

Regarding program-based space needs, the 2012 Master Plan identified the addition of an academic classroom/office building (21,890 Gross Square Feet) as the number one Mid-Term Project Priority (2014-2019; pages 92-93). Long-term (2019 and beyond) the Master Plan assumes that the NSRL will have been sold/leased (page 42) and identifies the priority for a new Physical Science facility (25,200 GSF) located on the Juneau Campus (pages 94-95) to accommodate this shift of program operations. In analyzing space needs based on variance from national and university standards the Master Plan also identifies that the greatest space need on the Juneau Campus is for recreation and physical education (pages 42-43). The ABMS property is well-suited to meet both of these needs because it has historically supported similar science programs and it is well located for enhancing recreational and physical education programs.

Revised Educational Program for the Partitioned Auke Bay Marine Station (ABMS) Property

The rich natural, social, and cultural environment surrounding the Juneau Campus provides many opportunities for the place-based interdisciplinary programs offered by the Departments of Humanities, Social Sciences and Natural Sciences in the School of Arts and Sciences. Acquisition of the partitioned ABMS property is a strategic priority for the School of Arts & Sciences in order to provide a single on-campus location to consolidate the Department of Natural Sciences' teaching, learning, research, and

¹¹ https://cms-prod-edit.alaska.edu/files/bor/130411-12_Summary_of_Actions.pdf

¹² <http://www.uas.alaska.edu/vicechancellor/mpic.html>

¹³ Page 17; http://www.uas.alaska.edu/vicechancellor/docs/mpic-meeting-notes/2014-10-01/141001_mpic_master_plan_introduction_ppt_wkg.pdf

service activities for the bachelor’s degree programs in biology, marine biology, environmental science, and geography as envisioned in the UAS 2012 Master Plan.

Acquiring the partitioned ABMS property and Main Building adjacent to the UAS Anderson Building will provide UAS with the opportunity to spatially co-locate academic programs in the natural sciences and promote the development of interdisciplinary program convergence¹⁴ on the Juneau Campus. Promoting convergence is a national priority for university programs in the natural sciences; convergence will be required of future scientists and citizens to address the complex scientific questions facing society. Consultation with the faculty in the Department of Natural Sciences confirmed strong support for this property acquisition. UAS administration has endorsed this property acquisition with a commitment to utilize institutional funds, grants and gifts to develop the programs and facilities located there.

The revised educational program for the partitioned ABMS property contains four components from the prior UAS application:

- Component 1. Natural Sciences Research Laboratory (NSRL) program
- Component 2. Environmental science and geography program
- Component 4. Alaska Native Science and Engineering Program (ANSEP)
- Component 7. Marine operations for support of teaching and research programs

Program Component Descriptions and Rationale

Component 1: Natural Sciences Research Laboratory (NSRL) program

Relocate research and teaching activities and staff from the off-campus Natural Sciences Research Laboratory (NSRL) to the partitioned ABMS property.

a) Purpose of the program component

The purpose of the relocation of faculty and staff along with their research and teaching activities from the NSRL to the ABMS property is two-fold. The first purpose is to eliminate the physical separation of the NSRL operations from the main Juneau Campus (the NSRL is located 2 miles south of the main Juneau Campus on Glacier Highway). The second, and most important purpose, is to add a property to the campus that will maximize the ability of the faculty, staff and students in the Department of Natural Sciences to collaborate to teach, learn and do research in adjacent buildings on Auke Bay. Interdisciplinary baccalaureate programs in environmental science, geography, biology, marine biology and fisheries will be strengthened and enhanced by the creation of a contiguous waterfront complex that houses all of the biological and environmental science programs on the Juneau Campus.

b) Why the program component needs to be implemented

The spatial separation of UAS’ biological and environmental science facilities has created programmatic “silos” due to the separation of faculty, staff and students located at: (a) the Anderson Building , which houses the biology and marine biology programs; (b) the main campus

¹⁴ “Convergence is an approach to problem solving that cuts across disciplinary boundaries. It integrates knowledge, tools, and ways of thinking from science, technology, engineering and mathematics (STEM) disciplines to form a comprehensive synthetic framework for tackling scientific and societal challenges that exist at the interfaces of multiple fields.” [NRC. 2014](#). Convergence: Facilitating Transdisciplinary Integration of Life Science, Physical Science, Engineering, and Beyond. Washington, DC: The National Academies Press.

on Auke Lake , which houses the faculty offices and teaching classrooms for environmental science, geography, geology and physics; (c) the NSRL, which houses the research and Geographic Information Systems (GIS) labs and research staff for environmental science, geography, forestry, and chemistry; and (d) the off-campus US Forest Service Pacific Northwest Research Station Juneau Forestry Sciences Laboratory (USFS PNWRS JFSL), which houses the research faculty and staff of the Alaska Coastal Rainforest Center.

The second and third floors of the NSRL provide infrastructure (gas lines, compressed air, fume hoods, and electrical supply) to support the use of analytical chemistry instrumentation and the GIS computer laboratories for research and teaching purposes. The NSRL is currently used to support what faculty consider an incompatible mix of analytical and field-based research activities. Processing of field samples with wet and “dirty” equipment tends to cause temperature and humidity fluctuations. These uses interfere with the maintenance of the adjacent “clean” lab spaces dedicated to environmental controls for analytical instrumentation used for chemical and biological analyses.

Sample introduction and data acquisition on NSRL analytical instrumentation is software-driven and requires intermittent monitoring by faculty to ensure the quality of analyses. Travel to the NSRL from the main campus, where faculty offices and teaching resources are located, limits faculty time for sample analysis and student supervision in the labs to non-teaching weekdays, evenings or weekends when the faculty operator is able to remain on-site for continuous time periods.

The facilities available on the ABMS property Main Building would provide a better configuration of space to support both field and analytical laboratory work now conducted at NSRL. Based on the historical utilization of the ABMS facilities, the existing laboratory spaces in the Main Building can address the UAS need to separate sensitive analytical instrumentation in labs away from the temperature and humidity fluctuations caused by foot traffic and the associated dust and dirt from field equipment and samples.

c) How the program component will directly benefit students

The relocation of the NSRL program operations to the ABMS property directly benefits students in all of UAS’ bachelor’s degree programs through increased on-campus opportunities for interdisciplinary natural science courses and hands-on undergraduate research experiences in accessible faculty research laboratories. Relocating environmental science and geography research laboratories to the ABMS property will allow students greater ability to participate in undergraduate research activities in labs with faculty mentors. Greater access to employment opportunities as research technicians and laboratory assistants for grant-funded research will directly benefit students as a result of the relocation of the NSRL operations to the Juneau Campus.

Component 2. Environmental science and geography program

Relocate the environmental science and geography instructional programs and faculty and staff office spaces from the Auke Lake side of the Juneau Campus to the ABMS property located next to the Anderson Building (which houses biology and marine biology programs) on Auke Bay to co-locate these programs’ interdisciplinary teaching, research and service activities in one on-campus location.

a) Purpose of the program component

The move of the environmental science and geography program faculty, staff and instruction from their currently distributed campus locations to the facilities available on the ABMS property, which

is adjacent to the Anderson Building, would co-locate all of the baccalaureate-level science programs on the Juneau Campus. This consolidation would result in a tremendous boost to UAS faculty teaching and research capabilities by adding large, aesthetically-pleasing spaces dedicated to the environmental sciences and geography programs. These programs currently do not have co-located teaching, research and office spaces. Consolidation of the environmental science and geography programs with the biology and marine biology programs on a beautiful Auke Bay property would enhance the quality and visibility of UAS' signature interdisciplinary STEM programs.

b) Why the program component needs to be implemented

The UAS environmental science and geography instructional programs have one dedicated teaching laboratory and one lecture classroom with a small storage closet for all physical science instructional materials and field supplies. These programs share general assignment classroom space in the main Egan Classroom building with the Departments of Humanities and Social Sciences. Teaching in the Egan Classroom building requires capping enrollments below current levels of student demand. The separation of the program's storage room requires that faculty be responsible for the cumbersome (or sometimes impossible) transport of classroom demonstration equipment and materials across campus to the Egan Classroom building. The shared classrooms lack sinks and water, eliminating many possible laboratory demonstrations and exercises.

The lack of dedicated instructional space for environmental science and geography courses constrains the establishment of educational displays of instructional materials that are essential to effective learning in STEM programs and enhance the campus as a learning community. The ABMS Main Building has classroom space that can be dedicated to program instruction as well as storage rooms that could be used for housing, organizing, and making easily accessible the large quantity of scientific materials that the faculty uses for teaching both in lecture and lab classroom settings.

The UAS environmental science and geography program faculty offices are currently located in a building converted from a double-wide trailer and in a windowless office within the Department of Humanities office suite. The faculty offices in the ABMS Main Building are spacious, have abundant natural light provided by large windows overlooking Auke Bay, and are all on the same floor of a single building. Importantly, the Main Building has sufficient office space for co-locating all faculty, lab staff, term research professors, teaching and research assistants, and graduate students affiliated with the program. Locating biological and physical science faculty offices in the adjacent Anderson Building and ABMS Main Building will enhance the development of interdisciplinary collaborations among faculty and will facilitate student-faculty interactions across all natural science programs.

UAS's small student-to-faculty ratio is a distinctive feature of our academic offerings. The lack of a dedicated "home" space for environmental science and geography programs makes it difficult for faculty to develop a program identity and create a student-centered learning community, both of which are important factors in student retention and success. The insufficiency of common space and study room(s) dedicated to environmental science and geography program students makes it more challenging for students to meet to study together, to work on collaborative projects that are required in upper division courses, or to socialize with their peers and faculty mentors in an academic setting.

c) How the program component will directly benefit students

By relocating the environmental science and geography programs in the ABMS Main Building,

students can attend classes in classrooms and labs co-located with other science disciplines taught within the University. A dedicated teaching space will allow faculty to focus on improving student learning outcomes rather than on how to share teaching space with other non-science disciplines. Student-centered learning spaces would enable students to work collaboratively with their classmates and peers while interacting with faculty members who have their offices located in close proximity. Students would also have more study spaces designated for their use and opportunities for work-study jobs in research and teaching labs. A dedicated space that enhances student access to faculty and related program resources would improve academic performance and increase satisfaction of program students.

Component 4: Alaska Native Science and Engineering Program (ANSEP)

Dedicate space to the Alaska Native Science & Engineering Program (ANSEP)¹⁵ at UAS for offering and integrating academic support services and cultural program activities.

a) Purpose of the program component

ANSEP is a longitudinal academic model for student success in STEM fields that works with Alaska Native and rural students from the time they are in middle school to provide academic support through high school, college and graduate school. ANSEP increases university recruitment and retention rates through hands-on middle and high school outreach initiatives, rigorous summer bridging programs, focused academic learning communities, organized student cohorts, networks of peer and professional mentors, community-based learning, professional internships and undergraduate and graduate research projects.

UAS and ANSEP (which is located at the University of Alaska Anchorage (UAA) have a Memorandum of Understanding (MOU) to support the development of an active ANSEP component at UAS (see Exhibit 14). UAS and ANSEP are collaborating under the terms of the MOU to create a clear pathway for students to complete the Bachelor of Science degree at UAS with particular emphasis in marine biology or biology.

Under the program MOU, ANSEP students interested in biology, marine biology or fisheries are connected with UAS' ANSEP coordinator for academic advising. Currently there are >25 undergraduate students affiliated with ANSEP at UAS. These students form a cohort that participates in academic support activities including study recitations, weekly lunches, social events, and interdisciplinary undergraduate research. Future plans for ANSEP expansion at UAS include agency and industry-supported programs to engage middle and high school students in STEM activities on the Juneau Campus. UAS plans to develop ANSEP as a regional strategy to recruit Alaska Native students from across the Southeast Alaska region to attend college in Juneau and to pursue careers in STEM fields.

b) Why the program component needs to be implemented

Currently the Juneau Campus does not have adequate facilities to dedicate a program space for ANSEP activities. ANSEP activities are scheduled opportunistically across available general assignment classroom spaces. The UAS ANSEP coordinator regularly turns down offers of free program materials and supplies from UAA because of the lack of ANSEP program storage space. The ANSEP coordinator has to share a faculty office in the Anderson Building; shared office space

¹⁵ <http://www.ansep.net/index>

is inadequate for having confidential or sensitive student-faculty advising discussions. The inadequacy of space for ANSEP at UAS is in stark contrast to the space situation at UAA where ANSEP has its own dedicated building¹⁶ designed to serve students as a hub for learning, safety, and a community of belonging.

Under the program MOU, UAS is committed to provide a welcoming environment for ANSEP students on the Juneau Campus. Space dedicated to ANSEP on the ABMS property on Auke Bay would enhance UAS' welcome to Alaska Native students and would be used by students for studying, tutoring, conferences and other student-centered support services. The partitioned ABMS property will make it possible to expand UAS' commitment to ANSEP activities on the Juneau Campus and to bring them into greater alignment with the quantity and quality of those offered on the Anchorage and Fairbanks campuses.

c) How the program component will directly benefit students

The ABMS property is located on Auke Bay, which has been the home of the Aak'w Kwáan Tlingit people for hundreds of years. ANSEP students will directly benefit from the ABMS property by having a program home that provides a place to learn and to develop a learning community located in a beautiful place of cultural significance to Alaska Native people. The UAS Juneau Campus meets the criteria for being a Native American Serving Nontribal Institution¹⁷ and seeks to develop programs that serve Alaska Native and Native American students as part of its mission for student learning enhanced by the cultures and environment of Southeast Alaska.

Student academic support activities that will directly benefit students by being housed on the property include study groups, tutoring, weekly social events, outreach/recruitment activities and faculty-mentored undergraduate research. Opportunities for program collaboration between ANSEP and the UAS' Native and Rural Student Center¹⁸ on the ABMS property will directly benefit students by providing a place to blend academic support services and student life activities on the Juneau Campus.

Regional pre-college students will also directly benefit from expanded ANSEP space on the Juneau Campus because ANSEP is interested in hosting regional summer bridge programs (traditionally located in Anchorage) on the UAS Juneau Campus. These pre-college summer activities would bring hundreds of middle and high school students and their teachers to campus each year and engage them in STEM through ANSEP's proven program of K-12 district collaboration and support. ANSEP students will directly benefit from increased funding from ANSEP partners such as the USFS, NOAA, Alaska Department of Fish & Game and regional Alaska Native Corporations who have expressed interest in expanding ANSEP activities at UAS.

Component 7: Marine operations for support of teaching and research programs

Provide access to a dock and secure space to offer UAS students, faculty and community partners research vessel moorage and secure staging areas for marine operations in support of teaching and research.

a) Purpose of the program component

¹⁶ <http://www.ansep.net/about/ansep-building>

¹⁷ <http://www2.ed.gov/about/offices/list/ope/idades/t3t5-eligibles-2015.pdf>

¹⁸ <http://www.uas.alaska.edu/juneau/nrsc/>

UAS natural science programs are fully engaged in understanding the natural environment of Southeast Alaska “From Icefields to Oceans.”¹⁹ Integral to this program commitment is support for interdisciplinary field work which includes student and faculty access to the marine environment of the fiords and estuaries accessible from Auke Bay.

The ABMS property has historically served the region as a marine station for interdisciplinary biological and environmental research.²⁰ A marine station is defined as a center of scientific research, education, and outreach that is embedded in the environment in a location that is protected to serve both the university that owns the facility and the larger scientific community that uses it. The research conducted at a marine station is focused on local and regional environments, but marine stations commonly catalyze national and international scientific collaborations.²¹ Operation of the ABMS dock facility would give UAS the world-class distinction of having access to a dock facility dedicated to the support of undergraduate education located on the Juneau Campus.

“I believe that in the not too distant future a much larger share of biological research, from biochemistry to ecology, will be conducted at field stations that consist of nature preserves and have ready access to laboratories equipped to analyze and monitor processes at every level of biological organization, including the molecular. Field stations will also serve as key centers of education at all levels. **Universities and other institutions wise enough to invest in such stations now, even in the face of limited financial resources, will assure themselves of a much larger share in the future action.**” Edward O. Wilson²²

b) Why the program component needs to be implemented

All UAS natural science programs have strong field-based teaching and research activities that are conducted in the marine environment in and around Auke Bay. UAS owns and/or operates five small boats (12-foot length to 27-foot length) which serve as teaching and research platforms for SCUBA diving, fishing for field sampling, seawater collection, instrument deployment, and marine mammal observations. UAS has no secure boat moorage or storage space on the Auke Bay waterfront to support marine operations so faculty and students must utilize the public transient-use marinas in the area. UAS-owned boats are all trailered; trailered boats need to be put in and taken out of the water for each use, which is time consuming and laborious at public boat launch facilities which are insufficient for supporting marine operations in teaching and research.

Access to dedicated and secure space on the ABMS dock would allow small boats to be moored on the water adjacent to campus for days to weeks at a time providing easy and efficient access. Boats and pieces of marine equipment are currently stored at the Anderson Building and in modified 20-foot shipping containers located off campus behind the NSRL Building. Secure moorage and waterfront storage is particularly desirable given recent incidents of theft and damage to boats and equipment stored at NSRL in January 2016 and the Anderson Building in June 2017.

¹⁹ https://www.alaska.edu/files/epscor/pdfs/IcefieldtoOcean_Pamphlet_Final.pdf

²⁰ <http://www.afsc.noaa.gov/history/facilities/aukebaylab.htm>

²¹ National Academies Press, 2012. Enhancing the Value and Sustainability of Field Stations and Marine Laboratories in the 21st Century. <http://www.nap.edu/read/18806/chapter/1>

²² Ibid (emphasis added)

UAS has agency and community partners that are committed to developing cooperative funding agreements with UAS to ensure the continued operation of the dock facilities for teaching and research. Partners that have expressed interest in collaborating with UAS for use of the dock facilities include the UAF; NOAA ABL; Douglas-Island Pink and Chum (DIPAC, a private, non-profit salmon hatchery); USFS, and Alaska Department of Fish & Game.

The UAS School of Career Education offers a regional marine transportation program²³ that provides training in Juneau for students who seek a deck department career path, from entry level to deck officer, with USCG-approved instruction. Collaboration between Arts & Sciences and Career Education faculty to utilize the dock on the partitioned ABMS property is anticipated to: (a) train career-seeking students in vessel operations skills; and (b) train natural science students in marine safety skills for conducting research from boats in Alaskan waters.

c) How the program component will directly benefit students

Access to the dock facility from the ABMS property will provide UAS with a marine station capability that will benefit students with access to efficient, safe and secure marine operations. Students will benefit from the dock’s ability to support and enhance interdisciplinary activities for teaching and marine research in Auke Bay. Students will have a dedicated dock facility to learn safe, small boat handling skills; gain hands-on experience in conducting scientific operations in the marine environment; and practice skills that will enhance their employability and/or benefit them in future graduate studies.

Student Participation

Component 1: Natural Sciences Research Laboratory (NSRL) programs.

When relocated, UAS undergraduate students and UAF graduate students will participate in faculty-mentored research activities in environmental sciences and geography. The student participation numbers estimated below are measures and indicators of student research activities available from the University of Alaska Decision Support Database (QAdhoc) and the UAS Office of Institutional Effectiveness.²⁴

- The duplicated headcount of UAS undergraduate student researchers or interns enrolled for academic credit in an internship (S491); independent study (S497); or independent research (S498) in environmental science (ENVS), geography (GEOG) or geology (GEOL) is estimated at nine upper class (junior/senior) students per academic year. This estimate is based on the average of the five academic years of enrollment in these environmental science courses offered by the program between AY12 and AY16.

Headcount (duplicated)		AY					
COURSE_SUBJECT	COURSE_NUMBI	AY12	AY13	AY14	AY15	AY16	
ENVS	S498	5	3	3	6	2	
	S497			1	1		
	S491	2	3	4	2	3	
GEOG	S498	1			1	1	
	S491	1	1	2		1	
GEOL	S497			1			Average
Grand Total		9	7	11	10	7	9

Data from QAdhoc Report, Class List

²³ http://www.uas.alaska.edu/apply/programs/applied_tech/maritime.html

²⁴ <http://uas.alaska.edu/ie/index.html>

Details of the special course activities for undergraduate research-related coursework:

Headcount (duplicated)			AY					
COURSE_SUBJECT	COURSE_NUMB	COURSE_TITLE	AY12	AY13	AY14	AY15	AY16	
ENVS	S498	Juneau Icefld Rsrch Prog		1				
		Res: Analyzing Bathymtrc Chan	1					
		Res: Atmospheric Sci Mend Glac	1					
		Res: Dens Dep Germ/Kelp Spoa	1					
		Res: Forest Ecology				1		
		Res: Glacier Bay					1	
		Res: Glaciers of SE AK Databse	1					
		Res: Invst Taku Glacier Termin					1	
		Res: Kelp Distrbtn Mapping				1		
		Res: Landslides in SE AK					1	
		Res: Meteorol Data Snowpack					1	
		Res: Radar Analysis JIRP			1			
		Res: Sensor Data Management						1
		Res: Snow Data Analysis						1
		Res: Snowpack Thermal Regimes						1
		Res: Spatial Pattrn/Ocean Envi					1	
		Res: Suicide Basin/Sub-Glacier					1	
	Research in ENVS				1			
	Rsrch: Glacier Soils			1				
	S497	IS: Snow Hydrology Data Analys				1		
		IS: Volatile Organic Carbon Pa					1	
	S491	Int: ADFG: Bat Research					1	
		Int: ADFG: Snow Modeling					1	
		Int: Air Opperat Permit Compli					1	
		Int: Dept of Envir Conserv				1		
		Int: Discovery Southeast			1			
		Int: Environmntl Interpret I				1		
		Int: Hydrology Technician					1	
	Int: Map Contam Sites SE AK			1				
	Int: NOAA Weather Forcst Stn				1			
	Int: Spill Preven/Resp Techn				1			
	Int: Title V Permit Renewal	1						
	Internship: AK Coastal RainFor	1						
	Internship: AK Dept Fish/Game			1				
ENVS Total			7	6	8	9	5	
GEOG	S498	Res: Analysis/Glaciers/GIS					1	
		Res: Measure Glacier Geom/GPS				1		
		Research in GEOG	1					
	S491	Int: Environmntl Interpret II				1		
		Int: NOAA Science Comm					1	
Int: Strat Spill Preven/Resp					1			
	Intern: Consesrvatn NW			1				
	Intern: Forest Svc	1						
GEOG Total			2	1	2	1	2	
GEOL	S497	IS: Denali National Parks			1			
GEOL Total					1			
Grand Total			9	7	11	10	7	

Data from QAdhoc Report, Class List

- UAS undergraduate student technicians/assistants employed by sponsored research grants.

In addition to the academic coursework, environmental sciences and geography program students are employed by UAS faculty to be research technicians and field assistants with funding from sponsored research grants. The number of UAS students employed in NSRL program research grants is estimated at nine students per academic year - seven undergraduate and two graduate students. The grant-funded wages paid to student assistants averaged to about \$50,000 per academic year. This estimate is based on the average of the FY15-FY16 expenditures on student workers from departmental and sponsored program budgets managed by environmental sciences and geography faculty Principal Investigators (PIs).

		FISCAL_YEAR		Values		
		2015		2016		
General Descrip	Student	Sum of HOURS	Wages	Sum of HOURS	Wages	
Organized research	Student 1	20	\$ 220			
	Student 2	167	\$ 2,088			
	Student 3			63	\$ 800	
	Student 4			165	\$ 2,063	
	Student 5	196	\$ 2,842			
	Student 6	146	\$ 1,819	312	\$ 3,900	
	Student 7	358	\$ 5,460	86	\$ 2,463	
	Student 8	512	\$ 6,912			
	Student 9	8	\$ 100	293	\$ 3,663	
	Student 10	200	\$ 2,600	183	\$ 2,471	
	Grad Student 1	19	\$ 17,987			
	Grad Student 2			20	\$ 16,207	
	Grad Student 3	18	\$ 17,042	12	\$ 10,632	
Grand Total		1644	\$ 57,069	1133	\$ 42,198	\$ 50,000

Data from QAdhoc Report, Personal Services Detail

- UAF graduate students in MS/PhD programs who have UAS faculty thesis advisors/mentors.

The UAS environmental science and geography program does not offer graduate degrees. In order to be able to supervise and mentor graduate students UAS faculty may request affiliate appointments in UAF departments, which grant them the opportunity to serve as graduate advisors. UAS faculty may provide funding for research assistantships from their research grants. Graduate student advising is a recognized teaching activity in the UAS faculty workload and in the promotion and tenure evaluation criteria of the UAS Faculty Handbook.²⁵

UAF graduate students supervised by UAS faculty will be relocated from NSRL to the ABMS property. UAS faculty maintain a high level of research productivity which will be enhanced with the co-location of faculty offices, teaching classrooms/labs and research facilities. It is estimated that eight graduate students will participate in research activities in the ABMS facility based on the annual workloads and activity reports of the UAS faculty members that based their graduate student research activities at NSRL over the period AY15-AY16.

²⁵ <http://www.uas.alaska.edu/facultyhandbook/index.html>

Graduate Students Supervised by UAS Environmental Science and Geography Faculty at NSRL							Year	
Headcount							AY14	AY15
Program	Advising Role	Faculty	University	Department	Student			
MS	Committee member	Hoferkamp	UAF	Environmental Science	MS Student 1	1	1	
		Hood	UAF	Fisheries & Ocean Sciences	MS Student 2	1	1	
		Pyare	UAF	Fisheries & Ocean Sciences	MS Student 3		1	
				Institute of Northern Engineering	MS Student 7	1	1	
	Major advisor	Buma	UAF	Dept. of Natural Resources	MS Student 5	1		
		Hoferkamp	UAF	Chemistry	MS Student 6		1	
		Hood	UAF	Institute of Northern Engineering	MS Student 7		1	
		Pyare	UAF	Biology and Wildlife	MS Student 8		1	
MS Total						4	7	
PhD	Committee member	Hood	UAF	Fisheries & Ocean Sciences	PhD Student 1	1	1	
				Institute of Northern Engineering	PhD Student 2	1	1	
		Pyare	UAF	Fisheries & Ocean Sciences	PhD Student 3		1	
PhD Total						2	3	
Grand Total						6	10	

Data from Faculty Annual Activity Reports, AY14-AY15

Component 2. Environmental science and geography program

When relocated to the property, the duplicated headcount of students that will enroll in courses offered on the ABMS property in the environmental science and geography instructional program is estimated to be 310 per academic year (includes summer; excludes special course numbers S491, S497, S499). This estimate is based on the average of the five academic years of enrollment in the physical science courses (classroom and laboratory) offered by the program between AY13 and AY16.

Headcount (duplicate)	AY					
COURSE_SUBJECT	AY12	AY13	AY14	AY15	AY16	
ENVS	94	89	142	109	95	
GEOG	123	99	81	74	107	
PHYS	68	55	63	31	60	
GEOL	64	67	61	44	26	Average
Grand Total	349	310	347	258	288	310

Data from QAdhoc Report, Class List

Course section enrollments summarized in the table above are detailed by subject area in the table below:

Headcount (duplicate)			AY				
COURSE_SUBJECT	COURSE_NUMB	COURSE_TITLE	AY12	AY13	AY14	AY15	AY16
ENVS	S102	*Earth and Environment	18	18	18	17	18
	S110	Introduction to ArcGIS	8	14			
	S111	Intro to Differential GPS	5	8	8	6	5
	S193	ST: Juneau Icefield Res Prog	3	2	2		
	S193P	ST: After Ice, Lwr Glacier Bay	10				
		ST: Ocean Passage, Marine Sci	7				
	S212	Natural Hazards				2	
	S293	ST: Earth's Natural Hazards		8	6		
		ST: Field Methods/ Rsrch SE					2
		ST: Mendenhall Rsrch Exp				4	
	S309	Mobile GIS Tech/Applic	2		2	3	3
	S309A	Mobile GIS Tech/Applic	3		1	3	2
	S338	Intro to GIS	12	10	15	16	9
	S393	ST: Environmtl Interpretatn		1			
		ST: Glaciology					11
		ST: Natural Resources Mngmnt	7		10		
		ST: Sci/Polit/Econ Climate Chg			10		
		ST: Temperate Rainforest Ecolo			13		
	S397	IS: GIS Mapping Invasive Pl	1				
	S406	Remote Sensing					7
	S407	Snow Hydrology		4		3	
	S410	Adv Geog Info Systems	3	3		7	
	S414	Biogeochemistry	3		7		
S415	Biogeog & Landscp Ecology	1		9		8	
S422	Earth's Climate System				6		
S492	Environ Sci Seminar	3	5	9	8	4	
S493	ST: Climate and the Earth Syst		4				
	ST: Forest Ecology				10		
	ST: Glaciology			11			
S496	Juneau Icefield Research Prog	8	12	21	24	26	
ENVS Total			94	89	142	109	95

Data from QAdhoc Report, Class List

Headcount (duplicate)			AY				
COURSE_SUBJECT	COURSE_NUMB	COURSE_TITLE	AY12	AY13	AY14	AY15	AY16
GEOG	S101	*Loc/Global Intro Geography	50	38	26	21	21
	S102	*Earth and Environment	8	3	7	12	15
	S110	Introduction to ArcGIS	9				
	S111	Intro to Differential GPS	4	4	4	3	2
	S212	Natural Hazards				3	8
	S293	ST: Earth's Natural Hazards			2	2	
		ST: Temperate Rainforest Ecolo				10	
	S309	Mobile GIS Tech/Applic	2		3	1	2
	S309A	Mobile GIS Tech/Applic	3		2		
	S312	Humans & Environmt		19		4	
	S313	Natural Resource Management					6
	S338	Intro to GIS	5	9	16	9	5
	S350	Intrdisc Prspctv Climate Chnge					17
	S391	Int: UAS Sustainability Commi			1		
	S393	ST: Environmtl Interpretatn			4		
		ST: Natural Resources Mngmnt	9		5		
		ST: Poetics/Politics/ Space					9
	S406	Remote Sensing					7
	S407	Snow Hydrology		8		4	
S410	Adv Geog Info Systems	4	4		1		
S414	Biogeochemistry	2		1			
S415	Biogeog & Landscp Ecology	13		4		10	
S490	Coastal Temperate Rainforests	14					
	Geography Seminar		8	10	6	5	
GEOG Total			123	99	81	74	107

Data from QAdhoc Report, Class List

Headcount (duplicate)			AY				
COURSE_SUBJECT	COURSE_NUMB	COURSE_TITLE	AY12	AY13	AY14	AY15	AY16
PHYS	S102	*Survey of Physics	8	10	4		5
	S103	*College Physics I	34		31		31
	S104	*College Physics II	26		22		24
	S193	ST: Phys Sci for K-8 Teachers					6
		ST: Physical Sci K-8 Teachers		4			
		ST: Physical Science K-8 Tchr			6		
	S211	*General Physics I		22		12	
S212	*General Physics II		19		13		
PHYS Total			68	55	63	31	60

Data from QAdhoc Report, Class List

COURSE_SUBJECT	COURSE_NUMB	COURSE_TITLE	AY12	AY13	AY14	AY15	AY16
GEOL	S104	*Physical Geology	19	12	17	14	17
	S105	*Geological History Life	25	15	19	16	
	S271	Earth Materials		3			
	S300	Geology of Alaska	7		10		
	S301	DS: Geomorphology			1		
		Geomorphology		11		6	
	S302	Hydrology	6	7	10	8	
	S310	Glaciation and Climate Change		12			
	S393	ST: Geological Resrces/Impact					9
	S493	ST: Quat Geol Delta-Tok			7		
ST: Quat Geol POW Island		7					
ST: Quat Geol/Hum Hist Qtz Lk					4		
GEOL Total			64	67	61	44	26

Data from QAdhoc Report, Class List

As noted above, the environmental science and geography program has experienced declining enrollments due in part to reduction of classroom size and/or space available due to moves and relocations during remodeling of the program's former homes in the Hendrickson and Whitehead Buildings on the Auke Lake Campus in AY15 and AY16.

Component 4: Alaska Native Science and Engineering Program (ANSEP)

Within a dedicated space on the partitioned ABMS property the number of students that will participate in ANSEP instructional and academic support activities by AY16 is estimated annually to be 30 students (unduplicated headcount) based on a 20% growth target from the AY16 student participation level.

Component 7: Marine operations for support of teaching and research programs

With access to the dock the number of UAS students that will participate in marine operations and teaching/research activities in UAS' and other research community collaborators' boats at the undergraduate and graduate levels are estimated annually to be 12 undergraduate student researchers, 12 student technicians/assistants, and 12 graduate students advised by UAS faculty in MS/PhD graduate programs from UAF or other graduate institutions. This estimate is based on AY16 activity levels of marine operations conducted on the Juneau public access docks at Statter Harbor, Amalga Harbor and Echo Cove Harbor.

Faculty/Staff Participation

Component 1: Natural Sciences Research Laboratory (NSRL) programs

Ten staff persons will relocate from the NSRL to the partitioned ABMS property Main Building to conduct research activities at the undergraduate, graduate and post-doctoral levels:

Component	Component 1		
ABMS Program	Name	Title	Count of Headcount
NSRL	Dryer, Pat	Research Technician	1
	Graduate Student 1	Research Technician; Graduate Student	1
	Motyka, Roman	Professor, Geophysical Institute	1
	Plivelich, Michael	Research Technician	1
	Post-doctoral fellow (Amundson lab)	Post-doctoral fellow	1
	Research Staff 1 (Pyare lab)	Research Technician	1
	Research Staff 2 (Pyare lab)	Research Technician	1
	Simonson, Bruce	GIS Library Manager	1
	Teerlink, Susie	Communications Coordinator (EPSCoR)	1
	Graduate Student 2	Research Technician; Graduate Student	1
Grand Total			10

Component 2. Environmental science and geography program

Eight faculty and support staff will relocate from across campus to the partitioned ABMS property for environmental science and geography programs:

Component	Component 2		
ABMS Program	Name	Title	Count of Headcount
Environmental Science and Geography	Amundson, Jason	Assistant Prof of Geophysics	2
	Buma, Brian	Assistant Prof of Forest Ecology	1
	ENVS Lab Staff	Laboratory Tech - ENVS	1
	Gregg, Leah	Administrative Assistant	1
	Hood, Eran	Professor of Env Science	1
	Nagorski, Sonia	Assistant Prof of Geology	1
	Pyare, Sanjay	Associate Prof of GIS	1
Grand Total			8

Component 4: Alaska Native Science and Engineering Program (ANSEP)

UAS has one term faculty member that coordinates ANSEP and leads the program that would conduct activities on the partitioned ABMS property:

Component 7: Marine operations for support of teaching and research programs

All UAS faculty and staff in the biology, marine biology, environmental science and geography programs indicate they would participate in marine operations and teaching/research activities from a dock accessible from the partitioned ABMS property. This number is conservatively estimated annually to be 24 users. This estimate is based on headcount from all known UAS science program faculty, staff and student users that regularly conducted marine operations and utilized the ABMS and/or nearby public dock facilities:

Marine Operations and Dock Users (2016-2017)		
Name	Title	Count of Headcount
Amundson, Jason	Assistant Prof of Geophysics	2
Behnke, Megan	Technician	1
Bergstrom, Carolyn	Associate Prof of Marine Biology	1
Bidlack, Allison	Director	1
Buma, Brian	Assistant Prof of Forest Ecology	1
Cox, Keith	Term Assistant Prof of Biology	1
Dryer, Pat	Research Technician	1
Fellman, Jason	Research Assistant Professor	1
Hoferkamp, Lisa	Associate Prof of Chemistry	1
Hood, Eran	Professor of Env Science	1
Graduate Student 1	Research Technician; Graduate Student	1
Nagorski, Sonia	Assistant Prof of Geology	1
Navarro, Michael	Assistant Prof of Marine Fisheries	1
Pearson, Heidi	Assistant Prof of Marine Biology	1
Post-doctoral fellow (Amundson lab)	Post-doctoral fellow	1
Pyare, Sanjay	Associate Prof of GIS	1
Research Staff 1 (Pyare lab)	Research Technician	1
Research Staff 2 (Pyare lab)	Research Technician	1
Stekoll, Mike	Professor of Chemistry & Biochemistry	1
Tallmon, David	Professor of Biology	1
Tamone, Sherry	Professor of Biology	1
Whitney, Emily	Technician	1
Graduate Student 2	Research Technician; Graduate Student	1
Grand Total		24

Frequency of Use

Indicate how often the requested property will be used by students and/or staff (i.e., daily, evenings/weekends, seasonally, semi-annually) for the educational program(s) listed above.

Component 1: Natural Sciences Research Laboratory (NSRL) programs.

Daily use (12 months per year) for teaching, research & service activities by faculty, staff and students as currently occurs in the NSRL.

Component 2. Environmental science and geography program

Daily use (12 months per year) for teaching, research & service activities by faculty, staff and students as currently occurs on the Juneau Campus in the Whitehead Building and Soboleff Annex Building..

Component 4: Alaska Native Science and Engineering Program (ANSEP)

Daily use for teaching and student academic support activities by faculty, staff and students during the 9-month academic year. Usage will be reduced in the 3-month summer period, but is estimated to be used in the summer for at least 3-4 days per week for instructional and research activities by ANSEP summer bridge programs. The property will also be used regularly in the summer on an intermittent basis by individual ANSEP summer interns for meetings 1-2 times per week with the ANSEP coordinator and/or faculty supervising their internship activities with agency partners in Juneau.

Component 7: Marine operations for support of teaching and research programs

Weekly use (12 months per year) for 4-6 days per week for teaching, research & service activities; seasonally intensive in the 3 summer months, early fall and late spring time periods with daily use expected for short periods as currently occurs on the dock in collaboration with NOAA.

Implementation Timeframe

Component 1: Natural Sciences Research Laboratory (NSRL) programs.

Implementation will require minor renovation and relocation of the existing program inventory of equipment, furniture and other teaching/research assets. Estimated completion time is 12 months after the property conveyance. The maximum time period will be utilized for project planning to coordinate renovation and moving activities with university break periods to minimize disruption of ongoing teaching, research and service activities.

Component 2. Environmental science and geography program

Implementation will require minor renovation and relocation of the existing program inventory of equipment, furniture and other teaching/research assets. Estimated completion time is 12 months after the property conveyance. The maximum time period will be utilized for project planning to coordinate renovation and moving activities with university break periods to minimize disruption of ongoing teaching, research and service activities.

Component 4: Alaska Native Science and Engineering Program (ANSEP)

Implementation is possible as soon as the building is ready for occupancy and furniture installed; estimated at 12 months after the property conveyance.

Component 7: Marine operations for support of teaching and research programs

Implementation can begin as soon as City & Borough of Juneau (CBJ) has received property conveyance of the dock from GSA/MARAD which is expected to be in less than 6 months. UAS faculty and students are already conducting teaching, research, and small boat operations from the dock.

Utilization and Funding for Partitioned Property

Use of Land

The partitioned ABMS property consists of 1.63 acres. The land will continue to be used for the buildings, driveways, walkways, parking lots, utilities, landscaping and buffer zones. Exhibits 4 and 18 include descriptions of the partitioned property. There is no vacant property associated with the partitioned ABMS.

Use of Buildings, and Funding Needs and Sources

A facility condition assessment from July 2016 which included the Main Building is included as Exhibit 15. Subdivision costs are given in Exhibit 1 to Exhibit 18.

Building Name	Brief Description of Use	Demolition (Y/N)	Demolition Cost	Renovation Cost	Annual Operating & Maintenance Cost	Funding Availability and Source*	Beginning Use Date (Months From Conveyance)	Historic/ Near Historic Properties (Y/N)
Site Work	Driveway, Parking, Utilities	N	N/A	\$940,000 to \$1,050,000	\$ 50,000	UAS UFB/ UAS O&M/ CBJ	0	N
Main Building	Classroom Laboratory Office	N	N/A	\$800,000 to \$1,100,000	\$ 150,000	UAS UFB/ UAS O&M	12	N
Pier & Dock	Marine Access Boat Moorage	N	N/A	\$0	\$ 5,000	UAS UFB/ UAS O&M/ UAS G&C	0	N
Genetics Lab	Parking	Y	\$10,000	\$ 0	\$ 0	UAS UFB/ CBJ	6	N
ATCO Building	Parking	Y	\$10,000	\$ 0	\$ 0	UAS UFB	6	N
Freezer Building	Parking	Y	\$10,000	\$ 0	\$ 0	UAS UFB/ CBJ	6	N

* UFB = Unrestricted Fund Balance; O&M = Operating & Maintenance Funds; G&C = Grants & Contracts Funds; CBJ = City & Borough of Juneau

Sketches, Floor Plans, or Plot Maps

Floor plans and usable space calculations for the Main Building on the partitioned ABMS property are attached in Exhibit 4.

Usable space within the Main Building on the Partitioned ABMS property was inventoried and categorized as either program or facility space; details are attached in Exhibit 11 and summarized in the revised category table below.

Category	Building	Sum of Square Footage
Program	Main	9,268
Facilities	Main	1,009
GRAND TOTAL		10,277

Usable program space in the Main Building is categorized by functional use as classroom, laboratory or office; details are attached in Exhibit 12 and summarized in the revised functional table below:

UAS Assigned Function	Building	Sum of Square Footage
Classroom	Main	2,362
Laboratory	Main	3,371
Office	Main	3,535
GRAND TOTAL		9,268

Suitability

1. Provide specific details why this property is suitable for use for the proposed educational program

The Partitioned ABMS property was the original location of the ABL, which housed a staff of about 50 scientists. In the 1970s, the facility's research and development focused on salmon ocean ranching, impacts by petroleum and other disturbances to fish habitat and population, and population assessment of herring and shrimp. The ABL also provided biostatistical support for salmon research within the National Marine Fisheries Service and was responsible for monitoring the Japanese fishery and their take of North American salmon, which included the establishment of the foreign salmon fishery observer program. The ABL was relocated to the new 66,000 square foot TSMRI at Lena Point north of Auke Bay in 2007.²⁶

The suitability of the partitioned property for the educational program is high because the property supported the ABL in conducting research programs, often done in collaboration with UAS faculty, that were very similar to those proposed in educational program components 1, 2, and 7. Similarities include field-based and laboratory-based scientific research in marine and terrestrial environments; partnerships for applied research on ecosystems and coastal resource management; and graduate/undergraduate student training in research done by ABL scientists.

The UAS educational program will enhance the public use benefit of the partitioned property by adding undergraduate instruction and academic support for students enrolled in UAS' STEM degree programs or taking general education science. The partitioned property, the Main Building and dock access are extremely well-suited physically and aesthetically to enhance all formats of undergraduate instruction in classroom-based, laboratory-based, and field-based courses.

Based on the program components 1, 2, 4, and 7 as described above, the partitioned property would provide suitable square footage in the Main Building, which has had equivalent historical uses. The table below is a potential utilization plan based on program needs and compatible uses for existing infrastructure.

Component Number	UAS Program Component	UAS Assigned Function	Sum of Square Footage
Component 1	Natural Sciences Research Laboratory (NSRL)	Laboratory	3,371
		Office	1,350
Component 2	Environmental Science and Geography	Classroom	1,942
		Office	1,938
Component 4	ANSEP	Classroom	420
		Office	247
Component 7	Marine Operations	Dock	450
GRAND TOTAL (Main Building only, not including dock)			9,268

UAS has recent experience with the suitability of using the partitioned property for the functional uses proposed in Component 2. In 2010-2011, when the adjacent Anderson Science Building (which houses the biology and marine biology programs) was undergoing renovations²⁷, UAS temporarily moved undergraduate classes to the ABMS Main Building.

²⁶ <http://www.afsc.noaa.gov/history/facilities/aukebaylab.htm>

²⁷ <https://scholarworks.alaska.edu/handle/11122/5716>

Based on this historical experience with the partitioned property, UAS believes that the partitioned ABMS property is uniquely suited to support UAS’ educational program and institutional mission. Acquisition of this partitioned property and dock access has the power to transform the student academic experience and the campus’ engagement with interdisciplinary sciences. Acquiring the partitioned ABMS property will give UAS the privilege of continuing the historical legacy of this site as an interdisciplinary hub for a network of university, agency and industry scientists doing collaborative and convergent research on the natural environment of Southeast Alaska.

Exhibit 17 contains letters of support for UAS’ application for acquisition of the partitioned ABMS property, received from agency and community partners.

2. Identify currently owned property that could be used to meet this need, if any. If none, please describe and provide evidence as to the circumstances preventing the currently owned property from being used for this purpose.

Program Component	Currently owned property to meet this need	Rationale
1. Natural Sciences Research Laboratory (NSRL) program	No	There is no facility on the currently owned Juneau Campus property to relocate NSRL operations to; see UAS 2012 Campus Master Plan (see Exhibit 10)
2. Environmental science and geography program	Yes	Program location can be maintained on currently owned Juneau Campus property in the Soboleff Annex, Soboleff Building, Whitehead Building and Egan Classroom Building
4. Alaska Native Science and Engineering Program (ANSEP)	No	There is no facility on the currently owned Juneau Campus property with space available to dedicate to the ANSEP program
7. Marine operations for support of teaching and research programs	No	UAS does not currently own any property with a marine dock or moorage facility nor is such a dock or moorage facility adjacent to any current UAS owned property.

Evidence of Funding Source

Over the past five years, UAS has had average annual revenue of \$45.2 million in unrestricted funds. Of that amount, average annual reserves have totaled \$2.3 million. These reserves are used for projects that have been determined by UAS’ Executive Cabinet as a high priority for the institution. The estimated cost of preparing the UAS portion of the NOAA property for UAS occupancy and moving staff and equipment is \$1.8 to 2.2 million (see table on page 24, compiled from data in Exhibit 15, page 142, and in Exhibit 1 to Exhibit 18), with some of these costs being shared by CBJ. UAS would have the ability to prioritize use of reserve funds to cover these costs within the required 12-month performance period.

Supporting financial documentation is included in Exhibit 5, including: (a) UAS Five Year Trend in Revenue by Source; (b) FY15 UA Final Combined UA Financial Statement; and (c) FY15 UA Unrestricted Current Funds Balance Sheet. Because the University of Alaska’s current fiscal year ended on June 30, 2017, the documentation included is for FY16.

Income or Revenue

Component 1: Natural Sciences Research Laboratory (NSRL) programs.

Revenue will be generated by sponsored research activities funded by grants and contracts conducted by the UAS Natural Sciences faculty PIs who will be relocating their laboratories and staff to the partitioned property (Assistant Professors Jason Amundson, Brian Buma, Sonia Nagorski; Associate Professor Sanjay Pyare; Professor Eran Hood). It is estimated that the revenue generated by grants to these PIs will be approximately the same or greater in the fiscal years following relocation. Current grants & contracts award revenue for research conducted from NSRL as of July 2016 is \$1,194,522 and is detailed below:

ADMIN	PI Last	PI First	GRANT #	GRANT TITLE	Start Date	End Date	Classification	Maximum
JNCCL	Amundson	Jason	G00008831	Dynamics of Subglacial Erosion	2013-12-01	2016-11-30	F - Federal	\$111,745
JNCCL	Amundson	Jason	G00008917	Iceberg Dynamics in Global Climate	2013-09-01	2017-08-31	F - Federal	\$61,000
JNCCL	Amundson	Jason	G00010311	Collab Rsrch: Ice Melange	2015-08-01	2018-07-31	F - Federal	\$96,808
JNCCL	Amundson	Jason	G00010316	Collaborative Rsrch: LeConte	2015-09-01	2019-08-31	F - Federal	\$498,483
JNCCL	Buma	Brian	G00010155	AK YC Decline Climate Change	2015-06-01	2017-09-01	F - Federal	\$30,000
JNCCL	Buma	Brian	G00010742	Southeast Forestry Intern - RSA	2016-03-01	2017-02-28	N - Nonfederal	\$4,940
JNCCL	Buma	Brian	G00010770	SE Forestry Intern, Kramer Endowmen	2016-03-01	2017-02-28	N - Nonfederal	\$3,000
JNCCL	Hood	Eran	G00010095	Ice2O change in the PCTR	2015-04-15	2018-09-30	F - Federal	\$35,875
JNCCL	Nagorski	Sonia	G00009577	Mercury Deposition SE AK Lakes	2014-07-01	2016-12-30	F - Federal	\$8,250
JNCCL	Pyare	Sanjay	G00007725	UAS GIS Library & SEAK Hydrography	2012-01-05	2017-12-31	F - Federal	\$304,421
JNCCL	Pyare	Sanjay	G00010130	SEAK GIS Hydrography Library	2014-08-01	2016-12-31	F - Federal	\$40,000
Grand Total								\$1,194,522

Data from UAS Institutional Effectiveness Current Grants Report

Component 2. Environmental science and geography program

Annual revenue will be generated by FY18 in tuition from courses offered in the environmental science and geography program that are relocated to the ABMS property. In FY18 it is estimated that the tuition revenue generated from these courses will be \$229,154 based on an annual increase of 5% in tuition rate for each of FY17 and FY18:

Sum of Tuition revenue	FY			Projected Tuition revenue	
COURSE SUBJECT	FY14	FY15	FY16	FY17	FY18
ENVS - Environmental Science	\$ 87,312	\$ 91,260	\$ 78,471		
GEOG - Geography	\$ 43,356	\$ 42,582	\$ 67,047		
GEOG - Geology	\$ 37,932	\$ 29,856	\$ 18,411		
PHYS - Physics	\$ 41,328	\$ 20,532	\$ 43,920	+ 5% from FY16	+ 5% from FY17
Grand Total	\$ 209,928	\$ 184,230	\$ 207,849	\$ 218,241	\$ 229,154
		5% =	\$ 10,392	\$ 10,912	

Data from QAdhoc Report, Class List with tuition calculation

Component 4: Alaska Native Science and Engineering Program (ANSEP)

Under a Memorandum of Agreement (see Exhibit 14) UAS has received an annual transfer of \$29,000 in revenue from FY14 through FY17 from the ANSEP program for support of one-third of a faculty member's salary for conducting program activities and advising ANSEP students on the UAS campus. It is expected that this level of annual program revenue will continue or expand with campus space dedicated to ANSEP activities.

UAS is currently actively receiving of private gifts to the ANSEP program for student activities on the Juneau Campus. In FY16 UAS received \$10,000 in private gifts from seafood industry donors to support undergraduate research by ANSEP students at the NOAA fish weir, located where Auke Creek drains Auke Lake into Auke Bay adjacent to the UAS Anderson Building and ABMS property. It is estimated that the revenue generated from philanthropic sources for undergraduate research projects and internships for ANSEP students will be approximately the same or greater in the fiscal years following establishment of ANSEP at the ABMS property.

Component 7: Marine operations for support of teaching and research programs

Revenue will be generated by grant and contract funded research activities that utilize the dock facility and are conducted by UAS faculty working with federal and state agency and industry partners. These grant revenues are already estimated and included in the summary of the other components. Research partners have expressed interest in cooperative agreements to provide revenue to maintain the dock facilities in exchange for partner access to the dock facilities.

Public Benefit Allowance Formula

UAS is applying to qualify for a 100% discount from the fair market value of the NOAA-ABMS partitioned property at the time of transfer. A table summarizing the program components that support the allowances described in Appendix A of 34 CFR 12 is provided to address the formula with reference to UAS’ educational program components:

Allowance	UAS Program Qualifications	%
Basic Public Benefit	University	50%
Accreditation	Regionally accredited; NWCCU	20%
Federal Impact	Program Component 4	10%
Public Service Training	NA	0%
Hardship	NA	0%
New Instructional Programs	NA	0%
Improved Health and Welfare of Students	Program Components 4, 7	10%
Research Use	Program Components 1, 2, 4, 7	10%
Training for Persons with Disabilities	NA	0%
Inadequate Existing Facilities	Program Components 1, 2, 4, 7	10%
Estimated Discount		110%

Accreditation

UAS is accredited by the Northwest Commission on Colleges and Universities, which is recognized by the Secretary of Education under 34 CFR part 602.

Federal Impact

Although UAS does not receive funds under Public Law 81-874 or 81-815, the educational program for this property includes a component (Component 4) to dedicate student academic support space for integrating academic and cultural activities that support the Alaska Native Science & Engineering Program (ANSEP) at UAS. ANSEP, which offers programs at the middle and high school levels as well as the collegiate level, is qualified to receive Federal financial assistance under other federal laws that

recognize the ongoing impact of certain historical Federal activities and policies upon the Alaska Native community (e.g., Johnson-O'Malley Act).

Public Service Training

N/A

Hardship

N/A

New Instructional Programs

N/A

Improved Health and Welfare of Students

UAS will use the partitioned ABMS property for improved health and welfare of students as described above in the details of the educational program:

- Component 4. Alaska Native Science and Engineering Program (ANSEP)
- Component 7. Marine operations for support of teaching and research programs

Research Use

UAS will use the partitioned ABMS property for undergraduate, graduate and faculty research activities described above in the details of the educational program:

- Component 1. Natural Sciences Research Laboratory (NSRL) program
- Component 2. Environmental science and geography program
- Component 4. Alaska Native Science and Engineering Program (ANSEP)
- Component 7. Marine operations for support of teaching and research programs

Training for Persons with Disabilities

N/A

Inadequate Existing Facilities

UAS will use the partitioned ABMS property to address current facility inadequacies as described above in the details of the educational program:

- Component 1. Natural Sciences Research Laboratory (NSRL) program
- Component 2. Environmental science and geography program
- Component 4. Alaska Native Science and Engineering Program (ANSEP)
- Component 7. Marine operations for support of teaching and research programs

Assurances

State and Local Planning and Zoning

The University of Alaska certifies that the educational program will comply with all state and local planning and zoning regulations, and building codes after acquisition of title from the USA, since the partitioned property will pass out of Federal ownership during title transfer.

Period of Use

The University of Alaska certifies that the partitioned property is needed at the time of application for the educational purposes described in its educational program and will be utilized for such purposes for a period of thirty (30) years. The University of Alaska may not modify its educational program during the thirty (30) year period without the prior written consent of the U.S. Department of Education.

Nondiscrimination

The University of Alaska states and agrees that it will not discriminate because of race, color, religion, sex, disability, age or national origin in the use of the property, in keeping with Section 606 of the Federal Property and Administrative Services Act of 1949, Title VI of the Civil Rights Act of 1964 (P.L. 88-352), Title IX of the Education Amendments of 1972 (P.L. 92- 318), and section 844 of the Education Amendments of 1974 (P.L. 93-380) (in relation to education), and Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112), Title II of the Americans with Disabilities Act of 1990, and the Department's Regulations issued pursuant to such Acts (34 CFR Parts 12, 80, 84, 86, 100, 104, and 106).

Insurance

The University of Alaska agrees, for itself, its successors and assigns, that if any conveyed improvements are insured against loss, damage, or destruction and if such loss, damage or destruction should occur during the period the University of Alaska holds title to the property while under the period of restricted use specified in the deed of transfer, said insurance and all moneys received therefrom by the University of Alaska, its successors or assigns shall be held in trust by the University of Alaska, its successor or assigns, and shall be promptly utilized by the University of Alaska for the purpose of repairing such improvements and restoring the same to their former condition and use, or for the purpose of replacing said improvements with equivalent or more suitable facilities; or, if not so used, shall be paid over to the Treasurer of the United States in an amount equal to the unamortized public benefit allowance of the buildings, structures, or improvements lost, damaged or destroyed.

Protection and Maintenance

The University of Alaska states and agrees for itself, its successors and assigns, that in the event the U.S. Department of Education exercises its option to revert all right, title and interest in the property to the United States of America, or the University of Alaska voluntarily returns title to the property in lieu of reverter, then the University of Alaska shall provide protection to and maintenance of the property at all times until such time as the title is actually reverted and returned to and accepted by the United States of America. Such protection and maintenance shall, at a minimum, conform to the standards prescribed by the General Services Administration in Appendix A of the "GSA Customer Guide to Real Property Disposal" as referenced at 41 CFR 102-75.965.

Environmental Analysis

The ABMS property use in the 47 years between its establishment as a marine station in 1960 and the move of the NOAA Auke Bay Laboratories to the TSMRI at Lena Point in 2007 has included offices, science laboratories, storage, conference rooms, small boat dock and dive lockers along with the station's supporting utilities, parking and maintenance facilities. UAS proposes to continue these same historical and traditional uses with the addition of undergraduate programming. Within the first 12 months of property conveyance, the University will address deferred maintenance issues and make minor safety and access improvements to the Main Building.

Environmental Questionnaire 1 has been completed and is attached as Exhibit 7. UAS plans no major projects that would require Environmental Questionnaire 2.

List of Exhibits

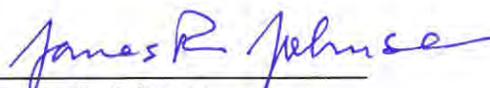
Note: Exhibits modified from the August 26, 2016 application are noted with *(revised)*

- Exhibit 1 – Board Resolution
- Exhibit 2 – Legal Citation to acquire and hold title to real property
- Exhibit 3 – Internal Revenue Service tax-exempt status determination letter
- Exhibit 4 - Sketches, Floor Plans, or Plot Map *(revised)*
- Exhibit 5 – Financial Statements *(revised)*
- Exhibit 6 – Protection and Maintenance Guidelines *(from August 2016 application information booklet)*
- Exhibit 7 – Environmental Questionnaire *(revised)*
- Exhibit 8 - UA Regional Summary of Property Table *(revised)*
- Exhibit 9 - UAS Strategic and Assessment Plan 2010-2017
- Exhibit 10 - UAS Master Plan 2012
- Exhibit 11 – Program Space Inventory by Function *(revised)*
- Exhibit 12 - Program Space Inventory by Building *(revised)*
- Exhibit 13 – President Johnsen Memo Development UAF-UAS Joint BS Fisheries Degree
- Exhibit 14 – MOU ANSEP-UAS 2015-2018
- Exhibit 15 - NOAA ABMS Condition Assessment and Estimated Project Costs
- Exhibit 16 – UAS Proposed Land Use Plan *(revised)*
- Exhibit 17 – Letters of Support
- Exhibit 18 - UAS CBJ Agreement *(new Exhibit)*
 - There are six attachments to the UAS/CBJ Agreement, also denoted as “exhibits”
 - Ex. 1 – Project Subdivision Cost Estimates
 - Ex. 2 – UAS application from August 2016
 - Ex. 3 – CBJ application from August 2016
 - Ex. 4 – Boundary map
 - Ex. 5 – Legal Description and sketch map of UAS parcel
 - Ex. 6 – Legal Description and sketch map of CBJ parcel

Certification

James R. Johnsen certifies by signature hereto, that I am duly authorized by the Board of Regents of the University to act on behalf of the University of Alaska to do any and all things necessary to acquire the Federal surplus real property identified and requested herein, including the preparation of this application and payment of such sums as may be necessary toward the purchase price of the requested property, and that all information given herein, and in exhibits hereto, are true and correct to the best of my knowledge. James R. Johnsen additionally certifies by signature hereto, that I understand, and agree to abide by the following terms and conditions, in addition to any other requirements that may be included in the deed of conveyance:

- Utilize the property solely and continuously in accordance with the approved application for a period of (30) years.
- Not sell, lease, mortgage, encumber, dispose of, or grant any right or interest in, the property to other parties without prior written consent of the U.S. Department of Education.
- Submit periodic utilization reports.
- Comply with non-discrimination acts which govern ownership of the property including Title VI of the Civil Rights Act of 1964 (P.L. 88-352), Title IX of the Education Amendments of 1972 (P.L. 92-318), Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112), and all requirements imposed by or pursuant to the regulations (34 C.F.R. Parts 12, 100, 104, and 106) issued pursuant to the Acts and now in effect; to the end that no person in the United States shall, on the ground of race, color, religion, sex, disability, age or national origin, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under the educational program and plan set forth and approved in the application.
- Remain tax supported or a non-profit tax-exempt organization under Section 501(c)(3) of the IRS Code.
- Place the property into use within twelve (12) months from the date of the deed, or thirty-six (36) months, if major construction is required and approved by the U.S. Department of Education.
- Submit payment for each month of non-use if the property is not placed into use within 12 or 36 months.

By: 
James R. Johnsen

Title: President, University of Alaska

Date: 8/11/2017

(NOTE: The Authorized Representative(s) signing must be the same as identified in the governing board resolution.)