OFFICE OF POLAR PROGRAMS (OPP)

OFF Fullall	g			
Dollars in Millic	ons)			
FY 2011	FY 2012	FY 2013	e	
Actual	Estimate	Request	Amount	Percent
\$105.86	\$102.76	\$108.51	\$5.75	5.6%
69.07	69.75	75.80	\$6.05	8.7%
259.41	256.74	258.33	\$1.59	0.6%
[67.52]	[67.52]	[67.52]	-	-
6.36	6.62	7.10	\$0.48	7.3%
\$440.70	\$435.87	\$449.74	\$13.87	3.2%
	Dollars in Millio FY 2011 Actual \$105.86 69.07 259.41 [67.52] 6.36	Actual Estimate \$105.86 \$102.76 69.07 69.75 259.41 256.74 [67.52] [67.52] 6.36 6.62	FY 2011 FY 2012 FY 2013 Actual Estimate Request \$105.86 \$102.76 \$108.51 69.07 69.75 75.80 259.41 256.74 258.33 [67.52] [67.52] [67.52] 6.36 6.62 7.10	Collars in Millions) Change FY 2011 FY 2012 FY 2013 FY 2012 E Actual Estimate Request Amount \$105.86 \$102.76 \$108.51 \$5.75 69.07 69.75 75.80 \$6.05 259.41 256.74 258.33 \$1.59 [67.52] [67.52] [67.52] - 6.36 6.62 7.10 \$0.48

OPP Funding	
(Dollars in Millions)	

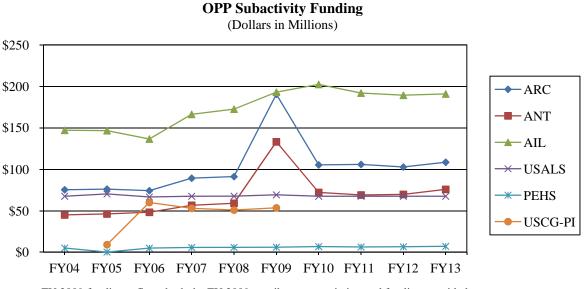
Totals may not add due to rounding.

About OPP

The Office of Polar Programs (OPP) is the primary U.S. supporter of fundamental research in the polar regions. In addition, NSF provides interagency leadership for U.S. activities in polar regions. In the Arctic, NSF helps coordinate research planning as directed by the Arctic Research Policy Act of 1984. The NSF Director chairs the Interagency Arctic Research Policy Committee created for this purpose, which is now a component of the President's National Science and Technology Council. In the Antarctic, per Presidential Memorandum 6646, NSF manages all U.S. activities as a single, integrated program, making Antarctic research possible for scientists supported by NSF and by other U.S. agencies. The latter include the National Aeronautics and Space Administration (NASA), the National Oceanic and Atmospheric Administration (NOAA), the U.S. Geological Survey (USGS), the Smithsonian Institution, and the Department of Energy. The U.S. Antarctic Program research activity supported by NSF also supports leadership by the U.S. Department of State in the governance of the continent and Southern Ocean under the aegis of the Antarctic Treaty.

OPP's FY 2013 Budget Request is influenced by four key priorities: (1) maintaining strong disciplinary programs that provide a base for our investments in cross-disciplinary system science programs; (2) strengthening U.S. research community activities in polar system science; (3) supporting critical facilities that enable research in the Earth's polar regions; and (4) enabling scientific leadership in research in polar regions that is aligned with the NSF-wide investments in Science, Engineering, and Education for Sustainability (SEES) and Cyberinfrastructure Framework for 21st Century Science and Engineering (CIF21). These priorities reflect opportunities for fundamental scientific discovery uniquely available in polar regions, as well as studies to investigate the causes and future trajectory of changes now being observed at the poles that could impact global systems. This work will implement the Foundation's leadagency role in facilitating the Nation's investment in polar science, where environmental change in parts of the Arctic and Antarctic is occurring faster than anywhere else in the world, and has a wide variety of regional and global impacts. Research supported by OPP will elucidate the causes and likely impacts of these changes, thus providing a sound basis for future policy decisions.

In FY 2013 OPP will also provide support for NSF-wide efforts, such as Integrating NSF Support Promoting Interdisciplinary Research and Education (INSPIRE) and NSF Innovation Corps (I-Corps).



FY 2009 funding reflects both the FY 2009 omnibus appropriation and funding provided through the American Recovery and Reinvestment Act of 2009 (P.L. 111-5).

OPP funding in FY 2010 and FY 2011 excludes appropriation transfers to the U.S. Coast Guard for Polar Icebreaking activities per Congressional mandates.

FY 2013 Summary by Division

- ARC's FY 2013 Request is focused on fundamental research and the science needed by policymakers to support decision-making regarding sound and sustainable economic and social development. A common theme in these activities is that they support NSF-funded research in the broader context of both interagency and international scientific studies.
- ANT's FY 2013 Request is focused on enabling fundamental discovery in fields as diverse as space weather, microbiology, and astrophysics, as well as on providing the fundamental science needed to reduce uncertainty in projections of future climate change. A common theme in these activities is that they have been identified as important directions in numerous community reports and discussions including the National Research Council's "Future Science Opportunities in Antarctica and the Southern Ocean."
- In FY 2013, AIL support includes providing increased logistical support for scientific studies that will further quantify ice-mass loss and sea level rise, atmosphere-ocean exchange rates, and how associated chemical changes will affect the marine ecosystem. Additional investments are focused on energy efficiency improvements and building the McMurdo fuel supply to a level that allows resiliency in the resupply schedule.
- In FY 2013, the Office of Polar Environment, Safety and Health continues its emphasis on environmental stewardship of the Arctic and the Antarctic, and on protecting the health and safety of researchers and others supporting research in polar regions. A priority for the office is the establishment of an electronic medical records system, using information technology to lower the cost of health care and improve delivery of health care services.

Major Investments

OPP Major investments								
(Dollars in Millions)								
Change Over FY 2011 FY 2012 FY 2013 FY 2012 Estimat								
Area of Investment	Actual	Estimate	Request	Amount	Percent			
CIF21	-	\$4.00	\$4.50	\$0.50	12.5%			
E^2	-	-	1.50	1.50	N/A			
I-Corps	-	-	0.75	0.75	N/A			
INSPIRE	-	-	1.00	1.00	N/A			
SEES	7.00	14.50	14.50	-	-			

OPP Major Investments

Major investments may have funding overlap and thus should not be summed.

- CIF21: OPP support (\$4.50 million, an increase of \$500,000 over the FY 2012 Estimate) for the NSF-wide CIF21 investment will focus on continued support for the creation of robust data management approaches that support access to research community data, archive requirements, and interoperability among different databases; and to build science community networks in order to advance data-enabled science.
- Expeditions in Education (E^2): In FY 2013 OPP redirects its Climate Change Education Program investments of \$1.50 million to participate in the E^2 program to advance the partnership between the science of learning and polar science communities. OPP expects to build on experience from the Climate Change Education program, as well as the International Polar Year education and outreach portfolio in order to capitalize on and encourage polar science perspectives for advancing the Expeditions in Education focus areas. The continuing partnership with the Directorate for Education and Human Resources (EHR) will ensure best practices are applied to rigorous assessment of funded activities.
- Innovation Corps (I-Corps): OPP will invest \$750,000 in I-Corps in FY 2013, with the goal of advancing technologies for research, such as robotics and remote sensing technologies in support of polar observations, and for creating pathways for exporting technological advances, such as the innovative radars and radar data processing that have been developed by the OPP-supported Science & Technology Center for the Remote Sensing of Ice Sheets (CReSIS).
- Integrated NSF Support Promoting Interdisciplinary Research and Education (INSPIRE): OPP's existing system science programs were established expressly to encourage communities to innovate across disciplinary lines to address societally-compelling issues, such as polar contributions to sea level rise, impacts of change for the coupled Arctic-human system, and cryospheric feedbacks in the global climate system. OPP will strengthen these programs in FY 2013 by contributing \$1.0 million to NSF efforts to identify and improve ways to review and support the most compelling interdisciplinary science.
- SEES: OPP will continue investments (totaling \$14.50 million) to advance understanding of ice-mass loss and sea level rise; effects of change on Arctic social structures; ecosystem changes associated with warming permafrost, oceanographic processes, and marine ecosystem impacts associated with

ocean acidification; and building the intellectual capacity to address complex problems through support of interdisciplinary science networks.

OPP Funding for Centers Programs and Facilities

OIT Funding for Centers Frograms					
(Dollars in Millions)					
				Change	Over
	FY 2011	FY 2012	FY 2013	FY 2012 E	Estimate
	Actual	Estimate	Request	Amount	Percent
Centers Programs Total	\$4.45	\$4.45	\$3.77	-\$0.68	-15.3%
STC: Center for the Remote Sensing of Ice Sheets (ANT)	4.45	4.45	3.77	-0.68	-15.3%

OPP Funding for Centers Programs

For detailed information on individual centers, please see the NSF-Wide Investments chapter.

Funding for CReSIS is reduced in FY 2013, the ninth year of operation, in accordance with NSF policy for the phase-out of sunsetting Science and Technology Centers.

OPP Fund	ling for Fa	cilities			
(Dolla	rs in Million	s)			
	FY 2011	FY 2012	FY 2013	Change FY 2012 I	
	Actual	Estimate	Request	Amount	Percent
Facilities (Total)	\$300.98	\$299.24	\$300.96	\$1.72	0.6%
Arctic Research Support & Logistics (ARC)	44.29	43.54	43.54	-	-
IceCube Neutrino Observatory ¹	3.45	3.45	3.45	-	-
U.S. Antarctic Facilities & Logistics	185.72	184.73	186.45	1.72	0.9%
U.S. Antarctic Logistical Support	67.52	67.52	67.52	-	-

ODD Funding for Facilities

¹MPS (PHY) provides an equal amount for operation of IceCube

For detailed information on individual facilities, please see the Facilities chapter.

Funding for U.S. Antarctic Facilities & Logistics increases in FY 2013 to support new research programs that are aligned with OneNSF framework investments and identified by ANT as highpriority scientific studies.

Summary and Funding Profile

OPP supports investments in core research and education and provides research support and infrastructure, such as permanent stations and temporary field camps in the Antarctic and the Arctic.

In FY 2013, the number of research grant proposals is expected to increase by 112 compared to the FY 2012 Estimate and OPP expects to award about 305 research grants. Average annual award size and duration increase from FY 2011 through FY 2013. Funding for facilities accounts for approximately 68 percent of OPP's budget.

OPP Funding Profile							
	FY 2011 Actual Estimate	FY 2012 Estimate	FY 2013 Estimate				
Statistics for Competitive Awards:							
Number of Proposals	680	674	786				
Number of New Awards	297	288	336				
Funding Rate	44%	43%	43%				
Statistics for Research Grants:							
Number of Research Grant Proposals	646	640	762				
Number of Research Grants	267	260	305				
Funding Rate	41%	41%	40%				
Median Annualized Award Size	\$149,125	\$146,500	\$157,500				
Average Annualized Award Size	\$184,184	\$182,200	\$192,500				
Average Award Duration, in years	2.5	2.5	2.8				

Program Monitoring and Assessment

The Performance chapter provides details regarding the periodic reviews of programs and portfolios of programs by external Committees of Visitors (COVs) and directorate Advisory Committees (ACs). Please see this chapter for additional information.

OPP plans to conduct COVs of its research and research support activities in late FY 2012/early FY 2013. The OPP AC met twice in FY 2011.

Aspects of the Office of Polar Environment, Health, and Safety requiring medical input are reviewed annually by a medical panel. Specialized reviews, such as that of the scientific diving program, are conducted as needed.

Indicators such as funding rates, award size and duration, and numbers of people supported on research and education grants also factor into OPP's internal program evaluation and performance improvement process.

In FY 2010, OSTP and NSF – which manages the U.S. Antarctic Program on behalf of the U.S. Government – tasked an independent review of the program that will continue into FY 2012. The review is being conducted in two phases: the first involved a National Research Council committee that examined and identified scientific drivers over the next two decades (see, *Future Science Opportunities in Antarctica and the Southern Ocean*, National Research Council, 2011); the second, a Blue Ribbon Panel, will analyze and report on the associated logistics and infrastructure needed to implement the science of the future effectively and efficiently. The Blue Ribbon Panel's report is expected in FY 2012.

	FY 2011		
	Actual Estimate	FY 2012 Estimate	FY 2013 Estimate
Senior Researchers	1,439	1,425	1,540
Other Professionals	874	860	940
Postdoctorates	123	110	125
Graduate Students	400	390	430
Undergraduate Students	261	245	290
K-12 Teachers	-	-	-
K-12 Students	-	-	-
Total Number of People	3,097	3,030	3,325

DIVISION OF ARCTIC SCIENCES (ARC)

\$108,510,000 +\$5,750,000 / 5.6%

	ARC Fundi	ng			
(E	Oollars in Milli	ons)			
				Change	Over
	FY 2011	FY 2012	FY 2013	FY 2012 E	Estimate
	Actual	Estimate	Request	Amount	Percent
Total, ARC	\$105.86	\$102.76	\$108.51	\$5.75	5.6%
Research	60.65	57.94	63.55	5.61	9.7%
Education	0.92	1.28	1.42	0.14	10.9%
Infrastructure	44.29	43.54	43.54	-	-
Arctic Research Support & Logistics	44.29	43.54	43.54	-	-

Totals may not add due to rounding.

Arctic Sciences is organized into several programs that support research in social science, earth system science, and a broad range of natural sciences. Educational projects are also supported. The Research Support and Logistics program assists researchers with access to the Arctic, improves safety and environmental stewardship, and increases the ability of researchers to share plans and results with local Arctic communities. The Arctic is experiencing rapid climate change, with scientific observations recording an estimated 14 percent per decade reduction in sea ice extent in the Arctic over the past 30 years, and significant summer melting of the Greenland Ice Sheet. At the same time the changes vary from region to region and, in addition, are tightly coupled to climate variability, which is also regional. These and other phenomena are forcing change and uncertainty in traditional Arctic populations, presenting challenges and opportunities for industry and commerce, and have the potential to affect the global population through changes in sea level and changed weather patterns. Arctic Sciences funds a broad range of activities to provide an integrated understanding of environmental change in the Arctic, including the study of significant, system-scale environmental change and its human dimension.

The Research Support and Logistics program is driven by and responds to research and education funded by the division. Funding is provided directly to grantees or to key organizations that provide or manage Arctic support and logistics. Emphasis will be placed on improving access to and the energy security of the remote facilities used by Arctic researchers and educators.

In general, 40 percent of the Arctic Science division's portfolio is available for new research grants, with 20 percent for continuing grants made in previous years and 40 percent for research support and logistics.

FY 2013 Summary

All funding decreases/increases represent change over the FY 2012 Estimate.

Research

• Commitments to ongoing research programs are maintained; support for new grants is focused on disciplinary programs that are aligned with OneNSF framework investments. These programs include awards to advance understanding of the Chukchi-Beaufort Seas, building on new syntheses of historical data and the recent successes of interagency studies of the Bering Sea ecosystem; of the connection of land-ice and sea level and the mechanism(s) for ice-loss; and of the changing seasonality of sea ice that may have profound consequences at a variety of spatial scales – local,

regional, circumpolar Arctic, and global. Approximately \$38.0 million is available for new grants in FY 2013.

- Studies on advancing understanding of societally-pressing areas, such as the effects of change on Arctic social structures and ecosystems changes associated with warming permafrost, are a continuing priority under SEES, as is building the intellectual capacity to address such complex problems through support of interdisciplinary science networks. Some of the resources previously directed to SEES are redistributed to other investment areas. (-\$1.50 million to \$7.75 million)
- Investments in CIF21 are focused on advancing data systems to enable science for the Arctic Observing Network to achieve the objectives of understanding the coupled human-natural Arctic system and for development of models that better represent the dynamic processes involved in this system. NSF funds primarily terrestrial and ocean-based observations through peer-reviewed research proposals. Data becomes immediately available after quality control, and most datasets are stored at the NCAR Earth Observing Laboratory.¹ CIF21 funds would allow improvements in areas of data interoperability and potentially building new systems for data discovery and access with interagency and international partners, again through peer-reviewed proposals. (+\$1.0 million to \$3.50 million)

Education

- Arctic Sciences redirects its \$750,000 investment from the Climate Change Education program and will use these funds to participate in the Expeditions in Education program to advance the partnership between the science of learning and polar science communities. Arctic Sciences expects to build on experience from the Climate Change Education program, as well as the International Polar Year education and outreach portfolio in order to capitalize on and encourage polar science perspectives for advancing the Expeditions in Education focus areas. The continuing partnership with the Directorate for Education and Human Resources (EHR) will ensure best practices are applied to rigorous assessment of funded activities.
- Arctic Sciences will continue its investment in the Polar Postdoctoral Program, designed to broaden the community of polar researchers. (\$500,000).

Infrastructure

- Funds are provided for logistics support to new research programs that are aligned with OneNSF framework investments and high-priority scientific studies that are needed to advance understanding of societally-pressing areas, such as the effects of change on Arctic social structures and ecosystems changes associated with warming permafrost, and building the intellectual capacity to address such complex problems through support of interdisciplinary science networks.
- Adjustments made to accommodate the above priorities include reducing costs by conservation of fuel through increased reliance on tractor-pulled sleds in lieu of aircraft to move fuel and equipment in support of studies at and near Summit Station, Greenland.

¹ <u>http://data.eol.ucar.edu/codiac/projs?A-CADIS</u>

DIVISION OF ANTARCTIC SCIENCES (ANT)

\$75,800,000 +\$6,050,000 / 8.7%

AN	NT Funding				
(Dol	lars in Millions)			
				Change	Over
	FY 2011	FY 2012	FY 2013	FY 2012 E	estimate
	Actual	Estimate	Request	Amount	Percent
Total, ANT	\$69.07	\$69.75	\$75.80	\$6.05	8.7%
Research	64.20	65.03	70.93	5.90	9.1%
Centers Funding (total)	4.45	4.45	3.77	-0.68	-15.3%
Center for Remote Sensing of Ice Sheets	4.45	4.45	3.77	-0.68	-15.3%
Education	1.38	1.27	1.42	0.15	11.8%
Infras tructure	3.49	3.45	3.45	-	-
IceCube Neutrino Observatory	3.45	3.45	3.45	-	-

Totals may not add due to rounding.

Antarctic Sciences funds research on high priority scientific topics for which access to Antarctica is essential to advancing the scientific frontiers. This includes research on physical, biological, geological, glaciological, oceanographic, and atmospheric processes in Antarctica, as well as on interactions of the ice sheets with the underlying continent, the surrounding ocean, and the overlying atmosphere. These studies also elucidate the Antarctic environment's role in the global Earth system. In particular, a new programmatic emphasis on system science fosters linkages across the disciplines in order to better advance understanding of Antarctica as an integrated system. Antarctic Sciences also provides instrumentation and supports research in astronomy and astrophysics that takes advantage of the polar environment to study the origin of super-high-energy neutrinos and the nature of dark energy and dark matter in the universe.

In general, 65 percent of the Antarctic Sciences portfolio is available for new research grants. The remaining 35 percent is used primarily to fund continuing grants made in previous years.

FY 2013 Summary

All funding decreases/increases represent change over the FY 2012 Estimate.

Research

- Support for new grants is provided, increasing the capability to support research in more remote and unstudied regions of Antarctica. Investments will be informed by the report of the National Research Council committee on future science in Antarctica and on the Southern Ocean, as well as by the companion Blue Ribbon Panel's findings and recommendations related to support of that science. Approximately \$35.0 million is available for new research grants in FY 2013.
- Priorities under SEES include studies on advancing understanding of societally-pressing areas, such as studies of ice-mass loss and sea level rise, quantifying atmosphere-ocean exchange rates and how these chemical changes will affect the marine ecosystem. An overall focus is building the intellectual capacity to address such complex problems through support of interdisciplinary science networks. (+\$1.50 million to a total of \$6.75 million)
- Investments in CIF21 are focused on improving in the interoperability of databases and tools for access and use of large geo- and bioscience spatially-based data sets by building on investments in the

Antarctic and Southern Ocean Data Portal, which makes diverse geospatial data sets accessible for analysis and modeling efforts. (-\$500,000 to a total of \$1.0 million)

Center for Remote Sensing of Ice Sheets (CReSIS):

• Funding continues to support research and education programs at CReSIS, a science and technology center devoted to developing innovative radars for determining ice sheet thickness and the nature of the lithosphere/ice sheet interface that are critical to developing models of ice sheet behavior and to make the expertise developed at CReSIS available to other researchers. Funding for CReSIS is reduced in FY 2013, the ninth year of operation, in accordance with NSF policy for the phase-out of sunsetting Science and Technology Centers.

Education

- Antarctic Sciences redirects its \$750,000 investment from the Climate Change Education program and will use these funds to participate in the Expeditions in Education program to advance the partnership between the science of learning and polar science communities. Antarctic Sciences expects to build on experience from the Climate Change Education program, as well as the International Polar Year education and outreach portfolio in order to capitalize on and encourage polar science perspectives for advancing the Expeditions in Education focus areas. The continuing partnership with the Directorate for Education and Human Resources (EHR) will ensure best practices are applied to rigorous assessment of funded activities.
- Antarctic Sciences will continue its investment in the Polar Postdoctoral Program, designed to broaden the community of polar researchers. (\$500,000).

Infrastructure

• Funds support operation and maintenance of IceCube, the world's only neutrino observatory designed to discover astrophysical sources of super-high-energy neutrinos. IceCube is expected to make discoveries about fundamental physical processes that occur in high-energy astrophysical phenomena such as supernovae or gamma-ray bursters. This funding maintains full operations of IceCube during its third year of data collection following completion of the Observatory construction. Antarctic Sciences and the Division of Physics in the Directorate for Mathematical and Physical Sciences contribute equally to IceCube operations.

DIVISION OF ANTARCTIC INFRASTRUCTURE AND LOGISTICS (AIL)

\$258,330,000 +\$1,590,000 / 0.6%

	AIL Fundin	ng			
(I	Dollars in Millio	ons)			
				Change	over
	FY 2011	FY 2012	FY 2013	FY 2012 E	Estimate
	Actual	Estimate	Request	Amount	Percent
Total, AIL	\$259.41	\$256.74	\$258.33	\$1.59	0.6%
Infrastructure	259.41	256.74	258.33	1.59	0.6%
U.S. Antarctic Facilities & Logistics	191.89	189.22	190.81	1.59	0.8%
U.S. Antarctic Logistical Support	67.52	67.52	67.52	-	-

Totals may not add due to rounding.

Antarctic Infrastructure and Logistics supports research through a network of stations, labs, equipment, and logistical resources that enables research activities in Antarctica. This includes operation of a year-round inland research station at the South Pole and two year-round coastal research stations (McMurdo and Palmer) with extensive laboratory, transportation, housing, communication, and computing capabilities (approximately \$85.0 million); summer camps as required for research (approximately \$5.0 million); icebreaking research ships—the *Laurence M. Gould* and the *Nathaniel B. Palmer* (approximately \$32.0 million); small fixed-wing aircraft and helicopters (approximately \$9.0 million); icebreakers for channel-breaking and ship escort and an annual fuel tanker and cargo ship at McMurdo Station (approximately \$40.0 million for ship charters and fuel). The division uses a mix of government and civilian contract service providers for research support activities in Antarctica.

The U.S. Antarctic Logistical Support budget line funds support provided by the U.S. Department of Defense (DoD). DoD operates as a logistical support provider on a cost-reimbursable basis. Major funding elements of DoD support include: military personnel, LC-130 flight operations and maintenance support through the 109th Airlift Wing (AW) of the New York Air National Guard in Scotia, New York, and Antarctica; transportation and training of military personnel supporting the U.S. Antarctic Program; support for air traffic control, weather forecasting, and electronic equipment maintenance; the charter of Air Mobility Command airlift and Military Sealift Command ships for the resupply of McMurdo Station; bulk fuel purchased from the Defense Logistics Agency; and reimbursement for use of DoD satellites for communications.

FY 2013 Summary

All funding decreases/increases represent change over the FY 2012 Estimate.

Infrastructure

• The AIL budget funds logistics support to research projects funded by ANT, including those that are aligned with OneNSF framework investments and high-priority scientific studies that are needed to advance understanding of societally-pressing areas, such as studies of ice-mass loss and sea level rise, quantifying atmosphere-ocean exchange rates, and how these chemical changes will affect the marine ecosystem. Direct support to science projects comprises approximately 21 percent of the annual budget. The AIL budget also funds infrastructure and operations at all operating locations (including operation of the permanent stations (11 percent), facilities maintenance (10 percent), communications and information technology (12 percent), and materials (13 percent)).

- Reimbursable support provided by the Department of Defense includes inter- and intracontinental airlift (\$10.0 and \$36.0 million, respectively) as well as weather forecasting and airfield services (\$19.0 million).
- In order to better utilize the resources provided to AIL to accommodate the above referenced priorities, adjustments may be implemented, including reducing costs and conserving fuel through increased reliance on tractor-pulled sleds, in lieu of aircraft, to move fuel and equipment in support of studies at South Pole Station, Antarctica.
- Investments continue to implement local smart-grid technology and alternative renewable energy systems at all Antarctic stations through planning, design and limited procurements. These activities include installation of additional metering and power distribution monitoring equipment, as well as design and engineering studies for installation of wind/solar power to augment station power production at South Pole Station, and for replacement of the hybrid wind/solar power system for the Black Island telecommunications facility. (Total of \$1.0 million)
- A priority for the division is to build the McMurdo fuel supply to a level that allows resiliency in the resupply schedule, fully ensuring the nationally-mandated operation of continental stations in Antarctica. With two full years of fuel in storage, the U.S. Antarctic Program (USAP) could plan for resupply every two years, allowing funds used to charter the fuel tanker to be redirected to other logistics and infrastructure priorities. Investments in FY 2013 will include construction of additional fuel tanks, energy improvements to facilities and waste-to-energy (WTE) technologies that reduce fuel usage, and additional fuel to increase on-station supplies. (Total of \$5.75 million)
- Funds are requested for the design and procurement of materials to support Palmer Station facility upgrades, including improvements to the pier, fuel storage, and fuel distribution systems. Palmer Station is the only station on the peninsula operated by the U.S. and national policy, as expressed in Presidential Memorandum 6646, demands its continuous operation. (Total of \$3.0 million)

OFFICE OF POLAR ENVIRONMENT, HEALTH & SAFETY (PEHS)

\$7,100,000 +\$480,000 / 7.3%

PEHS Funding							
(Dollars in Millions)							
Change Over							
	FY 2011	FY 2012	FY 2013	FY 2012 E	Estimate		
	Actual	Estimate	Request	Amount	Percent		
Total, PEHS	\$6.36	\$6.62	\$7.10	\$0.48	7.3%		
Infrastructure	6.36	6.62	7.10	0.48	7.3%		
Polar Environment, Health & Safety	6.36	6.62	7.10	0.48	7.3%		

Totals may not add due to rounding.

The Office of Polar Environment, Health, & Safety within OPP manages and oversees the environmental, health, and safety aspects of research and operations conducted in polar regions. It ensures compliance with environmental, safety, and health related regulatory, statutory, and international treaty requirements. The office has overall responsibility for guiding the implementation of both environmental protection and environmental stewardship to minimize the environmental impact of OPP-supported activities in polar regions. The office also develops and oversees programs to ensure the safety and health of all participants in the polar research enterprise.

FY 2013 Summary

All funding decreases/increases represent change over the FY 2012 Estimate.

Infrastructure

• Increased funding for Polar Environment, Health & Safety in FY 2013 (+\$480,000 to a total of \$7.10 million) will enable continued emphasis on environmental stewardship of the Arctic and the Antarctic, and measures to protect the health and safety of grantees and others conducting and supporting research in the polar regions, including, for example, field safety programs and access to on-site health care. A priority for the office is establishment of an electronic medical records system, using information technology to lower health care costs and improve delivery of health care services.