



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**

National Marine Fisheries Service

P.O. Box 21668

Juneau, Alaska 99802-1668

**SCIENTIFIC RESEARCH PERMIT (SRP) # 2012-11**  
**Alaska Fisheries Science Center**  
**Marine Ecology and Stock Assessment - Auke Bay Lab**

Issued to: Douglas P. DeMaster, Science and Research Director  
Alaska Fisheries Science Center (AFSC), NMFS  
7600 Sand Point Way N.E.  
Seattle, WA 98155 - 0070

This SRP authorizes the below named fishing vessel identified in the Scientific Research Plan dated June 7, 2012 (attached), as specified at 50 CFR 600.745, to conduct scientific research in the exclusive economic zone.

Vessel Name: *Bristol Explorer*

Chief Scientists: Alex Andrews, Ron Heintz, and Ed Farley (NOAA/ABL)

Effective Dates: August 1<sup>st</sup> – September 28<sup>th</sup>, 2012

Research Area: Bering Sea and Chukchi Sea

This SRP is separate and distinct from any permit required by any other applicable law. In order to facilitate identification of your activities as scientific research, you must carry a copy of your cruise plan and this SRP on board the research vessel while conducting scientific research activities. Generally, activities conducted in accordance with a scientific research plan permitted by an SRP are exempt from applicable regulations. This presumption may be overcome if an activity does not fit the definition of scientific research activity or is outside the scope of your scientific research plan. The planned activities for the BASIS/Arctic EIS survey include collection of acoustic data and surface and mid-water trawl catches to assess pelagic fish biomass; and collection of fish specimens for research on feeding ecology, age, growth, nutritional status and stock structure. Activities outside the scope of your permit that are in violation of the applicable regulations may be subject to sanctions.

For information regarding this SRP, contact Alex Andrews (907-789-6655), Ron Heintz (907) 789-6058, or Ed Farley (907) 789-6085.

  
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James W. Balsiger, Ph. D.  
Administrator, Alaska Region

June 3, 2012



## DETERMINATIONS

### MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

Under the Magnuson-Stevens Act, scientific research activity conducted from a scientific research vessel is not fishing and, therefore, exempt from the requirements of the Magnuson-Stevens Act regulations. Research activity is exempt from any requirements of the Magnuson-Stevens Act as described in the submitted scientific research plans and modified by any requirements of this SRP.

### NATIONAL ENVIRONMENTAL POLICY ACT

This action is categorically excluded from the requirement to prepare an environmental assessment in accordance with NAO 216-6. This action falls within the general categorical exclusion provided for research by that order (6.03.c.3(a)).

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**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**NATIONAL MARINE FISHERIES SERVICE**

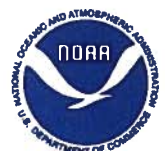
Alaska Fisheries Science Center  
7600 Sand Point Way N.E.  
Bldg. 4, F/AKC  
Seattle, Washington 98115-0070

11 June 2012

MEMORANDUM FOR: James W. Balsiger   
FROM: Douglas P. DeMaster   
SUBJECT: Request for Scientific Research Permit

I request a Federal Scientific Research Permit for the BASIS/Arctic EIS project cruise in the northern Bering Sea/Chukchi Sea aboard the charter vessel F/V *Bristol Explorer*, 1 August-28 September 2012. Scientists from the Alaska Fisheries Science Center will conduct the research. Draft cruise instructions are attached.

For information regarding this cruise, please contact Alex Andrews (907) 789-6655, Ron Heintz (907) 789-6058 or Ed Farley (907) 789-6085 at TSMRI.






**UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration**

National Marine Fisheries Service  
Alaska Fisheries Science Center  
Auke Bay Laboratories  
Ted Stevens Marine Research Institute  
17109 Point Lena Loop Road  
Juneau, Alaska 99801-8344  
Fax (907) 789-6094

June 7, 2012

**MEMORANDUM FOR:** Douglas P. DeMaster  
Science and Research Director

**FROM:** Phillip R. Mundy   
Laboratory Director

**SUBJECT:** Request for Scientific Research Permit  
BASIS/Arctic EIS: Northern Bering Sea and Chukchi Sea

I request a Scientific Research Permit be issued for the BASIS/Arctic Ecosystem integrated survey on the chartered fishing vessel *Bristol Explorer* in the northern Bering Sea and Chukchi Sea from August 1 through September 28, 2012. Scientists from the Alaska Fisheries Science Center will conduct fisheries and oceanographic research at stations on the eastern Bering Sea and Chukchi Sea shelf. Acoustic data and surface and mid-water trawl rope trawl catches will be used to assess the pelagic fish biomass and collect fish specimens for research on feeding ecology, age, growth, nutritional status, and stock structure. Oceanographic observations will be taken at each station to assess the ecosystem status of the eastern Bering Sea and Chukchi Sea.

Attached is a Scientific Research Plan that describes in detail the activities of the cruise

For information regarding this cruise contact: Alex Andrews (907) 789-6655, Ron Heintz (907) 789-6058, or Ed Farley (907) 789-6085 at TSMRI.

Attachment



## Scientific Research Plan

### Alaska Fisheries Science Center/Auke Bay Laboratories BASIS/Arctic Eis Cruise Plan for the F/V *Bristol Explorer*, August 1 – September 28, 2012.

#### Vessel Information:

Vessel: F/V *Bristol Explorer*

Vessel Design: 180 ft trawler, constructed of steel (blue), with house forward (white)

Call sign:

Coast Guard Document Number: 647985

Home Port: Seattle, WA

Vessel Owner: B&N Fisheries in Seattle, WA, Jerry Downing (206) 783-1948

E-mail: [jerryd@bnfisheries.net](mailto:jerryd@bnfisheries.net)

Vessel Master: Dan Carney

Telephone: 907-350-4350

E-mail: [bristol.explorer@amosconnect.com](mailto:bristol.explorer@amosconnect.com)

#### Survey Dates:

August 1 – September 28, 2012

#### Ports of Call:

Dutch Harbor August 1

Nome August 24

Nome September 11

Dutch Harbor September 28

#### Personnel:

Leg	Name	Affiliation
1	Alex Andrews <sup>1</sup>	AFSC/ABL
	Wes Strausberger	AFSC/ABL
	Alex DeRobertis	AFSC/MACE
	Kevin Taylor	AFSC/MACE
	Morgan Busby	AFSC/FOCI
	Melissa Prechtl	UAF
2	Ron Heintz <sup>1</sup>	AFSC/ABL
	Chris Wilson	AFSC/MACE
	Kevin Taylor	AFSC/MACE
	Jeanette Gann	AFSC/ABL
	Lisa DeForest	AFSC/FOCI
	Jennifer Marsh	UAF
3	Ed Farley <sup>1</sup>	AFSC/ABL
	Kevin Taylor	AFSC/MACE
	Wes Stausberger	AFSC/ABL

	Florence VanTulder	AFSC/ABL
	Katie Howard	ADFG
	Stacy Vega	UAF

- 1 – Chief Scientist
- AFSC -- Alaska Fisheries Science Center  
 ABL -- Auke Bay Laboratories Division  
 MACE -- Midwater Acoustic Conservation Engineering  
 FOCI -- Fisheries Oceanography Coordinated Investigations  
 UAF -- University of Alaska Fairbanks  
 ADFG -- Alaska Department of Fish and Game

## 1. Project Objectives and Rationale:

The primary objectives of the 2012 BASIS/Arctic EIS pelagic trawl survey in the northern Bering Sea and Chukchi Sea shelf are to: 1) collect baseline fisheries and oceanographic data to enable resource managers to better predict effects of climate and human impacts on ocean productivity and on the ecology of marine and anadromous fish species; 2) assess the distribution, relative abundance, diet, energy density, size, and potential predators of juvenile salmon, other commercial fish, and forage fish; and 3) evaluate the effect of climate change on the health and status of pelagic fishes. This research initiative is funded by the Coastal Impacts Assistance Program and Bureau of Ocean and Energy Management.

## 2. Experimental Design:

The survey will be conducted aboard the chartered fishing vessel, *F/V Bristol Explorer*. Salmon and other pelagic fish will be collected with a midwater rope trawl, model 400/601 made by Cantrawl Pacific Ltd<sup>1</sup> of Richmond, B.C., Canada. The trawl is 198 m long, with hexagonal mesh in wings and body, a 1.2-cm mesh liner in the codend, and a typical spread of 50 m horizontally and 20 m vertically. The trawl will be towed at or near the surface for 30 minutes at speeds approximately 4.5 knots at each station. Stations have been selected as part of a spatially systematic sampling design of the coastal northern Bering Sea shelf, including stations in Norton Sound and the Bering Strait. Additional trawl tows will be conducted as needed to verify species ID of acoustic targets.

Trawl catches will be sorted by species and catch in weight and numbers will be estimated. Standard biological data will be collected from salmon, including: length, weight, sex, condition, and maturity data. Scales, otoliths, genetic tissue samples, and whole fish specimens for laboratory analysis will also be collected from salmon species. Length frequency data and whole fish specimens for laboratory analysis will be collected from other pelagic nekton species. Diet information will be collected from stomachs of trawl caught fish on-board the fishing vessel. Sample requests and collections by collaborating scientists will be filled as time permits.

<sup>1</sup> Reference to trade names does not imply endorsement by the National Marine Fisheries Service, NOAA.

Oceanographic data will also be collected at each trawl station. Vertical profiles of salinity, temperature, chlorophyll a fluorescence, light attenuation (beam c), photosynthetic available radiation (PAR) and dissolved oxygen, will be obtained from surface to near bottom depths at each trawl station using a conductivity, temperature, and depth meter (CTD) with ancillary sensors (SBE-911, Sea-Bird Electronics, Inc, Bellevue, WA). Continuous along-track measurements of surface temperature and salinity will be collected using a thermosalinograph (SBE-45 or SBE-21, Sea-Bird Electronics, Inc<sup>1</sup>). Water samples for nutrients (N, P, Si), chlorophyll a (total and size fractionated), and phytoplankton will be collected at the surface and below the pycnocline using 5-L Niskin bottles. Zooplankton samples will be collected at each trawl station from surface to near bottom using double oblique bongo (60-cm diameter frame with 505 and 333 micron mesh nets) and 150 micron mesh.

### 3. Geographical Area of Operation:

The charter will begin in Dutch Harbor, Alaska on August 1, 2012 and end in Dutch Harbor on September 28, 2012 (Table 1). The survey will consist of three legs with two port calls scheduled in Nome on Aug. 24 and Sept. 11. The first leg will sample stations north of 65N within Chukchi Sea; leg 2 will continue to sample the Chukchi Sea. Leg 3 will sample stations south of 65N within the northern Bering Sea (Fig. 1).

### 4. Cruise Schedule:

Table 1. Tentative cruise itinerary for the *F/V Bristol Explorer* pelagic fish survey (BASIS/Arctic Eis) on the northeastern Bering Sea shelf and Chukchi Sea, August 1 – September 28, 2012.

Date	Location/Activity
Aug 1	Dutch Harbor, scientists embark and load sample equipment
Aug 2	Complete loading
Aug 3	Acoustic calibration; leave Dutch Harbor: travel to Bering Strait
Aug 6	Begin Sampling southern Chukchi Sea (leg 1)
Aug 23	Transit to Nome, AK
Aug 24	Port Call Nome
Aug 25	Transit to northern Chukchi Sea (leg 2)
Aug 26	Sample stations in northern Chukchi Sea
Sep 9	Transit to Nome, AK
Sept 11	Port Call Nome
Sep 12	Transit to northern Bering Sea; Begin sampling (leg 3)
Sep 26	Transit to Dutch Harbor
Sep 28	Port Call Dutch Harbor;
Sep 29	Offload gear, end survey



## **5. Catch of Restricted or Managed Species:**

A midwater rope trawl (50-m horizontal, 20-m vertical, towed near the surface or midwater) will be used to collect pelagic fish species in the the northern Bering Sea and Chukchi Sea. Based on the previous surveys conducted on the eastern Bering Sea and Chukchi Sea, we anticipate a total fish catch of approximately 6500 kg in trawl catch (Tables 2 and 3).

## **6. Sponsoring Organization Contact Information:**

Douglas P. DeMaster, Science and Research Director  
Alaska Fisheries Science Center (AFSC), NMFS  
Auke Bay Laboratories  
17109 Point Lena Loop Road  
Juneau, AK 99801  
FAX: (907) 789-6094

## **7. Principal Investigator/Chief Scientist Contact Information**

Alex Andrews, Chief Scientist (leg 1), [Alex.Andrews@noaa.gov](mailto:Alex.Andrews@noaa.gov) (907) 789-6655  
Ron Heintz, Chief Scientist (leg 2), [Ron.Heintz@noaa.gov](mailto:Ron.Heintz@noaa.gov) (907) 789-6058  
Ed Farley, Chief Scientist (leg 3), [Ed.Farley@noaa.gov](mailto:Ed.Farley@noaa.gov) (907) 789-6085

Alaska Fisheries Science Center (AFSC), NMFS  
Auke Bay Laboratories  
17109 Point Lena Loop Road  
Juneau, AK 99801  
FAX: (907) 789-6094

## **8. Steller Sea Lion Critical Habitat and Closures**

No stations are within designated Steller sea lion critical habitat (Fig. 1)

**Table 2. Anticipated catch composition of the F/V *Bristol Explorer* pelagic fish survey in the northesastern Bering Sea, leg 3: September 12-28, 2012, based on catch composition during the 2011 northern Bering Sea survey.**

<b>Common Name</b>	<b>Expected Catch (kg)</b>	<b>Amount Retained (kg)</b>
Pink salmon	55	20
Chum salmon	523	20
Coho salmon	4	20
Chinook salmon	42	20
Walleye pollock	1393	10
Safron Cod	24	1
Pacific herring	2667	10
Capelin	453	10
Pacific sand lance	16	1
Rainbow smelt	106	10
Squid and other pelagic fish	10	5
Yellowfin Sole	104	0
Jellyfish	8800	1

**Table 3. Anticipated catch composition of the F/V *Bristol Explorer* pelagic fish survey in the Chukchi Sea, legs 1 and 2: August 1 to September 11, 2012, based on catch composition during the BASIS 2007 survey in the Chukchi Sea.**

<b>Common Name</b>	<b>Expected Catch (kg)</b>	<b>Amount Retained (kg)</b>
Pink salmon	224	20
Chum salmon	281	20
Coho salmon	8	8
Chinook salmon	14	10
Arctic Cod	21	10
Safron Cod	193	10
Pacific herring	553	10
Capelin	4	4
Pacific sand lance	6	1
Shorthorn Sculpin	18	1

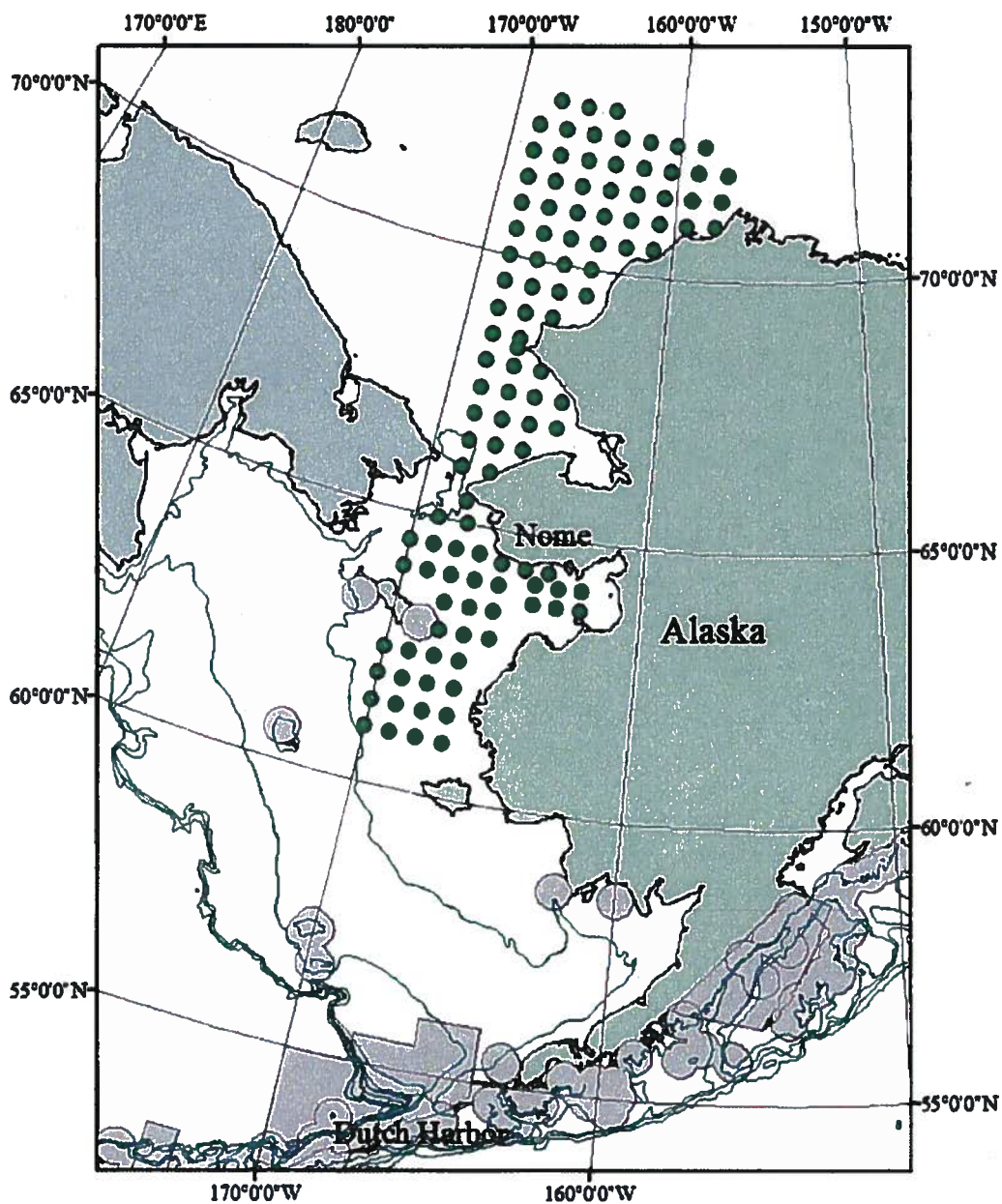


Fig. 1. Station coordinates for the F/V *Bristol Explorer* pelagic fish survey (BASIS/Arctic Eis), August 1 – September 28, 2012. Shaded coastal regions are designated as critical habitat for Steller sea lions.