

**Application for Consent to Conduct Marine Scientific Research  
in Areas Under National Jurisdiction of**

**United States of America**

(name of coastal state)

**Date: May 21, 2014 (FOR INFORMATIONAL NEEDS ONLY)  
RUSALCA RECEIVED AN EXEMPTION FROM THE U.S. NATIONAL SECURITY COUNCIL on  
April 23, 2014, FOR 2014 OPERATIONS.**

Request to go ahead with Russian-American Long-term Census of the Arctic (RUSALCA)

Key Dates: May 15, 2014: Transfer of funds to pay for the charter vessel between Alliance Group and Heritage, New Zealand and July 4, 2014: Departure of US team to Anadyr.

(Note: On 03/28/14 NOAA received permission from NSC to send equipment to Russia for the RUSALCA cruise. NOAA is now seeking confirmation that this also includes clearance to conduct the cruise and have scientists travel to Russia.

**NSC Decision: Proceed**

1. General Information

1.1 Cruise name and/or #:	RUSALCA-2014
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1.2 Sponsoring institution:	Russian Academy of Sciences, Alliance Group Ltd., National Oceanic and Atmospheric Administration of the USA (NOAA)
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Name:	Dr. Aleksey Ostrovskiy
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Name of Director:	Dr. Vitaly Keondjian, Alliance Group, Academician Nikolay P. Laverov, Vice-President of the Russian Academy of Sciences
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1.3 Scientist in charge of the project (include CV and passport photo):	
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Name:	Dr. Kathleen Crane
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Address:	NOAA 1100 Wayne Avenue, Silver Spring, MD 20910, USA
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1.4 Scientist(s) from coastal state involved in the planning of the project:	
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Name(s):	Dr. Kathleen Crane
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Address:	1100 Wayne Avenue, Silver Spring, MD 20910
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2. Description of Project (Attach additional pages as necessary)

## 2.1 Nature and objectives of the project:

The Russian-American Long-term Census of the Arctic (RUSALCA) has been implemented by both the National Oceanic and Atmospheric Administration NOAA for the USA and the Alliance Group Ltd. for the Russian Academy of Sciences. The program was developed to monitor the changing fluxes of heat, salt, (fresh water) nutrients and marine life from the Bering Strait into the Pacific Arctic Ocean where sea ice loss was a maximum. Because the Bering Strait and the Chukchi Sea are shared water masses by both the USA and the Russian Federation, the coordinating parties decided that the best and most stable way to monitor this region was by the fully integrated cooperation of the science agencies in both of our countries. The RUSALCA program was the first project carried out during the implementation of the 2003 the Memorandum of Understanding between the US National Oceanic and Atmospheric Administration (NOAA) and the Russian Academy of Sciences (RAS). The project has also been endorsed by the Hydrometeorological Service of the Russian Federation (Roshydromet) under the auspices of the Memorandum of Understanding between Roshydromet and NOAA signed in 2005. Other U.S. agency participants in RUSALCA include the National Science Foundation, the Department of the Interior, and the Office of Naval Research.

The word RUSALCA means “mermaid” in Russian.

The first project expedition was conducted in the summer of 2004. It was a multi-disciplinary cruise intent on building a long-term repeat suite of observations of the region, from physical oceanography to marine ecosystems with the goal of monitoring the consequences of the loss of sea ice cover. Oceanographic mooring stations were first deployed in the western part of the Bering Strait in 2004. They were recovered and redeployed annually from 2005 until 2012. In addition to the three mooring stations in the western, Russian part of the Bering Strait, five more stations were serviced annually, starting in 2007. These were located in the eastern, US part of the Bering Strait.

A significant number of CTD stations (Conductivity, Temperature, and Density), along with benthic and water column biological stations, were taken in 2004 through 2012. Three large, multidisciplinary expeditions were successfully implemented in the years of 2004, 2009 and 2012 in the Beaufort, East-Siberian and Chukchi Seas. The 2009 research cruise was widely covered by the news media even prior to its completion, including internationally recognized mass media such as The New York Times and Reuters. More detailed information can be obtained on the following RUSALCA web sites at NOAA [www.arctic.noaa.gov/aro/russian-american/](http://www.arctic.noaa.gov/aro/russian-american/), as well on the Alliance Group's site [www.rusalcaproject.com](http://www.rusalcaproject.com).

In 2013 the RUSALCA team did not go to sea to provide the scientific party the time to work on a decadal synthesis of results. The second decade of the RUSALCA Program will be coordinated primarily by NOAA, RAS, and Roshydromet and the Alliance Group. Annual to biannual expeditions will be organized to continue the research in the area of the Bering Strait and the seas and the Pacific-Arctic Ocean to the North. Multi-disciplinary and geographically more extensive research expeditions will be arranged every 2 to 4 years in the northern part of the East-Siberian, Chukchi and Beaufort Seas and in the Pacific Arctic Ocean.

Access to Russian Territorial Waters and the EEZ as well as internal Russian coordination and permitting is maintained by the Alliance Group in Moscow. The Roshydromet research vessel is operated by a New Zealand Company (Heritage) and maintains many links in Anadyr, where the vessel is normally outfitted for its Arctic expeditions. Heritage provides Chukotka permits for the science party, while the Alliance Group is responsible for visa processing. In 2014, the RUSALCA team will deploy a mooring in the Western Bering Strait (to replace one that was removed in 2012, and will carry out a biophysical transect of the Distributed Biological Observatory (DBO) across the Chukchi Sea from Russia to the USA. RUSALCA is the only expedition to date that has been able to cover the DBO from Russia to the USA.. The DBO constitutes the U.S. and some of the Russian sentinel Arctic stations, a

part of the Arctic Council's endorsed Circumpolar Biodiversity Marine Monitoring Program.

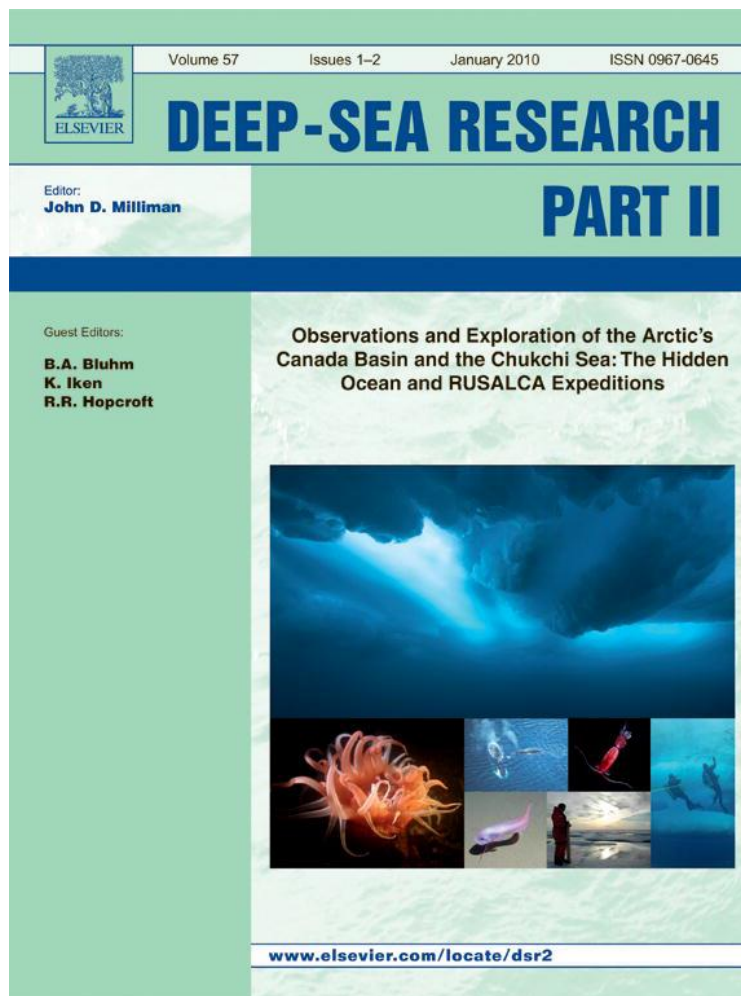
Data from the RUSALCA program are stored on the Alaska Ocean Observing System website and are being prepared for submission to the Arctic Council's Conservation of Arctic Flora and Fauna (CAFF) working group's data portal in Iceland.

## 2.2 Relevant previous or future research cruises:

RUSALCA-2004-2012 The RUSALCA Mission has become nearly routine, yet is a vital source of long term observations of the changing Chukchi Sea  
[www.arctic.noaa.gov](http://www.arctic.noaa.gov), [www.rusalcaproject.com](http://www.rusalcaproject.com)

## 2.3 Previously published research data relating to the project:

### Some of the RUSALCA Publications



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Yang, X.-Y., J.-Y.Hu, J. Wang and D. Wang, 2011. Western North Pacific temperature variability associated with the Okhotsk sea ice anomaly. *J. Oceanogr.*, DOI: 10.1007/s10872-011-0018-3

Zhang, J., R Woodgate, and R.Moritz, 2010, Sea Ice response to Atmospheric and Oceanic Forcing in the Bering Sea, *J.Phys.Oceanogr.*, 40(8),1729-1747.

Zhang, J., R.A. Woodgate and S. Mangiameli, 2010 Towards seasonal prediction of the distribution and extent of cold bottom waters on the Bering Sea shelf, *Deep Sea Research II*).

A first decade synthesis of RUSALCA results will be published by *Oceanography Magazine* in 2015 ([www.tos.org](http://www.tos.org)).

### 3. Methods and Means to be Used

3.1 Particulars of vessel:	
Name:	Professor Khromov
Nationality (Flag state):	Russian Federation
Owner:	Far Eastern Roshydromet Research Institute
Operator:	Heritage Expeditions, NZ
Overall length (meters):	71.6
Maximum draught (meters):	4.5
Displacement/Gross tonnage:	2140
Propulsion:	Dizal 2 x 1560 1560 h/p
Cruising & Maximum speed:	11 & 17.3 knots
Call sign:	UBWR
Method and capability of communication (including emergency frequencies):	USW 156-158 MHz, SW: 2022.5 MHz INMARSAT 1626.5-1646.5 MHz
Name of master:	Djachenko Alexander Nikolaevich
Number of crew:	26
Number of scientists on board:	12



### **Science Party:**

**Kathleen Crane** *U.S. Mission Coordinator of RUSALCA, NOAA*  
[kathy.crane@noaa.gov](mailto:kathy.crane@noaa.gov)

**Kevin Wood**, University of Washington, PMEL, NOAA (*Logistics and all around support*)

**Calvin Mordy**, University of Washington, PMEL, NOAA, Water Samples (*productivity, nutrients, chemistry*)

**Elizabeth Labunsky**, Fish and Wildlife Service, (Seabird Observations)

**Kathleen Stafford**, University of Washington, (*Marine Mammal Observations, and mooring operations*)

**William Floering**, PMEL, NOAA (*mooring technician*)

**Aleksey Ostrovskiy**, *Russian Mission Coordinator of RUSALCA, Alliance Group (all around support)*

**Maria Pisareva**, Woods Hole Oceanographic Institution and P. P. Shirshov Institution of Oceanology, (*Physical Oceanography*)

**Vladimir Bakhmutov**, MTB, (*Anadyr and vessel support*)

2 people to run the deck winches from the Far Eastern Branch of Roshydromet

**Nathan Russ**, Heritage Expeditions Representative, Christchurch, NZ  
(*Crew Coordination*)

3.2 Aircraft or other craft to be used in the project:
none

3.3 Particulars of methods and scientific instruments		
Types of samples and data	Methods to be used	Instruments to be used
Water samples, salinity, temperature, pressure Along the DBO line 3	Vertical profiling	CTD- (SEABird SBE-19 SEALOGGER) Water Samples from Niskin Bottles
See also section 4.	See also section 4.	See also section 4.

3.4 Indicate whether harmful substances will be used:
no

3.5 Indicate whether drilling will be carried out:
no

3.6 Indicate whether explosives will be used:
no

#### 4. Installations and Equipment

Details of installations and equipment (dates of laying, servicing, recovery; exact locations and depth):		
We will service one hydrographic mooring in the Russian Waters of the Bering Strait. The Mooring, CTD, and sample stations and the vessel coordinates are listed below.		
Station Name and Date	North Latitude	West Longitude
A 1-2 07.09-10.2014 Mooring	65°.933N	169 °.6143
<b>DBO Line 3 Transect</b>		
CS0.5	66 ° 48,63 ´ N	171 ° 18,18 ´ W
CS1	66 ° 49,80 ´ N	171 ° 15,40 ´ W
CS2	66 ° 51,89 ´ N	171 ° 10,07 ´ W
CS3	66 ° 53,98 ´ N	171 ° 04,74 ´ W
CS4	66 ° 56,08 ´ N	170 ° 59,41 ´ W
CS5	67 ° 03,73 ´ N	170 ° 38,26 ´ W
CS6	67 ° 11,39 ´ N	170 ° 17,12 ´ W
CS7	67 ° 18,66 ´ N	169 ° 56,48 ´ W
CS8	67 ° 25,94 ´ N	169 ° 35,84 ´ W
CS9	67 ° 32,01 ´ N	169 ° 18,42 ´ W
CS10	67 ° 38,08 ´ N	169 ° 01,01 ´ W
CS11	67 ° 45,30 ´ N	168 ° 39,91 ´ W
CS12	67 ° 52,53 ´ N	168 ° 18,82 ´ W
CS13	67 ° 59,32 ´ N	167 ° 59,37 ´ W

CS14	68 °	06,12 ´	N	167 °	39,92 ´	W
CS15	68 °	12,05 ´	N	167 °	21,41 ´	W
CS16	68 °	15,01 ´	N	167 °	12,15 ´	W
CS17	68 °	17,98 ´	N	167 °	2,90 ´	W
CS18	68 °	18,94 ´	N	166 °	57,60 ´	W
CS19	68 °	19,90 ´	N	166 °	52,30 ´	W

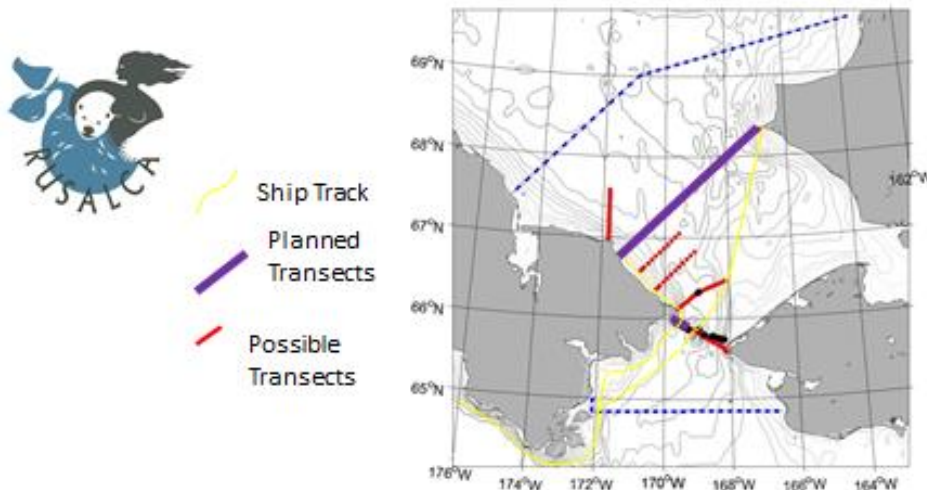
## 5. Geographical Areas

5.1 Indicate geographical areas in which the project is to be conducted (with reference in latitude and longitude):

Bering Strait and Chukchi Sea. See chart below

5.2 Attach chart(s) at an appropriate scale (1 page, high-resolution) showing the geographical areas of the intended work and, as far as practicable, the positions of intended stations, the tracks of survey lines, and the locations of installations and equipment.

### 2014 RUSALCA Plans



## 6. Dates

6.1 Expected dates of first entry into and final departure from the research area of the research vessel:

07. 10.2014 and 07.15.2014 (are these just the dates of presence in US EEZ & TS?)

6.2 Indicated if multiple entry is expected:

Possibly. We don't anticipate multiple entry but situations change due to weather, and time. RUSALCA has needed to move from one side of the strait to the other to avoid bad weather and to continue to sample.

## 7. Port Calls

7.1 Dates and names of intended ports of call:

08.08.2014 Anadyr. Embarkation of American and Russian scientists and equipment,  
08.17.2014 Anadyr. Disembarkation of American and Russian scientists and equipment.

7.2 Any special logistical requirements at ports of call:

We do not anticipate any needs from Nome. From Anadyr we will take on provisions, may need barge to load equipment, people (Agent will handle these needs)

7.3 Name/Address/Telephone of shipping agent (if available):

If we need an agent in Alaska she/he will come from : Alaska Maritime Agencies, 4341 B. Street, Suite 101, Anchorage, Alaska 99503, 907-562-8808 phone, 907-562-8810 fax

## 8. Participation:

8.1 Extent to which coastal state will be enabled to participate or to be represented in the research project:

To a great extent as an equal partner sharing all major roles including leadership, planning, etc.

8.2 Proposed dates and ports for embarkation/disembarkation:

07.08.2014 depart Anadyr, 07.17.2014 arrive Anadyr,

## 9. Access to data, samples and research results

9.1 Expected dates of submission to coastal state of preliminary reports, which should include the expected dates of submission of the final results:

No more than 30 days from the end date of the cruise.

9.2 Proposed means for access by coastal state to data and samples:

Electronic data carriers, mail, delivery by hand

9.3 Proposed means to provide coastal state with assessment of data, samples and research results or provide assistance in their assessment or interpretation:

Through the US institutions such as NOAA University of Washington, Woods Hole Oceanographic Institution, University of Alaska

9.4 Proposed means of making results internationally available:

Open web site access, publications, presentations at professional conferences, etc.