

Appendix IIC: Funded Research Projects

First number in the project number relates to the calendar year in which the project was recommended for funding by NPRB and approved by the Secretary of Commerce. For example, project 302 was funded in 2003.

#	Budget	Project Title	Investigators	Institutions
201	\$120,000	Pilot nearshore habitat mapping using acoustic and visual techniques.	Brian Bornhold (PI), Brenda Burd (PI), William Collins (PI), John Harper (PI), Pam Thuringer (PI), Sheri Ward (PI)	Coastal and Ocean Resources, Inc.
202	\$121,918	Application of new sonar technology to reducing salmon bycatch in pollock fisheries and other North Pacific fishery and ecosystem issues.	Craig Rose (PI)	NOAA - AFSC
203	\$120,690	Continuation of long-term observations on Bering Sea shelf: biophysical moorings at sites 2 and 4.	Jeffery Napp (PI), Phyllis Stabeno (PI), Terry Whitledge (PI)	NOAA - AFSC, NOAA - PMEL, University of Alaska Fairbanks
204	\$190,800	NPAFC Salmon Tagging	Vladimir Fedorenko (PI), Jack Helle (PI)	North Pacific Anadromous Fish Commission
205	\$216,515	Genetic stock identification of Western Alaska sockeye salmon.	James Seeb (PI), Richard Wilmot (PI)	Alaska Dept. of Fish and Game, NOAA - AFSC
206	\$60,009	Integration of marine bird and mammal observations with the continuous plankton recorder program.	David Hyrenbach (PI), William Sydeman (PI)	Duke University, Point Reyes Bird Observatory
207	\$124,084	A protocol for detection of change in the Bering Sea ecosystem.	Anne Hollowed (PI), James Overland (PI), Nancy Soreide (PI)	NOAA - AFSC, NOAA - PMEL
208	\$131,408	Environmental cues for Pacific herring spawning in northern Bristol Bay.	Gordon Kruse (PI), David Musgrave (PI)	University of Alaska Fairbanks
209	\$76,776	Two species of rougheye rockfishes in the northern Gulf of Alaska.	Anthony Gharrett (PI)	University of Alaska Fairbanks
210	\$24,782	Nutritional quality of Alaskan fish for predators.	Michael Castellini (PI)	University of Alaska Fairbanks
211	\$21,661	Sinking particles/pelagic food webs in the Southeast Bering Sea.	Susan Henrichs (PI)	University of Alaska Fairbanks
301	\$261,102	Evaluation of emergent structure in low-relief benthic habitats as a criterion for defining the essential fish habitat of juvenile North Pacific flatfishes.	Alisa Abookire (PI), Ian Fleming (PI), Clifford Ryer (PI), Allan Stoner (PI)	NOAA - AFSC, Oregon State University
302	\$179,995	A continuous plankton recorder survey of the North Pacific and southern Bering Sea.	Sonia Batten (PI), David Welch (PI)	Dept. of Fisheries and Oceans Canada, Kintama Research, Sir Alister Hardy Foundation for Ocean Science
303	\$499,080	North Pacific Anadromous Fish Commission Cooperative Research: Use of genetic stock identification to determine the distribution, migration, early marine survival, and relative stock abundance of sockeye and chum salmon in the Bering Sea.	Syuiti Abe (PI), James Seeb (PI), Shigehiko Urawa (PI), Richard Wilmot (PI)	Alaska Dept. of Fish and Game, Hokkaido University, National Salmon Resources Center Japan, NOAA-AFSC

#	Budget	Project Title	Investigators	Institutions
304	\$1,303,001	Deep sea coral distribution and habitat in the Aleutian Archipelago.	Jonathan Heifetz (PI), Jennifer Reynolds (PI), Douglas Woodby (PI)	Alaska Dept. of Fish and Game, NOAA - AFSC, University of Alaska Fairbanks
305	\$350,000	Monitoring and modeling predator-prey relationships	Patricia Livingston (PI)	NOAA - AFSC
306	\$99,805	Species identity and life history of Hematodinium, the causative agent of bitter crab syndrome in Northeast Pacific snow (opilio) and Tanner (bairdi) crabs	Lorenz Hauser (PI), Pamela Jensen (PI), Frank Morado (PI), Douglas Woodby (PI)	Alaska Dept. of Fish and Game, NOAA - AFSC, University of Washington
307	\$56,117	Bering Sea right whales: ongoing research and public outreach.	John Hildebrand (PI)	Scripps Institution of Oceanography, University of California San Diego
308	\$320,000	Forage fishes in the western Gulf of Alaska: variation in productivity.	Kevin Bailey (PI), Janet Duffy-Anderson (PI), Jeffery Napp (PI), Jari Paakkonen (PI), Matt Wilson (PI)	NOAA - AFSC
309	\$184,518	Sperm whale and longline fisheries interactions in the Gulf of Alaska.	Greg Beam (PI), Linda Behnken (PI), Ann Bowles (PI), Stephen Insley (PI), Sarah Mesnick (PI), Tory O'Connell (PI), Janice Straley (PI)	Alaska Dept. of Fish and Game, Alaska Longline Fishermen's Association, Hubbs-Sea World Research Institute, University of California Santa Cruz, NOAA - SWFSC, University of Alaska Southeast
310	\$400,022	Estuaries as essential fish habitat for salmonids: assessing residence time and habitat use of coho and sockeye salmon in Alaska estuaries.	Mary Bishop (PI), Sean Powers (PI), Gordon Reeves (PI)	Prince William Sound Science Center, US Forest Service, Pacific Northwest Research Station
311	\$43,066	Establishing a statewide data warehouse of salmon size, age and growth records.	Beverly Agler (PI)	Alaska Dept. of Fish and Game
312	\$149,962	Ice seal bio-monitoring in the Bering-Chukchi Sea region.	Lori Quakenbush (PI), Gay Sheffield (PI)	Alaska Dept. of Fish and Game
313	\$172,886	Effects of prey availability and predation risk on the foraging ecology and demography of harbor seals in Prince William Sound: development and test of a dynamic state variable model.	Gail Blundell (PI), Lawrence Dill (PI), Alejandro Frid (PI)	Alaska Dept. of Fish and Game, Simon Fraser University
314	\$92,920	Thermal habitat preferences of Pacific halibut and the potential influence of hydrographic variability on a local coastal fishery.	Tim Loher (PI), Heather McCarty (PI)	Heather McCarty and Associates, International Pacific Halibut Commission
315	\$320,212	Continuation of long-term observations on the Bering Sea shelf: Biophysical moorings at sites 2 and 4.	Jeffrey Napp (PI), James Overland (PI), Phyllis Stabeno (PI), Terry Whitledge (PI)	NOAA - AFSC, NOAA - PMEL, University of Alaska Fairbanks
316	\$85,561	Essential fish habitat for blue king crab, Phase 1: Development of cultivation techniques for blue king crab larvae.	Bradley Stevens (PI)	NOAA - AFSC
317	\$24,930	Pre-season forecast of Bristol Bay sockeye salmon migration timing based on oceanographic and biological variables.	Greg Ruggerone (PI)	Natural Resource Consultants Inc.
318	\$45,000	Development of comprehensive baseline commercial fishing community engagement and dependency profiles for the Bering Sea, Aleutian Islands, and Western Gulf of Alaska regions.	Mike Downs (PI)	EDAW, Inc
319	\$68,198	Retrospective study of pigmented macrophage aggregates as markers of Pacific herring population health.	Gary Marty (PI)	University of California Davis
320	\$900,000	Regime forcing and ecosystem response in the Bering Sea (REFER): Phase II.	Sara Iverson (PI), Alexander Kitaysky (PI), Alan Springer (PI)	Dalhousie University, University of Alaska Fairbanks, University of Washington

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321	\$192,850	Evaluation of alternative hypotheses to explain the collapse of the Kvichak sockeye salmon: a project to catalyze a comprehensive, hypotheses-driven research program.	Mike Link (PI), Greg Ruggerone (PI)	Bristol Bay Science and Research Institute, Natural Resource Consultants Inc.
322	\$99,321	Spatial and temporal interactions between endangered short-tailed albatrosses and North Pacific commercial fisheries.	Greg Balogh (PI), Ed Melvin (PI), Graham Robertson (PI), Rob Suryan (PI)	Australian Antarctic Division, Oregon State University, University of Washington Sea Grant, US Fish & Wildlife Service
324	\$161,700	Bering Sea wintering grounds of beluga whales.	Rod Hobbs (PI), Denis Litovka (PI), Gregory O'Corry-Crowe (PI), Jack Orr (PI), Pierre Richard (PI)	Dept. of Fisheries & Oceans Canada, Pacific Scientific Research Fisheries Institute, NOAA - AFSC, NOAA - SWFSC
325	\$165,000	Video monitoring aboard Bering Sea factory trawlers - a pilot study.	Stosh Anderson (PI), Mark Buckley (PI)	Digital Observer LLC
326	\$100,000	Enhancing rural high school involvement in North Pacific resource issues through participation in Alaska Regional National Ocean Sciences Bowl.	Susan Sugai (PI)	Alaska Sea Grant, University of Alaska Fairbanks
327	\$624,025	Early marine ecology of juvenile chum salmon in Kuskokwim Bay, Alaska.	Lewis Haldorson (PI), Nicola Hillgruber (PI), Christian Zimmerman (PI)	University of Alaska Fairbanks, USGS Alaska Science Center
401	\$499,236	Survey strategies for assessment of Bering Sea forage species.	Mark Benfield (PI), Evelyn Brown (PI), James Churnside (PI), Nicola Hillgruber (PI), John Horne (PI), Sandra Parker-Stetter (PI), Mike Sigler (PI)	Louisiana State University, NOAA - ETL, NOAA - AFSC, University of Alaska Fairbanks, University of Washington
402	\$74,949	Evaluation of ocean circulation models for the Bering Sea and Aleutian Islands Region.	Albert Hermann (PI), David Musgrave (PI)	NOAA - PMEL, University of Alaska Fairbanks
403	\$103,000	Building an education and outreach program for the North Pacific Research Board.	Steve Carrick (PI), Amy Haddow (PI)	Alaska SeaLife Center
404	\$149,979	Alaska Marine Information System	Dale Kiefer (PI), Karen Stocks (PI)	University of California San Diego, System Science Applications
406	\$120,408	Synthesis of marine biology and oceanography of southeast Alaska.	Ginny Eckert (PI), Lisa Eisner (PI)	NOAA - AFSC, University of Alaska Southeast
407	\$188,963	Kelp-grazer interactions in Kachemak Bay, Alaska: Grazing activity, chemical defenses and resource allocation in selected kelp species.	Katrin Iken (PI)	University of Alaska Fairbanks
409	\$255,690	Integration of marine bird and mammal observations with the Pacific continuous plankton recorder (CPR) program: temporal variability in ecosystem structure across three basins.	David Hyrenbach (PI), William Sydeman (PI)	Duke University, Point Reyes Bird Observatory
410	\$170,204	Long-term observations on the Bering Sea shelf (2004-2005): biophysical moorings at sites 2 and 4 as sentinels for ecosystem change.	Jeffery Napp (PI), Phyllis Stabeno (PI), Terry Whitledge (PI)	NOAA - AFSC, NOAA - PMEL, University of Alaska Fairbanks
411	\$168,444	Investigations into dietary specialization of killer whales in the Bering Sea and Aleutian Islands.	Amy Hirons (PI), Peggy Krahn (PI), Paul Wade (PI)	NOAA - AFSC, NOAA - NWFSC, University of Alaska Fairbanks
412	\$68,626	Sperm whale and longline fisheries interactions in the Gulf of Alaska: passive acoustic component.	William Kuperman (PI), Janice Straley (PI), Aaron Thode (PI)	Scripps Institution of Oceanography, University of Southeast Sitka Campus

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413	\$131,476	Tufted puffins as biological indicators of forage fish availability in the western Gulf of Alaska.	C. Loren Buck (PI), Cory Williams (PI)	University of Alaska Fairbanks
414	\$244,000	Seasonal foraging strategies and consequences for Northern Fur Seals at Colonies with opposite population trends.	Rolf Ream (PI), Alan Springer (PI)	NOAA - AFSC, University of Alaska Fairbanks
415	\$140,936	Investigations of a skate nursery area in the eastern Bering Sea.	Gerald R. Hoff (PI)	NOAA - AFSC
416	\$143,384	Determining the ecological value of habitat to juvenile rockfish in the Aleutian Islands.	Jennifer Boldt (PI), Chris Rooper (PI), Mark Zimmermann (PI)	NOAA - AFSC
417	\$200,000	Reproductive ecology of Atka mackerel, <i>Pleurogrammus monopterygius</i> , in Alaska.	Shannon Atkinson (PI), Nicola Hillgruber (PI), Robert Lauth (PI), Susanne McDermott (PI)	Alaska SeaLife Center, NOAA - AFSC, University of Alaska Fairbanks
418	\$171,006	Abundance, life history, and population demographics of spiny dogfish, <i>Squalus acanthias</i> .	Vincent Gallucci (PI), Gordon Kruse (PI)	University of Alaska Fairbanks, University of Washington
419	\$90,000	Modeling of multispecies groundfish interactions in the eastern Bering Sea.	Patricia Livingston (PI)	NOAA - AFSC
420	\$105,000	Interannual and spatial variation in population genetic composition of northeastern Gulf of Alaska young-of-the-year Pacific ocean perch.	Anthony Gharrett (PI)	University of Alaska Fairbanks
421	\$48,402	Identification of polybrominated diphenyl ethers (PBDEs) in sediments and biota in a pristine southeast Alaska watershed and near a municipal waste landfill in Juneau, Alaska.	Lisa Hoferkamp (PI), Sherry Tamone (PI)	University of Alaska Southeast
422	\$108,820	Ecological implications of fisheries-based economical development in Nelson Lagoon: Steller's eider critical habitat.	Ellen Lance (PI), Kimberly Trust (PI)	US Fish & Wildlife Service
423	\$80,000	An international market model for red king (<i>Paralithodes camtschaticus</i>), blue king (<i>P. platypus</i>), golden king (<i>Lithodes aequispinus</i>), tanner (<i>Chionoectes Bairdi</i>) and snow (<i>Chionoectes opilio</i>) crab.	Joshua Greenberg (PI), Mark Herrmann (PI)	University of Alaska Anchorage, University of Alaska Fairbanks
501	\$160,600	Remote monitoring of survival and short-range year-round movements of harbor seals in Prince William Sound	Gail Blundell (PI)	Alaska Dept of Fish and Game
502	\$99,957	Integration of ecological indicators for the North Pacific with emphasis on the Bering Sea: A workshop approach.	Alex Bychkov (PI), James Overland (PI)	NOAA - PMEL, PICES
503	\$195,437	Arctic Ocean synthesis.	Russell Hopcroft (PI)	University of Alaska Fairbanks
504	\$99,850	Analysis of ongoing salmon programs.	Eric Knudsen (PI)	Consulting Fisheries Scientist
505	\$63,996	Walleye pollock in the Eastern Bering Sea: A spatially explicit model.	Terrance Quinn (PI)	University of Alaska Fairbanks
506	\$133,938	Factors influencing the mortality of tagged walleye pollock captured using a trawl net.	Robert Foy (PI)	University of Alaska Fairbanks,
507	\$172,863	Essential habitat for Pribilof Island Blue King Crab, phase 2.	C. Loren Buck (PI), Bradley Stevens (PI)	NOAA - AFSC, University of Alaska Fairbanks

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508	\$206,353	Female reproductive output of snow crab in eastern Bering Sea.	David Armstrong (PI), Billy Ernst (PI), Timothy Essington (PI), Patricia Livingston (PI), Lobo Orensanz (PI)	Centro National Patagonico & Dept. of Oceanography, University of Concepcion, Chile, NOAA - AFSC, University of Washington
509	\$120,699	Retrospective analysis of Kodiak red king crab.	Gordon Kruse (PI)	University of Alaska Fairbanks
510	\$199,069	Skate life history and demography.	Gregor Cailliet (PI), Dave Ebert (PI)	Moss Landing Marine Laboratories
511	\$320,395	Spiny dogfish in Alaska.	Vincent Gallucci (PI), Gordon Kruse (PI)	University of Alaska Fairbanks, University of Washington
512	\$116,830	Juvenile Pacific ocean perch genetics, phase 2.	Anthony Gharrett (PI)	University of Alaska Fairbanks
513	\$295,824	Winter movements of fur seal pups.	Russ Andrews (PI), Randall Davis (PI)	Alaska SeaLife Center, Texas A&M University
514	\$420,339	Consequences of fur seal foraging strategies.	Rolf Ream (PI), Alan Springer (PI)	NOAA - AFSC, University of Alaska Fairbanks
515	\$203,644	Ice seal movements.	Peter Boveng (PI), Brendan Kelly (PI)	NOAA - AFSC, NOAA - NMML, University of Alaska Southeast
516	\$200,000	Seabirds as indicators of marine ecosystems.	Vernon Byrd (PI), David Irons (PI), John Piatt (PI), Alan Springer (PI), William Sydeman (PI)	Point Reyes Bird Observatory, University of Alaska Fairbanks, US Fish & Wildlife Service, USGS Alaska Science Center
517	\$345,966	Sentinels for Bering Sea ecosystem change.	Jeffery Napp (PI), Phyllis Stabeno (PI), Terry Whitledge (PI)	NOAA - AFSC, NOAA - PMEL, University of Alaska Fairbanks
518	\$155,248	Bering Sea whales and oceanography.	David Mellinger (PI), Sue Moore (PI)	NOAA - NMML, Oregon State University
519	\$30,000	Bering Sea whale acoustics.	John Hildebrand (PI)	Scripps Institution of Oceanography, University of California San Diego
520	\$420,000	Gulf of Alaska Long-Term Observations.	Russell Hopcroft (PI), Tom Weingarter, (PI), Terry Whitledge (PI)	University of Alaska Fairbanks
521	\$100,000	A profiling echosounder for North Pacific monitoring.	David Mackas (PI), Svein Vagle (PI)	Institute of Ocean Sciences, Dept. of Fisheries and Oceans Canada
522	\$499,630	Reproductive biology of Atka mackerel.	Shannon Atkinson (PI), Mike Canino (PI), Nicola Hillgruber (PI), Susanne McDermott (PI)	Alaska SeaLife Center, NOAA - AFSC, University of Alaska Fairbanks
523	\$131,251	Pollock recruitment and stock structure.	Martin Dorn (PI), Albert Hermann (PI), Sarah Hinckley (PI), John Horne (PI), Bern Megrey (PI), Carolina Parada (PI)	NOAA - AFSC, NOAA - PMEL, University of Washington
524	\$70,017	Productivity of capelin and pollock.	Janet Duffy-Anderson (PI), Patricia Livingston (PI), Elizabeth Logerwell (PI), Matt Wilson (PI)	NOAA - AFSC
525	\$183,679	Modeling multispecies groundfish interactions.	Kerim Aydin (PI), James Ianelli (PI)	NOAA - AFSC

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527	\$172,507	Evaluation of sperm whale deterrents.	Linda Behnken (PI), William Kuperman (PI), Sarah Mesnick (PI), Victoria O'Connell (PI), Janice Straley (PI), Aaron Thode (PI)	Alaska Longline Fishermen's Association, Groundfish Project Leader Region 1, Scripps Institution of Oceanography, NOAA - SWFSC, University of Alaska Southeast
528	\$94,220	Socioeconomic baseline information for the Pribilof Islands.	Astrid Scholz (PI)	Ecotrust
529	\$61,194	Valuation of habitat closures	Matt Berman (PI), Ussif Sumaila (PI)	University of Alaska Anchorage, University of British Columbia
530	\$89,640	Institutions for ecosystem-based management: Alaska	David Fluharty (PI)	University of Washington
531	\$31,234	Seabird-fish models.	William Sydeman (PI)	Point Reyes Bird Observatory
532	\$171,690	Albatross habitat and fisheries interaction.	Greg Balogh (PI), Rob Suryan (PI)	Oregon State University, US Fish & Wildlife Service
533	\$45,269	Safety evaluation of fisheries management.	Jennifer Lincoln (PI)	NIOSH, US Public Health Service
534	\$122,663	Expanding the seabird tissue archival.	Paul Becker (PI), David Roseneau (PI), Geoffrey York (PI)	NOAA, NIST, US Fish & Wildlife Service, US Geological Survey, USGS Alaska Science Center
535	\$183,140	Dietary specialization of killer whales.	Amy Hirons (PI), Peggy Krahn (PI), Paul Wade (PI)	NOAA - AFSC, NOAA - NWFSC, University of Alaska Fairbanks
536	\$100,000	A continuous plankton recorder survey of the North Pacific and southern Bering Sea.	Sonia Batten (PI), David Welch (PI)	Dept. of Fisheries and Oceans Canada, Kintama Research, Sir Alister Hardy Foundation for Ocean Science
537	\$99,586	Building an education and outreach program for the North Pacific Research Board.	Steve Carrick (PI)	Alaska SeaLife Center
601	\$100,000	A continuous plankton recorder survey of the North Pacific and southern Bering Sea.	Sonia Batten (PI), David Mackas (PI)	Dept. of Fisheries and Oceans Canada, Sir Alister Hardy Foundation for Ocean Science
602	\$200,000	Sentinels for Bering Sea ecosystem change.	Jeffery Napp (PI), Phyllis Stabeno (PI), Terry Whitledge (PI)	NOAA- AFSC, NOAA - PMEL, University of Alaska Fairbanks
603	\$415,925	Gulf of Alaska Long-Term Observations.	Russell Hopcroft (PI)	University of Alaska Fairbanks
604	\$155,350	Retrospective analyses of Norton Sound benthic fauna.	Toshihide Hamazaki (PI), Stephen Jewett (PI), Thomas Weingartner (PI)	Hamachan Scientific Research Services, University of Alaska Fairbanks
605	\$199,917	Modeling Growth and Survival of Early Life-Stages of Pacific Cod in Response to Climate-Related Changes in Sea Ice Conditions in the Bering Sea.	Mike Behrenfeld (PI), Lorenzo Ciannelli (PI), Michael Davis (PI), Thomas Hurst (PI), Benjamin Laurel (PI), Al Stoner (PI)	NOAA - AFSC, Oregon State University
606	\$115,690	Modeling Climate Effects on Interdecadal Variation in Southeastern Bering Sea Jellyfish Populations.	Mary Beth Decker (PI)	Yale University
607	\$149,547	Modeling study on the response of lower trophic level production to climate change.	Clara Deal (PI), Meibing Jin (PI), Jia Wang (PI)	International Arctic Research Center, University of Alaska Fairbanks
608	\$200,000	Response of the Bering Sea integrated circulation-ice-ecosystem to forcing by climate and the adjacent North Pacific and Arctic Oceans 1955-2005.	Richard Barber (PI), Fei Chai (PI), Yi Chao (PI)	Duke University, Jet Propulsion Laboratory, University of California Los Angeles, University of Maine

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609	\$97,498	Is the pelagic distribution of seabirds in the Bering Sea driven by climate change? A retrospective analysis	Julia Parrish (PI)	University of Washington
610	\$182,938	Adaptation to a changing world: molecular evidence for selective mortality in walleye pollock larvae.	Kevin Bailey (PI), Michael Canino (PI), Lorenz Hauser (PI)	NOAA - AFSC, University of Washington
611	\$85,781	Spatio-temporal variability in North Pacific meso-marine ecosystem structure: Basin-wide responses to a cooling transition.	David Hyrenbach (PI), William Sydeman (PI)	Point Reyes Bird Observatory, University of Washington
612	\$100,000	COASST-Alaska: A comprehensive monitoring program for coastal ecosystem health and change.	Julia Parrish (PI)	University of Washington
614	\$256,648	Optimization of a nutrient-phytoplankton-zooplankton ecological model for quantifying physical and biological interactions on the Gulf of Alaska shelf.	Ken Coyle (PI), Albert Hermann (PI), Sarah Hinckley (PI)	NOAA - AFSC, University of Alaska Fairbanks, University of Washington
615	\$149,950	Marine habitat mapping technology workshop for Alaska.	Brian Allee (PI), Gary Greene, (PI), Jennifer Reynolds (PI)	Moss Landing Marine Laboratories, University of Alaska Fairbanks
616	\$122,300	Chiswell Ridge habitat mapping and groundfish assessment.	Mike Byerly (PI), Richard Sylwester (PI)	Alaska Dept of Fish and Game, Golder and Associates
617	\$150,000	Migration patterns of Pacific halibut in the southeast Bering Sea.	Tim Loher (PI), Brenda Norcross (PI)	International Pacific Halibut Commission, University of Alaska Fairbanks
618	\$39,432	Spatial and temporal patterns in Pacific cod reproductive maturity in the Bering Sea.	Elizabeth Logerwell (PI), Sandra Neidetcher (PI)	Alaska Fisheries Science Center
619	\$244,984	Connectivity between Greenland halibut (<i>Reinhardtius hippoglossoides</i>) spawning and nursery areas in the eastern Bering Sea: A paradigm for offshore spawning flatfish species.	Kevin Bailey (PI), Lorenzo Ciannelli (PI), Janet Duffy-Anderson (PI), Ann Matarese (PI)	NOAA - AFSC, Oregon State University
620	\$108,525	Estimating movement rates of Pacific cod (<i>Gadus macrocephalus</i>) in the Bering Sea and the Gulf of Alaska using mark-recapture methods.	Don Gunderson (PI), Peter Munro (PI), Dan Urban (PI)	Alaska Dept. of Fish and Game, NOAA - AFSC, University of Washington
621	\$149,995	Diet and trophic ecology of skates in Gulf of Alaska (<i>Raja</i> and <i>Bathyraja</i> spp.): Foundational ecological information for ecosystem-based management of demersal resources.	Gregor Cailliet (PI), David Ebert (PI)	Moss Landing Marine Laboratories
622	\$150,000	Analysis of fall, winter, and spring predation of key Bering Sea and Gulf of Alaska groundfish through food habits and stable isotope analysis.	Kerim Aydin (PI), Bruce Miller (PI)	NOAA - AFSC, University of Washington
623	\$82,300	Tools to assess <i>Hematodinium</i> life history and impacts on Tanner crabs.	Carolyn Friedman (PI), Lorenz Hauser (PI), Frank Morado (PI)	NOAA - AFSC, University of Washington
624	\$294,515	Modeling transport and survival of larval crab: Investigating the contraction and variability in snow crab stocks in the Eastern Bering Sea using individual-based models.	David Armstrong (PI), Billy Ernst (PI), Albert Hermann (PI), Sarah Hinckley (PI), Gordon Kruse (PI), Bernard Megrey (PI), Jeff Napp (PI), Jose Maria (Lobo) Orensanz (PI), Carolina Parada (PI)	Centro Nacional Patagonico, NOAA - AFSC, University of Alaska Fairbanks, University of Concepcion, University of Washington
625	\$250,000	Assessment of Bristol Bay red king crab resource for future management action--a new approach.	Steven Hughes (PI)	Bering Sea Fisheries Research Foundation

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626	\$152,464	Testing low-cost methods to reduce sperm whale depredation in the Gulf of Alaska.	Jan Straley (PI), Aaron Thode (PI)	Scripps Institution of Oceanography, University of Alaska Southeast
627	\$196,865	Identifying life history characteristics of squid in the Bering Sea.	Nate Bickford (PI), Brenda Norcross (PI)	University of Alaska Fairbanks
628	\$215,228	Understanding the population dynamics of an abundant non-target species group: life history and demographics of large sculpin species in the Bering Sea large marine ecosystem.	Kerim Aydin (PI), Anne Hollowed (PI), Bruce Miller, (PI), Rebecca Reuter (PI)	NOAA - AFSC, University of Washington
629	\$188,232	Assessment of female reproductive effort and maternal effects in Pacific Ocean perch: do big old females matter?	Selina Heppell (PI), Scott Heppell (PI), Paul Spencer (PI)	NOAA - AFSC, Oregon State University
630	\$163,845	Food web linkages: forage fish distribution and ecology in core Areas of predator distribution in the Aleutian Archipelago.	Mayumi Arimitsu (PI), Vernon Byrd (PI), John Piatt (PI)	US Fish & Wildlife Service, USGS Alaska Science Center
631	\$223,658	Population structure of ringed seals.	Brendan Kelly (PI), Bradley Swenson	Central Michigan University, University of Alaska Southeast
632	\$299,768	Distribution, abundance, and ecology of Pacific walruses in the Bering Sea.	Chadwick Jay (PI), Brenda Konar (PI), Rosa Meehan (PI)	University of Alaska Fairbanks, US Fish & Wildlife Service, US Geological Survey
633	\$140,650	Multi-scale predictions of right whale (<i>Eubalaena japonica</i>) habitat in the North Pacific and Bering Sea.	John Ford (PI), Edward Gregr (PI), Randall Reeves (PI)	Dept. of Fisheries and Oceans Canada, NOAA - AFSC, NOAA - SWFSC, Okapi Wildlife Associates, SciTech Consulting
634	\$38,400	Genetic population structure of bowhead whales, using historical bone and baleen samples.	Phillip Morin (PI)	NOAA - SWFSC
635	\$57,196	Comparison of stable carbon and nitrogen isotope ratios in muscle and epidermis of subsistence-harvested bowhead, beluga and gray whales.	Larissa Dehn (PI), Erich Follmann (PI)	University of Alaska Fairbanks
636	\$48,710	Identifying critical foraging habitat of lactating northern fur seals and the spatial overlap with commercial fisheries in the eastern Bering Sea.	Pamela Lestenkof (PI), Andrew Trites (PI)	North Pacific Universities Marine Mammal Research Consortium, Pacific Rim Fisheries
637	\$164,334	North Pacific pelagic seabird observer program.	David Irons (PI), Kathy Kuletz (PI)	US Fish & Wildlife Service
638	\$99,660	Relationships among climate variability, ocean productivity and demography of Aleutian populations of three planktivorous seabirds: Least (<i>Aethia pusilla</i>), Crested (<i>A. cristatella</i>) and Whiskered Auklets (<i>A. pygmaea</i>)	Ian Jones (PI)	Memorial University of Newfoundland
639	\$35,173	Extending lessons from the Steller sea lion controversy: Getting ahead of the northern fur seal curve.	Marc Hershman (PI)	University of Washington
640	\$49,999	Comprehensive baseline commercial fishing community engagement and dependency profiles: Adak, St. George, St. Paul, and Sand Point, Alaska.	Michael Downs (PI)	EDAW, Inc
641	\$40,000	Role of walrus in distribution of human trichinellosis disease among indigenous people in Chukchi Peninsula.	Lidiya Bukina (PI), Anna Kolevatova (PI)	Federal State Educational Institution of Higher Vocational Education, Vyatka State Agricultural Academy
642	\$150,000	Seasonal distribution, habitat use, and energy density of forage fish in the nearshore ecosystem of Prince William Sound (NPRB-OSRI Collaboration).	Scott Johnson (PI)	NOAA - AFSC

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643	\$150,000	Bering Strait region local and traditional knowledge pilot project.	Austin Ahmasuk (PI)	Kawerak, Inc.
644	\$150,000	Response and intervention system for climate change induced paralytic shellfish poisoning in Aleut communities.	Victoria Gofman (PI), Raymond Ralonde (PI), Bruce Wright (PI)	Aleutian/Pribilof Islands Association, Inc., Aleut International Association, University of Alaska
645	\$149,930	Alaska rockfish: Subsistence harvests and local knowledge of Alaska rockfish (genus Sebastes).	Jesse Dizard (PI)	Alaska Dept. of Fish and Game
646	\$33,853	Steller sea lions in Alaska: Direct mortality by humans.	Michael Turek (PI)	State of Alaska
701	\$200,000	Sentinels for ecosystem change: Long-term biophysical moorings on the Bering Sea shelf (2007-2008).	Jeffery Napp (PI), Phyllis Stabeno (PI), Terry Whitledge (PI)	NOAA - AFSC, NOAA - PMEL, University of Alaska Fairbanks,
702	\$113,074	Development and testing of a real-time ocean data transmitting buoy for the Gulf of Alaska.	Thomas Weingartner (PI)	University of Alaska Fairbanks
703	\$99,100	Education and Outreach for the North Pacific Research Board.	Nora Deans (PI)	Alaska SeaLife Center
704	\$100,000	Developing the Alaska Marine Information System.	Mark Johnson (PI)	University of Alaska Fairbanks
705	\$99,987	Trends and variability in the Bering Sea/Bering Strait sea ice cover.	Sheldon Drobot (PI)	University of Colorado
706	\$168,437	Wind field over the Bering-Chukchi Shelf: The QUIKSCAT perspective.	Thomas Weingartner (PI)	University of Alaska Fairbanks
707	\$127,692	Alaskan ferry oceanographic monitoring in the Gulf of Alaska.	Nicholas Bond (PI), Edward Cokelet (PI), Daniel DooLittle (CI), Calvin Mordy (CI)	KBRR, NOAA - PMEL, UW/JISAO
708	\$249,996	Gulf of Alaska long-term observations: The Seward Line 2007.	Russell Hopcroft (PI), Thomas Weingartner (CI), Terry Whitledge (CI)	University of Alaska Fairbanks
709	\$217,708	Species-habitat associations in three flatfish species of the eastern Bering Sea as mediated by demographic, human and cross-scale environmental forcing.	Kevin Bailey (PI), Kung-Sik Chan (PI), Lorenzo Ciannelli (PI), Stan Kotwicki (CI)	NOAA - AFSC, Oregon State University, University of Iowa
710	\$133,113	Potential trawl impacts upon ecological processes controlling habitat quality in juvenile flatfish nurseries.	Thomas Hurst (CI), Brian Knoth (CI), Benjamin Laurel (CI), Clifford Ryer (PI), Allan Stoner (CI)	NOAA - AFSC
711	\$221,848	Quantification of unobserved injury and mortality of Bering Sea crabs due to encounters with trawls on the seafloor.	Michael Davis (CI), John Gauvin (PI), J. Munk (CI), Craig Rose (PI), Allan Stoner (CI)	NOAA - AFSC, Marine Conservation Alliance Foundation
712	\$242,895	Bycatch characterization in the Pacific halibut fishery: A field test of electronic monitoring technology.	Jennifer Cahalan (PI), William Karp (PI), Bruce Leaman (PI), Jennifer Watson (CI), Gregg Williams (CI)	International Pacific Halibut Commission, NOAA - NMFS, Pacific States Marine Fisheries Commission
713	\$99,459	Predicting snow crab growth and size with climate warming in the northern Bering Sea.	James Lovvorn (PI)	University of Wyoming
714	\$248,206	Developing biological reference points for crustacean fisheries: Reproductive potential of Bristol Bay red king crab and eastern Bering Sea snow crab.	Ginny Eckert (PI), Gordon Kruse (CI), Katherine Swiney (PI)	NOAA - NMFS, University of Alaska Fairbanks

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715	\$135,274	Life history and population dynamics of four endemic Alaskan skates: Determining essential biological information for effective management of bycatch and target species.	Gregor Cailliet (CI), David Ebert (PI)	Moss Landing Marine Laboratory
716	\$249,998	Evaluating acoustics for squid assessment in the Bering Sea.	John Horne (PI)	University of Washington
717	\$299,807	Threatened southwest Alaska sea otter stock: delineating the causes and constraints to recovery of a keystone predator in the North Pacific Ocean.	James Bodkin (CI), James Estes (PI)	Alaska SeaLife Center, USGS Alaska Science Center
718	\$29,910	Using predictive habitat modeling and passive acoustics to locate breeding habitats of North Pacific right whales in the Pacific Islands Region.	Caroline Good (PI), Ed Gregr (PI), David Johnston (PI), Douglas Nowacek (PI)	Duke University, Florida State University, Pacific Islands Fisheries Science Center/Joint Institute of Marine and Atmospheric Research, SciTech Consulting
719	\$52,688	Analysis of Acoustic and Oceanographic Data from the Bering Sea	David Mellinger (PI), Kathleen Stafford (PI)	Oregon State University, University of Washington
720	\$293,753	Migration, wintering destinations and habitat use of North Pacific right whales (<i>Eubalaena japonica</i>).	Phillip Clapham (CI), Mads Peter Heide-Jorgensen (CI), Alexandre Zerbini (PI)	NOAA - NMML, Greenland Institute of Natural Resources
722	\$299,176	North Pacific seabird diet database: A public archival diet information system.	David Irons (PI), Daniel Roby (PI)	Oregon State University, U.S. Fish and Wildlife Service
723	\$199,281	Increasing short-tailed albatross population growth and stability through translocation of post guard chicks.	Gregory Balogh (PI), Tomohiro Deguchi (PI), Kiyooki Ozaki (CI), Robert Suryan (PI)	Oregon State University, U.S. Fish and Wildlife Service, Yamashina Institute for Ornithological Research
724	\$83,099	Estimating diets of two species of threatened sea ducks, the Steller's eider (<i>Polysticta stelleri</i>) and the spectacled eider (<i>Somateria fischeri</i>): validation of novel diet assessment techniques and identification of benthic resource use.	Tuula Hollmen (PI), Sara Iverson (CI)	Alaska SeaLife Center, Dalhousie University
725	\$23,948	Fisheries "rationalization" and crew: Workplace dynamics and compensation, what can we learn?	Seth Macinko (PI)	University of Rhode Island
726	\$99,677	Sediment quality triad assessment in Watchman Bay, Alaska: Characterization of soft bottom benthic habitats and contaminant bioeffects assessment.	Dennis Apeti (CI), Stuart Hartwell (PI), Kimani Kimbrough (CI)	NOAA - NOS
727	\$46,399	TBT contamination and impacts in Alaskan seaports.	Lisa Hoferkamp (CI), David Tallmon (PI)	University of Alaska Southeast
728	\$100,000	Herring synthesis: Documenting and modeling herring spawning areas within socio-ecological systems over time in the southeastern Gulf of Alaska.	Virginia Butler (CI), Madonna Moss (CI), Thomas Thornton (PI)	Portland State University, University of Oregon
729	\$145,000	Residency and movements of copper rockfish <i>Sebastes caurinus</i> and lingcod <i>Ophiodon elongatus</i> in nearshore areas of Prince William Sound.	Mary Bishop (PI), Sean Powers (CI)	Prince William Sound Science Center, University of South Alabama/Dauphin Island Sea Lab
730	\$244,022	A cooperative pollock acoustic biomass survey for management of fisheries interactions with Steller sea lions in the Aleutian Islands.	Steven Barbeaux (CI), Lowell Fritz (CI), Elizabeth Logerwell (PI)	NOAA - AFSC

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731	\$147,816	Temperature data collections on Bering Sea groundfish vessels to evaluate temperature at depth and catch rates for target and bycatch species in order to reduce bycatch and increase knowledge of how ecosystem variables affect fishing.	John Gauvin (PI), James Ianelli (PI), Phyllis Stabeno (PI)	Marine Conservation Alliance Foundation, NOAA - AFSC, NOAA - PMEL
732	\$99,999	COASST Alaska--A beached bird monitoring program.	Julia Parrish (PI)	University of Washington
733	\$59,693	Pribilof Islands community-based ocean monitoring program.	Aquilina Lestenkof (CI), Max Malavansky (CI), Bruce Robson (CI), Phillip Zavadil (PI)	Aleut Community of St. Paul Island - Tribal Government, St. George Island Traditional Council
734	\$8,187	An updated hydrology model for the Gulf of Alaska.	Thomas Royer (PI)	Old Dominion University
801	\$34,026	Seabird and marine mammals combined with CPR.	William Sydeman (PI)	Farralon Institute
802	\$79,062	Education and Outreach for the North Pacific Research Board.	Nora Deans (PI)	Alaska SeaLife Center
803	\$50,000	A continuous plankton recorder survey of the North Pacific and southern Bering Sea.	Sonia Batten (PI), Dave Mackas (PI)	Dept. of Fisheries and Oceans Canada, Sir Alister Hardy Foundation for Ocean Science
804	\$225,000	Seward line monitoring.	Russell Hopcroft (PI)	University of Alaska Fairbanks
805	\$169,050	Modeling processes controlling the on-shelf transport of oceanic mesozooplankton populations in the Gulf of Alaska and SE Bering Sea.	Kenneth Coyle (CI), Georgina Gibson (PI), Kate Hedstrom (CI)	University of Alaska Fairbanks
806	\$53,313	Comparison of long-term laboratory estimates of fecundity of <i>Euphausia pacifica</i> from the Gulf of Alaska and the northern California Current.	William Peterson (PI)	Oregon State University
807	\$249,775	Testing the localized depletion hypothesis: Is Steller sea lion foraging success affected by local fish effort?	Daniel Hennen (PI)	Alaska SeaLife Center
808	\$249,914	Habitat mapping and production estimate of skate nursery sites in the eastern Bering Sea.	Jared Guthridge (PI), Gerald Hoff (PI), Hanumant Singh (PI)	Alaska SeaLife Center, NOAA - AFSC, Woods Hole Oceanographic Institution
809	\$249,905	Evaluation of echosign data in improving trawl survey biomass estimates for patchily-distributed rockfish.	Dana Hanselman (CI), Paul Spencer (PI)	NOAA - AFSC
810	\$242,346	Assessment of rockfish species in untrawlable habitat using advanced acoustic, optical and trawl technologies.	David Demer (PI), Michael Martin (CI), Christopher Rooper (PI), Thomas Weber (PI), Mark Wilkins (CI), Christopher Wilson (CI), Mark Zimmermann (CI)	NOAA - AFSC, NOAA - SWFSC, University of New Hampshire
811	\$112,895	Development of a quantitative PCR assay for simultaneous identification and enumeration of planktonic red king crab (<i>Paralithodes camtschaticus</i>) larvae.	Ginny Eckert (CI), Pamela Jensen (PI), J. Morado (CI)	NOAA - AFSC, University of Alaska Fairbanks
812	\$166,966	Reproductive indices of male snow crabs, <i>Chionoecetes opilio</i> from the Bering Sea: analysis of hormones, reproductive structures, and behavior.	Sherry Tamone (PI)	University of Alaska Southeast
813	\$212,799	Determining the implications of uncertainty in Snow Crab recruitment using management strategy evaluation.	Andre Punt (PI), Benjamin Turnock (PI)	NOAA - AFSC, University of Washington

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814	\$248,190	Recruitment mechanisms for Tanner crabs in the Eastern Bering Sea.	Enrique Curchitser (PI), Albert Hermann (PI), Gordon Kruse (PI), Jeffrey Napp (PI)	JISAO/University of Washington, NOAA - AFSC, Rutgers, The State University of New Jersey, University of Alaska Fairbanks
815	\$246,058	Pacific cod (<i>Gadus macrocephalus</i>) migration and distribution related to spawning in the eastern Bering Sea: a mark-recapture experiment on a large geographic scale.	M. Conners (CI), Peter Munro (PI)	NOAA - AFSC
816	\$232,173	Estimating source contribution and dispersal histories of Pacific cod recruits using otolith elemental composition.	Thomas Hurst (PI), Jessica Miller (PI), Jamal Moss (CI)	NOAA - AFSC, Oregon State University
817	\$30,977	A landscape genetics approach to Pacific cod (<i>Gadus macrocephalus</i>) population structure in the Bering Sea and Aleutian Islands; investigation of ecological barriers to connectivity between potentially distinct population components.	Ingrid Spies (PI)	NOAA - AFSC
818	\$176,349	Walrus distributional and foraging response to changing ice and benthic conditions in the Chukchi Sea.	Jacqueline Grebmeier (PI), Chadwick Jay (PI)	University of Maryland, USGS Alaska Science Center
819	\$76,066	Body condition of marbled murrelets: Consequences for overwinter survival during a period of collapsed herring stocks.	Mary Bishop (PI), Neil Dawson (CI)	Prince William Sound Science Center
820	\$238,143	Measuring and modeling habitat use by spectacled eiders wintering in the Bering Sea.	James Lovvorn (PI)	University of Wyoming
821	\$87,089	Using blue mussels as an indicator species for testing domoic acid toxicity in subsistence bivalve harvest.	Brian Himelbloom (CI), Raymond Ralonde (PI), Bruce Wright (PI)	Aleutian Pribilof Islands Association, University of Alaska Fairbanks
822	\$99,934	Mercury levels in murre and gull eggs harvested for food in the Norton Sound region and potential sources of contamination.	Austin Ahmasuk (PI), Paul Becker (PI), David Roseneau (PI)	Kawerak Inc., National Institute of Standards and Technology, U.S. Fish and Wildlife Service
823	\$99,535	Cultural models of Copper River salmon biology.	James Brady (CI), Donna Hicks (CI), Marie Lowe (CI), Erica McCall Valentine (CI), Liliana Naves (CI), William Simeone (PI), Gloria Stickwan (CI)	Ahtna Incorporated, Alaska Department of Fish and Game, Alaska Dept. of Fish and Game, Ecotrust, North Cape Fisheries Consulting, University of Alaska
825	\$209,900	Assessment of Bristol Bay Red King Crab Resource for Future Management Action – Implementing a Cooperative Approach	Steven Hughes (PI)	Bering Sea Fisheries Research Foundation
826	\$150,000	Monitoring, avoiding, and deterring humpback whale bycatch in coastal Alaskan fisheries: a cooperative approach	Allison Rice (CI), Kate Wynne (PI)	University of Alaska Fairbanks
827	\$121,420	Ambient Noise monitoring in the Beaufort Sea using autonomous vertical arrays	Aaron Thode (PI)	Scripps Institution of Oceanography, University of California San Diego
828	\$262,189	Collaborative research: Dynamicall consistent synthesis of in-situ and satellite measurements in the Aleutian Passes.	Dmitri Nechaev (PI), Gleb Panteleev (PI)	University of Alaska Fairbanks, University of Southern Mississippi
829	\$99,936	An important use for Aleutian Island indicators: Hunting black swans.	James Overland (PI)	NOAA - PMEL