DEPARTMENT OF HEALTH AND HUMAN SERVICES

NATIONAL INSTITUTES OF HEALTH

National Institute of Environmental Health Sciences (NIEHS)

Department of Interior and Related Agencies Appropriations

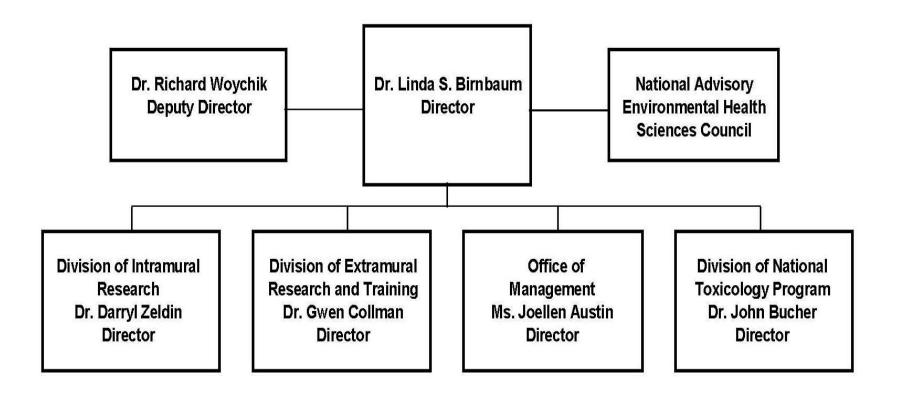
Superfund-Related Activities

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NATIONAL INSTITUTES OF HEALTH

National Institute of Environmental Health Sciences

Organization Structure



NATIONAL INSTITUTES OF HEALTH

National Institute of Environmental Health Sciences Department of Interior, Environment, and Related Agencies Appropriations Superfund Related Activities

For necessary expenses **[**for **]** of the National Institute of Environmental Health Sciences in carrying out activities set forth in section 311(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C.9660(a)) and section 126(g) of the Superfund Amendments and Reauthorization Act of 1986, **[**\$77,349,000 **]**\$77,349,000.

Amounts Available for Obligation¹

Source of Funding	FY 2014 Actual	FY 2015 Enacted	FY 2016 President's Budget
Appropriation	\$77,349	\$77,349	\$77,349
Type 1 Diabetes	0	0	0
Rescission	0	0	0
Sequestration	0	0	0
FY 2014 First Secretary's Transfer	0	0	0
FY 2014 Second Secretary's Transfer	0	0	0
Subtotal, adjusted appropriation	\$77,349	\$77,349	\$77,349
OAR HIV/AIDS Transfers	0	0	0
National Children's Study Transfers	0	0	0
Subtotal, adjusted budget authority	\$77,349	\$77,349	\$77,349
Unobligated balance, start of year	0	0	0
Unobligated balance, end of year	0	0	0
Subtotal, adjusted budget authority	\$77,349	\$77,349	\$77,349
Unobligated balance lapsing	-4	0	0
Total obligations	\$77,345	\$77,349	\$77,349

 $^{^1}$ Excludes the following amounts for reimbursable activities carried out by this account: FY 2014 - \$10,100 $\,$ FY 2015 - \$10,109 $\,$ FY 2016 - \$10,109

$Budget\ Mechanism\ -\ Total^{\scriptscriptstyle 1}$

MECHANISM	FY 2	2014 Actual	FY 20	015 Enacted		6 President's Budget		FY 2016 +/- FY 2015
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Research Projects:								
Noncompeting	13	\$32,557	20	\$35,689	21	\$33,521	1	-\$2,168
Administrative Supplements	(16)	762	(6)	762	(6)	762	(0)	0
Competing:								
Renewal	3	7,836	3	5,476	4	7,926	1	2,450
New	8	3,594	2	2,532	2	2,202	0	-330
Supplements	0	0	0	0	0	0	0	0
Subtotal, Competing	11	\$11,429	5	\$8,008	6	\$10,128	1	\$2,120
Subtotal, RPGs	24	\$44,748	25	\$44,459	27	\$44,411	2	-\$48
SBIR/STTR	10	1,937	14	2,492	14	2,528	0	36
Research Project Grants	34	\$46,685	39	\$46,951	41	\$46,939	2	-\$12
Research Centers:								
Specialized/Comprehensive	0	\$0	0	\$0	0	\$0	0	\$0
Clinical Research	0	0	0	0	0	0	0	0
Biotechnology	0	0	0	0	0	0	0	0
Comparative Medicine	0	0	0	0		0	0	0
Research Centers in Minority Institutions	0	0	0	0		0	0	o
Research Centers	0	\$0	0	\$0	0	\$0	0	\$0
Other Research:								
Research Careers	0	\$0	0	\$0	0	\$0	0	\$0
Cancer Education	0	\$0 0	0	0	0	0	0	\$0 0
Cooperative Clinical Research	0	0	0	-		0	0	0
Biomedical Research Support	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
Minority Biomedical Research Support	0	26.704	24	Ü		26 270		20
Other Other Research	32 32	26,704	24 24	26,398	24 24	26,370		-28
		\$26,704		\$26,398		\$26,370		-\$28
Total Research Grants	66	\$73,389	63	\$73,349	65	\$73,309	2	-\$40
Ruth L Kirchstein Training Awards:	<u>FTTPs</u>		<u>FTTPs</u>		<u>FTTPs</u>		<u>FTTPs</u>	
Individual Awards	0	\$0	0	\$0	0	\$0	0	\$0
Institutional Awards	0	0	0	0	0	0	0	0
Total Research Training	0	\$0	0	\$0	0	\$0	0	\$0
Research & Develop. Contracts	0	\$0	0	\$0	0	\$0	0	\$0
(SBIR/STTR) (non-add)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Intramural Research	0	0	0	0	0	0	0	0
Res. Management & Support	0	3,960	0	4,000		4,040		40
Res. Management & Support (SBIR								
Admin) (non-add)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Total, Superfund	0	\$77,349	0	\$77,349	0	\$77,349	0	\$0

¹ All items in italics and brackets are non-add entries.

Major Changes in the Fiscal Year 2016 Budget Request

Major changes by budget mechanism and/or budget program detail are briefly described below. The FY 2016 Budget request for NIEHS Superfund is \$77.349 million, the same as the FY 2015 Enacted level.

Research Project Grants (RPGs) (-\$0.048 million; total \$44.411 million):

NIEHS plans to support a total of 41 RPG awards in FY 2016. Noncompeting RPGs will increase by one award and decrease by \$2.168 million. The number of competing RPGs will increase by one award and funding will increase by \$2.120 million to \$10.128 million.

Summary of Changes

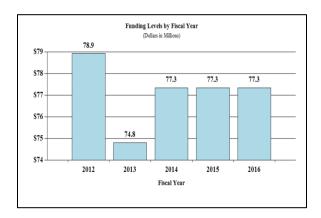
FY 2015 Enacted		\$77,349
FY 2016 President's Budget		\$77,349
Net change		\$0
	FY 2016 President's Budget	Change from FY 2015
CHANGES	FTEs Budget Authority	FTEs Budget Authority
A. Built-in:		
1. Intramural Research:		
a. Annualization of January 2015 pay increase & benefits	\$0	\$0
b. January FY 2016 pay increase & benefits	0	0
c. One more day of pay (n/a for 2015)	0	0
d. Differences attributable to change in FTE	0	0
e. Payment for centrally furnished services	0	0
f. Increased cost of laboratory supplies, materials, other	0	0
expenses, and non-recurring costs	0	U
Subtotal		\$0
2. Research Management and Support:		
a. Annualization of January 2015 pay increase & benefits	\$1,587	\$4
b. January FY 2016 pay increase & benefits	1,587	
c. One more day of pay (n/a for 2015)	1,587	6
d. Differences attributable to change in FTE	1,587	0
e. Payment for centrally furnished services	22	1
f. Increased cost of laboratory supplies, materials, other	2,430	16
expenses, and non-recurring costs	2,430	
Subtotal		\$40
Subtotal, Built-in		\$40

Summary of Changes - Continued

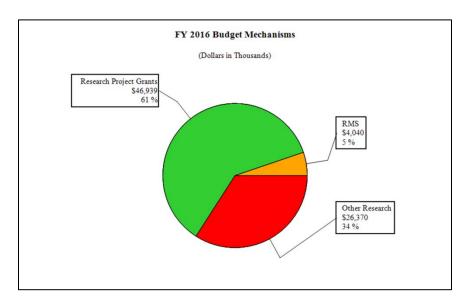
	FY 2016 F	President's Budget	Change fr	rom FY 2015
CHANGES	No.	Amount	No.	Amount
B. Program:				
1. Research Project Grants:				
a. Noncompeting	21	\$34,283	1	-\$2,168
b. Competing	6	10,128	1	2,120
c. SBIR/STTR	14	2,528	0	36
Subtotal, RPGs	41	\$46,939	2	-\$12
2. Research Centers	0	\$0	0	\$0
3. Other Research	24	26,370	0	-28
4. Research Training	0	0	0	0
5. Research and development contracts	0	0	0	0
Subtotal, Extramural		\$73,309		-\$40
	<u>FTEs</u>		<u>FTEs</u>	
6. Intramural Research	0	\$0	0	\$0
7. Research Management and Support	0	4,040	0	0
8. Construction		0		0
9. Buildings and Facilities		0		0
Subtotal, Program	0	\$77,349	0	-\$40
Total changes				\$0

Fiscal Year 2016 Budget Graphs

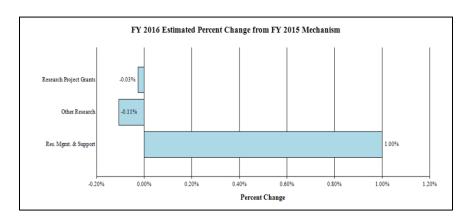
History of Budget Authority:



Distribution by Mechanism:



Change by Selected Mechanism:



Budget Authority by Activity¹

	FY 2014	Actual	FY 2015	Enacted	FY 2016 F Buo		FY 2 +/ FY2	/-
	FTE	Amount	FTE	Amount	<u>FTE</u>	Amount	<u>FTE</u>	Amount
<u>Detail</u>								
Superfund Research		\$49,168		\$49,168		\$49,168		\$0
Worker Training Program		28,181		28,181		28,181		0
TOTAL	0	\$77,349	0	\$77,349	0	\$77,349	0	\$0

 $^{^{\}mbox{\scriptsize 1}}$ Includes FTEs whose payroll obligations are supported by the NIH Common Fund.

Authorizing Legislation

	PHS Act/ Other Citation	U.S. Code Citation		FY 2015 Enacted		FY 2016 President's Budget
Environmental Protection Agency's Hazardous Substance Superfund	CERCLA Section 311(a)	42§9660 Section 9660(a)	Indefinite	\$77,349,000	Indefinite	\$77,349,000
	SARA Section 126(a)	42§9660 Section 9660(a)	Indefinite		Indefinite	
Total, Budget Authority				\$77,349,000		\$77,349,000

Appropriations History

Fiscal Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
2006	\$80,289,000	\$80,289,000	\$80,289,000	\$80,289,000
Rescission				(\$1,181,000)
2007 Rescission	\$79,108,000	\$79,414,000	\$78,414,000	\$79,117,000 \$0
2008 Rescission	\$78,434,000	\$79,117,000	\$78,434,000	\$78,775,000 (\$1,229,000)
2009 Rescission	\$77,546,000	\$78,074,000	\$77,546,000	\$78,074,000 \$0
2010 Rescission	\$79,212,000	\$79,212,000	\$79,212,000	\$79,212,000 \$0
2011 Rescission	\$81,763,000			\$79,212,000 (\$158,000)
2012 Rescission	\$81,085,000			\$79,054,000 (\$126,000)
2013 Rescission Sequestration	\$78,928,000		\$78,928,000	\$78,927,514 (\$157,855) (\$3,961,618)
2014 Rescission	\$79,411,000			\$77,349,000 \$0
2015 Rescission	\$77,349,000			\$77,349,000 \$0
2016	\$77,349,000			

Justification of Budget Request

Superfund

Authorizing Legislation: Section 311(a) of the Comprehensive Environmental, Response,

Compensation, and Liability Act of 1980, as amended, and Section 126(g) of the Superfund Amendments and Reauthorization Act of

EX7.0016

1986.

Budget Authority (BA):

		FY 2016	
FY 2014	FY 2015	President's	FY 2015+/-
Actual	Enacted	Budget	FY 2014
\$77,349,000	\$77.349.000	\$77,349,000	0

FTEs are included with the regular NIEHS appropriation.

Program funds are allocated as follows: Competitive Grants/Cooperative Agreements and Other.

Director's Overview

The National Institute of Environmental Health Sciences (NIEHS) Superfund Research Program (SRP) and the NIEHS Superfund Worker Training Program (WTP) were created under the Superfund Amendments and Reauthorization Act (SARA) of 1986 to meet the need for innovative strategies and technologies to provide solutions to the magnitude and complexity of Superfund assessment and remediation. SRP fosters multidisciplinary research, fundamental creative discoveries, and innovative research strategies focused on solving problems related to Superfund sites. WTP provides health and safety training to hazardous waste cleanup workers and emergency responders. SRP and WTP address challenges posed by environmental contamination such as health risks, prevention and intervention strategies, emergency response efforts, and cost-effective remediation related to hazardous waste found throughout the United States.

The NIEHS SRP's goal is to gain a better understanding of how toxicants affect human health in order to help environmental managers and risk assessors protect the public from exposures to hazardous substances. SRP works to accomplish its goal through research conducted at universities across the country, including research to develop cost-effective approaches to detect, remove, and/or reduce the amount of toxic substances found in the environment. SRP conducts research on remediation, detection, and monitoring tools or strategies and also funds studies that relate to multiple disease endpoints such as cardiovascular disease, cancer, and neurological disorders. For example, polychlorinated biphenyls (PCBs) are a pervasive environmental health problem through contamination of soil and groundwater aquifers by toxic chlorinated organic compounds at Superfund sites. PCBs have been associated with various adverse health outcomes including diabetes and cardiovascular disease. SRP-supported researchers have found that green tea decreases the negative health effects of PCBs in mice, providing additional evidence that nutrition may be able to bolster and buffer us against various environmental pollutants.

The primary objective of the NIEHS WTP is to fund non-profit organizations with a demonstrated track record of providing occupational safety and health education in developing and delivering high quality training to workers who are involved in handling hazardous waste or in responding to emergency releases of hazardous materials. Since 1987, NIEHS WTP has developed a strong network of non-profit organizations that are committed to protecting workers and their communities by delivering high-quality, peer-reviewed safety and health curricula to target populations of hazardous waste workers and emergency responders. Over the period between August 2013 and July 2014, NIEHS WTP awardees conducted over 9,500 courses for over 161,000 workers and since the inception of NIEHS WTP, over 2,660,000 workers have been trained.

The NIEHS Superfund Program successfully applies current science to resolve and prevent harmful health effects from environmental hazards. SRP research has resulted in improved techniques for the remediation of contaminated sites, greater knowledge concerning the fate and transport of hazardous materials in the environment, and interventions that have improved the health of those exposed. WTP utilizes knowledge gained from SRP research to update and tailor safety and health training so that it addresses the actual hazards faced by workers today.

Overall Budget Policy:

The FY 2016 President's Budget request for NIEHS Superfund is \$77.349 million, the same as the FY 2015 Enacted level.

Program Descriptions and Accomplishments

The NIEHS Superfund Research Program (SRP): SRP researchers identify critical issues and work to develop solutions, improving the Nation's health and the environment. SRP research mitigates exposures through innovative clean-up strategies; develops new biomarkers of exposure for public health interventions; identifies clues of early onset of disease due to exposure to environmental hazards; and improves NIEHS's ability to predict whether a person might come in contact with a contaminant. Furthermore, SRP-supported research and its outcomes are generalizable, addressing issues throughout the United States. In keeping with the NIEHS mission, teams of diverse professionals develop, test, and implement unique, solution-oriented approaches to address complex environmental health problems. They are improving the understanding of environmental contaminants, which may lead to lower environmental cleanup costs, reduced risk of exposure, and improvements in human health.

There is a need for instruments that provide frequent, long-term monitoring of hazardous sites to assess exposure from chemicals, identify contamination sources, and monitor remediation progress. Through an NIEHS Small Business Innovation Research grant, SRP-funded scientists from the chemical sensor company Seacoast Science in California have developed an inexpensive vapor intrusion monitoring system. The newly developed Seacoast Science vapor intrusion monitor can operate safely and repeatedly without user intervention and detect typical vapor intrusion chemicals at low detection limits, allowing many more sites to be monitored over longer periods, and at a lower cost than other monitor systems.

SRP researchers at the University of Washington have found that a mitochondrial enzyme, Paraoxonase 2 (PON2), located in many tissues including the brain is found in higher amounts in female mice than in male mice. These gender differences in PON2 expression suggest that brain cells from male mice are intrinsically more susceptible to oxidative stress because of a lower expression of PON2. As many adverse health outcomes involve oxidative stress, this finding may explain gender differences in the incidence of various diseases, including neurodevelopmental, neurological, and neurodegenerative diseases. Additionally, the researchers found that PON2 may be modulated through dietary or pharmacological intervention, thereby possibly providing a novel strategy for neuroprotection.

PCBs are a class of compounds used for decades in many industrial applications, such as electrical equipment. Although commercial production of PCBs was banned in most countries including the United States in 1979, PCBs persist throughout the environment because of their stable chemical structure. PCBs easily enter the food chain, and human exposure is caused by eating contaminated foods, primarily fish, meats, and dairy. Studies conducted by SRP researchers at the University of Kentucky have found that PCBs may cause diabetes but their research also shows that healthy nutrition lessens the toxic effects of PCBs. According to the researchers, this is the first study to investigate associations between serum carotenoids, serum concentrations of PCBs, and the probability of developing type 2 diabetes in a representative sample of U.S. adults. The results of this study indicate that regularly eating fruits and vegetables not only helps to protect against disease but also may reduce exposure to PCBs.

SRP-supported researchers from the University of California (UC), Riverside, found that the addition of black carbon reduces the bioavailability, or the fraction of chemicals that can be taken up by organisms, of the flame retardants polybrominated diphenyl ethers (PBDEs) in sediment. PBDEs are a group of brominated flame retardants widely used in a variety of consumer products that can migrate into the environment and accumulate in living organisms. Studies show that they can disrupt endocrine activity, and affect thyroid regulation and brain development. Early exposure to penta-BDEs has been linked to low birth weight, lowered IQ, and impaired motor and behavioral development in children. Researchers developed a method to measure PBDE bioavailability in sediment and found that reduction in bioavailability varied greatly depending on the type of black carbon; activated carbon showed the best efficiency compared to biochar or charcoal. Findings from this study may be used to optimize the selection of black carbon materials in mitigating PBDE contamination in sediments.

Budget Policy:

The FY 2016 President's Budget estimate for SRP is \$49.168 million, the same as the FY 2015 level.

Program Portrait: Cancer Prevention

FY 2015 Level: \$23.0 million FY 2016 Level: \$23.0 million Change: \$0.0 million

A variety of hazardous environmental exposures cause cancer, the second leading cause of death in the United States. Preventing cancer is considered a primary means to help people live longer and have more productive lives while reducing healthcare costs. An important part of SRP-funded research – through the use of basic research, remediation, and detection – is cancer prevention.

SRP grantees at U.C., San Diego, are studying hepatocellular carcinoma (HCC), the most common type of liver cancer. In the United States its incidence has doubled in the past two decades. Given that there is no effective treatment for HCC and, upon diagnosis, most patients with advanced disease have a remaining lifespan of only four to six months, it is important to detect HCC early or to prevent it. SRP investigators have shown that liver cells can progress into cancer cells when exposed to hazardous substances, but by disrupting autoregulatory/epigenetic switches, HCC may be prevented. These SRP researchers have identified potential biomarkers to screen for HCC progenitor cells (pre-liver cancer cells) that may lead to intervention or prevention strategies that are of particular importance for HCC.

Inorganic arsenic exposure is a worldwide health problem; more than 100 million people are exposed to arsenic levels that exceed recommended drinking water limits. Long-term exposure to arsenic can result in a variety of adverse health conditions including cancer. Children are particularly at-risk. For the first time, findings by SRP researchers at U.C., Berkeley provide strong evidence in humans that ingested arsenic causes cancer in specific kidney and ureter cells, called transitional cells. Other recent findings from the group suggest that people exposed to both arsenic and other known or suspected carcinogens have a very high risk of lung or bladder cancer. Another group of SRP researchers at the University of North Carolina have identified proteins that may serve as novel targets for understanding arsenic-associated effects on fetal growth and disease later in life. The results provide an important foundation to continue efforts to link prenatal arsenic exposure, protein response, and disease susceptibility that will ultimately lead to prevention strategies.

SRP-funded scientists from Brown University developed process models to predict the concentrations of vapors that enter indoor environments from sources such as groundwater that may contain trichloroethylene (TCE), which is associated with cancer. The importance of measuring vapor intrusion is that even in low concentrations, long-term exposure to these volatile chemicals may pose an unacceptable risk of chronic health effects. Although these analytical tools are a great first step, SRP researchers continue to recommend advanced modeling techniques to analyze more complicated scenarios and better understand variability in vapor intrusion concentrations that come from large changes in indoor air contaminants over time or differences based on soil properties.

NIEHS Worker Training Program (WTP): The major objectives of the NIEHS WTP are to prevent work-related harm by training workers in how best to protect themselves and their communities from exposure to hazardous materials encountered during hazardous waste operations, hazardous materials transportation, environmental restoration, or chemical emergency response, and to undertake brownfields and minority workforce development. A variety of hazardous sites, such as those involved with chemical waste cleanup, remedial action, and transportation-related chemical emergency response, may pose severe health and safety concerns. These are often characterized by a multiplicity of substances present, the presence of unknown substances, and the general uncontrolled condition of the site. A major goal of the WTP is to assist organizations with development of institutional competency to provide appropriate model training and education programs to hazardous materials and waste workers.

WTP-trained workers engage in all areas of transportation industries and the training provided to them so that they recognize hazards and emergency situations while responding effectively is a benefit to workers, industry, and communities. For example, a WTP-trained rail worker told us, "...While working in the yard in Augusta, Georgia, we observed a leaking tank car in the middle of a two yard track. As foreman on the job, I advised the yardmaster of the possible dangers associated with this move and asked for another course of action. The yardmaster changed his mind and we did not expose ourselves to this hazard."

Refresher and retraining of hazmat workers ensures that individuals retain and practice the skills needed to be safe whether it is at the worksite or in response to an emergency. As a result of WTP refresher training, a journey level operator noticed that the soil at his worksite had changed in color and smell so he brought it to the health and safety officer's attention. After several samples were taken, the health and safety officer determined there were chemicals on site that rendered the site hazardous. As a result of WTP retraining that taught these important skills, the journey level operator was able to protect not only himself but also his co-workers from potential hazardous exposure and adverse health effects.

NIEHS WTP not only saves lives; it builds livelihoods and creates a strong basis for continuous employment for years to come. Communities across the country have struggled to redevelop neighborhoods to make them healthy, safe, livable, and most importantly sustainable. The NIEHS WTP Minority Worker Training Program (MWTP) addresses one of the most important and significant problems with unemployment: workers lacking crucial technical and marketable job skills and experience on the job. Approximately 10,000 workers have trained under this program with nearly 70 percent of those workers obtaining employment in environmental remediation and construction fields. The report "Minority Worker Training Program: Guidance on How to Achieve Successes and Best Practices" provides guidance and model strategies on innovative techniques to improve the effectiveness and efficiency of these types of programs. As a result of MWTP training, individuals are now gainfully employed and earning wages averaging \$12-\$18 per hour, and reaching more than \$30 per hour for union jobs. As a result of Economic Impact Analysis, it has been determined that an investment of approximately \$3.5 million annually generates a \$100 million return on investment each year¹. Benefits are derived from the program's effects on earnings, reduction in workplace injury costs, reduction in hiring costs, reduction in crime-related costs, reduction in transfers, and the additional tax revenue gained as a result of the program. The program also generated \$2.3 million for the previous year in matching funds and in-kind contributions from firms and non-profit organizations that understand the enormous benefits of the program.

NIEHS WTP-funded trainers also assist residents, volunteers, and businesses during natural disasters by providing the latest information on best practices for the protection of volunteers, homeowners, and cleanup workers. WTP, in collaboration with local and state partners, specifically in New York and New Jersey following the devastation left by Super Storm Sandy, identified health and safety-related needs that could be addressed through training and education. The initial population that was identified as having the greatest need was the returning small business owners and residents who were faced with potential exposures to lead, asbestos,

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¹ The Economic Impact of of Minority Worker Training Program, draft, July 2014, Bryan Engelhardt, Robert Baumann and Kathy Kiel.

chemicals, mold, and structural hazards as they began to remove and rebuild their residences and businesses. Additional vulnerable populations were identified as the recovery continued. Thousands of volunteers and day laborers entered the states and began to do much of the cleanup and rebuilding with limited knowledge of the potential hazards that they were being exposed to. Training was provided using adult learning methods and cultural sensitivities.

NIEHS WTP strengthened disaster response efforts by working to increase worker and community mental health resiliency through collaboration with the Substance Abuse and Mental Health Services Administration (SAMHSA). Based on recommendations from stakeholders following NIEHS's response to disasters, it was determined that the additional burden placed on workers and their communities in the form of traumatic stress added to the multifactorial list of post disaster recovery issues. WTP utilized its experience with adult learning techniques and cultural sensitivity in developing awareness level courses focused on improving mental health resiliency of workers, supervisors, clinician personnel, and their communities.

In addition, WTP has increased NIEHS's involvement in the NIH Disaster Research Response Project (DR2P) in response to recent disasters and research conducted in their wake by working to integrate hazardous materials awareness and training of research responders. WTP staff worked on a collaborative project with their NIEHS Intramural and Extramural colleagues, and the National Library of Medicine to explore involving researchers in disaster response. This project consisted of a simulated tsunami preparedness exercise that involved 150 Federal, State, and environmental health personnel at the Port of Los Angeles to test the NIH DR2P. The goals of the exercise were met, which included identification, assessment, and discussion of the activation of disaster research response teams and how those teams can support local and state responders and public health departments. WTP also created safety and health training curricula which were presented through a national webinar to prepare all the research response participants.

Budget Policy:

The FY 2016 President's Budget estimate for WTP is \$28.181 million, the same as the comparable FY 2015 level.

Program Portrait: Native American Training

 $\begin{array}{lll} FY\ 2015\ Level: & \$0.25\ million \\ \hline FY\ 2016\ Level: & \$0.30\ million \\ \hline Change: & +\$0.05\ million \\ \end{array}$

NIEHS WTP is an asset for outreach and training of underserved and rural communities, especially among Native American first responders, including tribal employees in law enforcement, emergency medical, fire service, public works agencies, natural resource, and other hazardous materials and transportation workers. WTP trained nearly 1,200 Native Americans during the past year. This training is especially important for Native Americans due to the high unemployment rates and correspondingly high levels of impoverishment. WTP training helps provide opportunities and advantages for the individual and the larger community. Specifically, the Alabama Fire College (AFC) trained nearly 700 Native Americans from 14 Tribes to protect themselves and their communities from hazardous materials encountered in workplaces and during emergency response operations through their partnership with the Native American Fish and Wildlife Society (NAFWS). Key training occurred at Confederated Tribes of the Umatilla Indian Reservation (Cayuse, Walla Walla, and Umatilla), in Oregon, and at three tribes in Albuquerque, New Mexico (the Jicarilla Apache tribe, Eight Northern Indian Pueblo Council, and the Pueblo of Sandia Tribe). AFC also provided two eight-hour hazardous awareness training classes at the NAFWS National Conference and the Pacific Northwest Regional Conference in Pendleton, Oregon.

Additionally, WTP assisted Native Americans through the Western Region Universities Consortium, led by U.C., Los Angeles, which provided key training in hazardous waste/emergency response, hazard communication, and construction safety training in California, Arizona, and Washington for seven tribes and organizations that mainly included the Navajo and Hopi Nations, White Mountain Apache Tribe (through the Bureau of Indian Affairs) and the Yukon River Intertribal Watershed Council.

The International Brotherhood of Teamsters/National Railway Training Program, through WTP funding, identified environmental justice and occupational health disparity issues among Native American workers for Navajo/Diné in Arizona and New Mexico, conducted targeted outreach, and provided essential Chemical Transportation/Emergency Response training using a blended learning approach for production and railway workers. Training Native Americans will continue to be an important part of the NIEHS WTP.

Budget Authority by Object Class¹ (Dollars in Thousands)

		FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Total co	mpensable workyears:			112010
	Full-time employment	0	0	(
	Full-time equivalent of overtime and holiday hours	0	0	(
	Average ES salary	\$0	\$0	\$0
	Average GM/GS grade	0	0	(
	Average GM/GS salary	\$0	\$0	\$0
	Average salary, grade established by act of July 1,	\$0	\$0	¢r
	1944 (42 U.S.C. 207)	\$0	\$0	\$0
	Average salary of ungraded positions	\$0	\$0	\$0
	OBJECT CLASSES	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
	Personnel Compensation			
11.1	Full-Time Permanent	\$952	\$965	\$13
11.3	Other Than Full-Time Permanent	245	249	
11.5	Other Personnel Compensation	15	15	(
11.7	Military Personnel	0	0	(
11.8	Special Personnel Services Payments	0	0	(
11.9	Subtotal Personnel Compensation	\$1,212	\$1,229	\$17
12.1	Civilian Personnel Benefits	\$355	\$358	\$4
12.2	Military Personnel Benefits	0	0	(
13.0	Benefits to Former Personnel	0	0	(
21.0	Subtotal Pay Costs	\$1,567	\$1,587	\$20
21.0	Travel & Transportation of Persons	\$137	\$141	\$4
22.0	Transportation of Things	0	0	(
23.1 23.2	Rental Payments to GSA	0	0	(
23.2	Rental Payments to Others	0	0	(
24.0	Communications, Utilities & Misc. Charges Printing & Reproduction	0	0	(
25.1	Consulting Services	13	13	(
25.1	Other Services	2.134	2,147	13
	Purchase of goods and services from government	, -		10
25.3	accounts	142	145	3
25.4	Operation & Maintenance of Facilities	0	0	(
25.5	R&D Contracts	0	0	(
25.6	Medical Care	0	0	(
25.7	Operation & Maintenance of Equipment	0	0	Č
25.8	Subsistence & Support of Persons	0	0	(
25.0	Subtotal Other Contractual Services	\$2,290	\$2,306	\$16
26.0	Supplies & Materials	\$1	\$1	\$0
31.0	Equipment	6	6	(
32.0	Land and Structures	0	0	(
33.0	Investments & Loans	0	0	(
41.0	Grants, Subsidies & Contributions	73,349	73,309	-40
42.0	Insurance Claims & Indemnities	0	0	(
43.0	Interest & Dividends	0	0	(
44.0	Refunds	0	0	(
	Subtotal Non-Pay Costs	\$75,782	\$75,762	-\$20
	Total Budget Authority by Object Class	\$77,349	\$77,349	\$0

 $^{^{1}\,\,}$ FTEs are included with the regular NIEHS appropriation.

Salaries and Expenses

(Dollars in Thousands)

OBJECT CLASSES	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Personnel Compensation			
Full-Time Permanent (11.1)	\$952	\$965	\$13
Other Than Full-Time Permanent (11.3)	245	249	3
Other Personnel Compensation (11.5)	15	15	0
Military Personnel (11.7)	0	0	0
Special Personnel Services Payments (11.8)	0	0	0
Subtotal Personnel Compensation (11.9)	\$1,212	\$1,229	\$17
Civilian Personnel Benefits (12.1)	\$355	\$358	\$4
Military Personnel Benefits (12.2)	0	0	0
Benefits to Former Personnel (13.0)	0	0	0
Subtotal Pay Costs	\$1,567	\$1,587	\$20
Travel & Transportation of Persons (21.0)	\$137	\$141	\$4
Transportation of Things (22.0)	0	0	0
Rental Payments to Others (23.2)	0	0	0
Communications, Utilities & Misc. Charges (23.3)	0	0	0
Printing & Reproduction (24.0)	0	0	0
Other Contractual Services:			
Consultant Services (25.1)	13	13	0
Other Services (25.2)	2,134	2,147	13
Purchases from government accounts (25.3)	142	145	3
Operation & Maintenance of Facilities (25.4)	0	0	0
Operation & Maintenance of Equipment (25.7)	0	0	0
Subsistence & Support of Persons (25.8)	0	0	0
Subtotal Other Contractual Services	\$2,290	\$2,306	\$16
Supplies & Materials (26.0)	\$1	\$1	\$0
Subtotal Non-Pay Costs	\$2,427	\$2,447	\$20
Total Administrative Costs	\$3,994	\$4,034	\$40

FTEs are included with the regular NIEHS appropriation.

NATIONAL INSTITUTES OF HEALTH

FY 2016 Congressional Justification Budget Request by Institute/Center

Institute/Center	FY 2014 Actual	FY 2015 Enacted ¹	FY 2016 President's Budget
NCI	\$4,932,402	\$4,953,028	\$5,098,479
NHLBI	2,988,584	2,995,865	3,071,906
NIDCR	397,881	397,700	406,746
NIDDK ²	1,884,486	1,899,140	1,938,133
NINDS	1,588,904	1,604,607	1,660,375
NIAID	4,401,196	4,417,558	4,614,779
NIGMS ³	2,366,518	2,372,301	2,433,780
NICHD	1,283,338	1,286,869	1,318,061
NEI	675,583	676,764	695,154
NIEHS ⁴	743,174	744,682	759,131
NIA	1,171,717	1,197,523	1,267,078
NIAMS	520,355	521,528	533,232
NIDCD	404,284	405,207	416,241
NIMH	1,419,654	1,433,651	1,489,417
NIDA	1,017,961	1,015,705	1,047,397
NIAAA	446,284	447,153	459,833
NINR	140,598	140,852	144,515
NHGRI	498,101	498,677	515,491
NIBIB	327,003	327,243	337,314
NIMHD	268,477	270,969	281,549
NCCIH	124,369	124,062	127,521
NCATS	633,634	632,710	660,131
FIC	67,617	67,634	69,505
NLM ⁵	336,613	337,324	394,090
OD	1,303,014	1,413,734	1,442,628
B&F	128,316	128,863	128,863
Total, NIH Program Level	\$30,070,062	\$30,311,349	\$31,311,349
Less funds allocated from different sources:			
Mandatory Type 1 Diabetes Research	-139,200	-150,000	-150,000
PHS Program Evaluation	-8,200	-715,000	-847,489
Total, NIH Discretionary Budget Authority	\$29,922,662	\$29,446,349	\$30,313,860
Interior Budget Authority	-77,349	-77,349	-77,349
Total, NIH Labor/HHS Budget Authority	\$29,845,313	\$29,369,000	\$30,236,511

¹ Excludes Ebola-related funding.

² Includes Mandatory Type 1 Diabetes Research funding.

³ Includes Program Evaluation financing of \$715 million in FY 2015 and \$847.5 million in FY 2016.

⁴ Includes Interior Appropriation for Superfund research.

⁵ Includes Program Evaluation financing of \$8.2 million in FY 2014.

NATIONAL INSTITUTES OF HEALTH FY 2016 Congressional Justification

Budget Mechanism - Total^{1,2}

MECHANISM	FY 201	FY 2014 Actual		FY 2015 Enacted ⁷		FY 2016 President's Budget		FY 2016 +/-	
		- 1 2017 Actual		r i 2015 macteu		11 2010 Heskelle's Budget		FY 2015	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	
Research Projects:									
Noncompeting	23,504	\$10,785,361	23,433	\$11,294,016	23,303	\$11,524,971	-130	\$230,955	
Administrative Supplements	(1,588)	208,245	(1,479)	172,045	(1,420)	168,834	(-59)	-3,212	
Competing:									
Renewal	1,897	1,297,091	2,049	1,062,346	2,264	1,143,837	215	81,491	
New	7,223	3,167,751	6,987	3,078,440	7,996	3,592,077	1,009	513,637	
Supplements	48	14,318	40	9,781	43	10,641	3	859	
Subtotal, Competing	9,168	\$4,479,160	9,076	\$4,150,567	10,303	\$4,746,555	1,227	\$595,988	
Subtotal, RPGs	32,672	\$15,472,767	32,509	\$15,616,627	33,606	\$16,440,359	1,097	\$823,732	
SBIR/STTR	1,660	695,480	1,697	716,012	1,841	765,300	144	49,288	
Research Project Grants	34,332	\$16,168,247	34,206	\$16,332,639	35,447	\$17,205,659	1,241	\$873,020	
Research Centers:									
Specialized/Comprehensive	1,117	\$1,958,143	1,130	\$1,929,147	1,171	\$1,894,298	41	-\$34,849	
Clinical Research	60	413,671	60	416,824	60	411,742		-5,082	
Biotechnology	93	167,045	94	165,694	99	152,972	5	-12,722	
Comparative Medicine	51	129,353	52	131,500	49	122,254	-3	-9,246	
Research Centers in Minority Institutions	22	55,067	21	56,127	20	55,377	-1	-750	
Research Centers	1,343	\$2,723,280	1,357	\$2,699,292	1,399	\$2,636,643	42	-\$62,650	
Other Research:									
Research Careers	3,624	\$611,866	3,632	\$614,794	3,648	\$619,919	16	\$5,125	
Cancer Education	96	32,932	96	32,932	96	32,738		-195	
Cooperative Clinical Research	394	474,587	385	468,828	386	503,987	1	35,160	
Biomedical Research Support	111	67,391	105	64,579	105	64,579			
Minority Biomedical Research Support	287	104,470	283	103,115	282	102,920	-1	-195	
Other	1,722	555,627	1,689	559,959	2,010	557,907	321	-2,053	
Other Research	6,234	\$1,846,873	6,190	\$1,844,207	6,527	\$1,882,049	337	\$37,842	
Total Research Grants	41,909	\$20,738,399	41,753	\$20,876,138	43,373	\$21,724,351	1,620	\$848,213	
Ruth L Kirchstein Training Awards:	FTTPs		FTTPs		FTTPs		<u>FTTPs</u>		
Individual Awards	3,058	\$136,141	3,105	\$140,036	3,234	\$146,846	129	\$6,810	
Institutional Awards	12,258	602,287	12,426	622,034	12,501	638,636	75	16,602	
Total Research Training	15,316	\$738,429	15,531	\$762,071	15,735	\$785,483	204	\$23,412	
Research & Develop. Contracts	2,211	\$2,990,140	2,078	\$2,898,740	2,095	\$2,895,964	17	-\$2,777	
(SBIR/STTR) (non-add)	(115)	(65,426)	(129)	(73,771)	(132)	(78,580)	(3)	(4,810)	
Intramural Research	7,060	\$3,384,285	7,087	\$3,425,860	7,080	\$3,520,574	-7	\$94,714	
Res. Management & Support	5,574	1,527,790	5,624	1,560,897	5,631	1,580,442	7	19,544	
(SBIR Administrative) (non-add)	(3)	(3,687)	(30)	(4,054)	(0)	(0)	(-30)	(-4,054)	
,,	(=)	(2,221)	(2-7)	(1,121)	(=)	(-/	(23)	(1,== 1)	
Office of the Director - Appropriation 3		(1,303,014)		(1,413,734)		(1,442,628)		(28,894)	
Office of the Director - Other		477,354		573,430		582,324		8,894	
ORIP/SEPA (non-add) 3		(294,486)		(294,665)		(294,665)		(0)	
Common Fund (non-add) ³		(531,174)		(545,639)		(565,639)		(20,000)	
Buildings and Facilities ⁴		136,316		136,863		144,863		8,000	
Appropriation		(128,663)		(128,863)		(128,863)		(0)	
Type 1 Diabetes ⁵		-139,200		-150,000		-150,000		O	
Program Evaluation Financing ⁶		-8,200		-715,000		-847,489		-132,489	
Subtotal, Labor/HHS Budget Authority		\$29,845,313		\$29,369,000		\$30,236,511		\$867,511	
Interior Appropriation for Superfund Research	+	77,349		77,349		77,349	-	φου7,511	
Total, NIH Discretionary Budget Authority	1	\$29,922,662		\$29,446,349		\$30,313,860		\$867,511	
Type 1 Diabetes	+	139,200		150,000		150,000		4007,011	
Total, NIH Budget Authority	+	\$30,061,862		\$29,596,349		\$30,463,860		\$867,511	
Program Evaluation Financing	+	8,200		715,000		847,489		132,489	
Total, Program Level		\$30,070,062		\$30,311,349		\$31,311,349		\$1,000,000	

All Subtotal and Total numbers may not add due to rounding.

All numbers in italics and brackets are non-add.

Number of grants and dollars for the Common Fund, ORIP and SEPA components of OD are distributed by mechanism and are noted here as a non-add. The Office of the Director - Appropriations also is noted as a non-add since the remaining funds are accounted

Includes R&F appropriation and funds for facilities repairs and improvements at the NCI Federally Funded Research and Development Center in Frederick, Maryland.

Number of grants and dollars for mandatory Type I Diabetes are distributed by mechanism above; therefore, Type I Diabetes amount is deducted to provide subtotals only for the Labor/HHS Budget Authority.

Number of grants and dollars for Program Evaluation Financing are distributed by mechanism above; therefore, the amount is deducted to provide subtotals only for the Labor/HHS Budget Authority.

Excludes Ebola related funding.

National Institutes of Health

Detail of Full-Time Equivalent Employment (FTE)

			FY 2016
	FY 2014	FY 2015	President's
Institutes and Centers (ICs)	Actual	Enacted	Budget
NCI	3,040	3,057	3,057
NHLBI	927	932	932
NIDCR	238	239	239
NIDDK	628	632	632
NINDS	532	535	535
NIAID	1,972	1,983	1,983
NIGMS	185	186	186
NICHD	564	567	567
NEI	261	262	262
NIEHS	657	661	661
NIA	392	394	394
NIAMS	242	243	243
NIDCD	139	140	140
NIMH	555	558	558
NIDA	393	395	395
NIAAA	236	237	237
NINR	91	92	92
NHGRI	330	332	332
NIBIB	101	102	102
NCATS	125	126	126
NCCIH	75	76	76
NIMHD	66	66	66
FIC	63	63	63
NLM	799	804	804
OD	664	669	669
Central Services ¹	4,773	4,799	4,799
Total	18,048	18,150	18,150
PHS Trust Fund (non-add) ²	4	4	4
CRADA (non-add) ³	5	5	5
Grand Total	18,048	18,150	18,150

¹ Reflects FTE associated with Central Services positions whose payroll costs are covered from NIH Management Fund and NIH Service and Supply Fund resources.

 $^{^2}$ PHS Trust Fund positions are incorporated within the IC's Direct-funded civilian FTE category and are treated as non-add values.

³ CRADA positions are distributed across multiple ICs and are treated as non-add values.

NATIONAL INSTITUTES OF HEALTH

National Institute of Environmental Health Sciences FY 2014 Conference Significant Item

Item

Worker Training Program – **The** Committees direct NIEHS to explore the feasibility of incorporating a nominal fee to recoup administrative or other costs associated with the Worker Training Program. NIEHS should include a report that summarizes findings and recommendations with the fiscal year 2016 budget request.

Action taken or to be taken

The National Institute of Environmental Health Sciences (NIEHS) Worker Training Program (WTP) is a long-standing initiative that provides job training to a population that includes underserved, low-income, and/or jobless individuals through a diverse set of grantee institutions, and does so efficiently with low overhead. The WTP is an umbrella consortium authorized by Section 126(g) of the Superfund Amendments and Reauthorization Act of 1986. The WTP consortium builds upon Federal-level partnerships that have been created over the last 20 years. The overhead costs for administration of the program continue to be at or below the levels of similarly situated federal cooperative agreement programs.

The National Institutes of Health (NIH) and NIEHS have taken a careful look at the program mission and objectives and have reviewed data from the grantees related to how they provide their services, as well as any income generated from their training programs. Given the program objectives, and in light of the characteristics of both the variety of grantee institutions and the trainee population served, NIEHS finds that it would be both administratively difficult and counterproductive to the mission of the program to attempt to impose a fee across the board for trainees to have access to the program offerings.

The diverse family of WTP programs includes the Hazardous Waste Worker (HWW) training program, the Environmental Careers training program, the Hazmat Disaster Preparedness training program, and the Hazmat Training Program for Nuclear Weapons Cleanup, which is administered through an Interagency Agreement with the U.S. Department of Energy (DOE). Also, grantee organizations come from many different places, including academic consortia developed at four-year universities; Historically Black Colleges and Universities; Community Colleges; industry-based colleges; non-profit organizations dealing with occupational health; joint labor management trust funds; labor-based unions; and other groups. Each of these groups of institutions uses different business models to run their programs and deliver training in a cost-effective way for their target populations. Charging training fees has always been an option, but not a program requirement. In FY 2010, for example, 3 out of 20 grantees generated program-related income (specifically, for the Hazardous Waste Worker training program).

A variety of approaches are incorporated into the training process to ensure an equitable public-private partnership in expending appropriated funds. For example, the Steelworkers Union generates program-related income by soliciting funds from employers to enhance the training provided. Some university groups also charge nominal fees depending on the target audience for

the training. Some targeted groups, such as unemployed or disadvantaged persons, are not able to pay for training; thus, no charges are levied.

NIH policy, as stated in the NIH Grants Policy Statement (last revised, 2012), allows for program-generated income to be proposed by the applicant organization. Program income is defined as gross income, earned by a grantee, a consortium participant, or a contractor under a grant, that was generated directly by the grant-supported activity or earned as a result of the award. Program income includes, but is not limited to, income from fees for services performed; charges for the use or rental of real property; equipment or supplies acquired under the grant; the sale of commodities or items fabricated under an award; charges for research resources; registration fees for grant-supported conferences; and license fees and royalties on patents and copyrights. The grantees are permitted to utilize program income using the additive alternative, in which program generated income is added to funds committed to the project or program and used to advance eligible project or program objectives. The amount of program income earned and expended must be reported on the appropriate annual financial report. In the cases where income has been generated by the WTP, the funds generated have been used to buy supplies and equipment for training or for instructor and curricula development.

NIEHS has further reviewed existing Grants Management Policy for the Department of Health and Human Services (HHS) and NIH to inform any changes in our approach toward program income. This review included analysis of administrative costs associated with collecting, distributing, and using optimal processes for retaining fees from trainees, employers, or the organizations that provide the training through the retention of program income or other methods for revenue capture. A variety of challenges would be expected with the incorporation of a fee for recouping costs, which may limit the viability for some, if not all, grantees.

NIEHS considers that, given the wide variety of grantee institutions serving the WTP, the low income of most of the target populations, and the existing low overhead cap of the program, it would not be feasible to mandate a fee collection model across the board. However, that does not preclude individual grantee programs from choosing to take advantage of existing policy to enhance their offerings.

As NIEHS developed the recent Funding Opportunity Announcement (FOA) for soliciting and competing for new cooperative agreements for this program in FY 2015, we clarified the option under current policy for grantees to generate program-related income where appropriate. Specifically, in the Funding Opportunity Announcement (FOA) RFA-ES-14-008 (released on July 28, 2014), NIEHS WTP included language to encourage applicants to develop sources of program income to supplement the federal grant resources provided to support the development of model training programs in hazardous materials response. This is expected to provide enhanced program support for the future.