

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**NATIONAL INSTITUTES OF HEALTH**  
**(dollars in thousands)**

	<b>FY 2011 Estimate</b>	
	<b>FTEs</b>	<b>Amount</b>
Interior – Superfund Activities Request		\$81,763

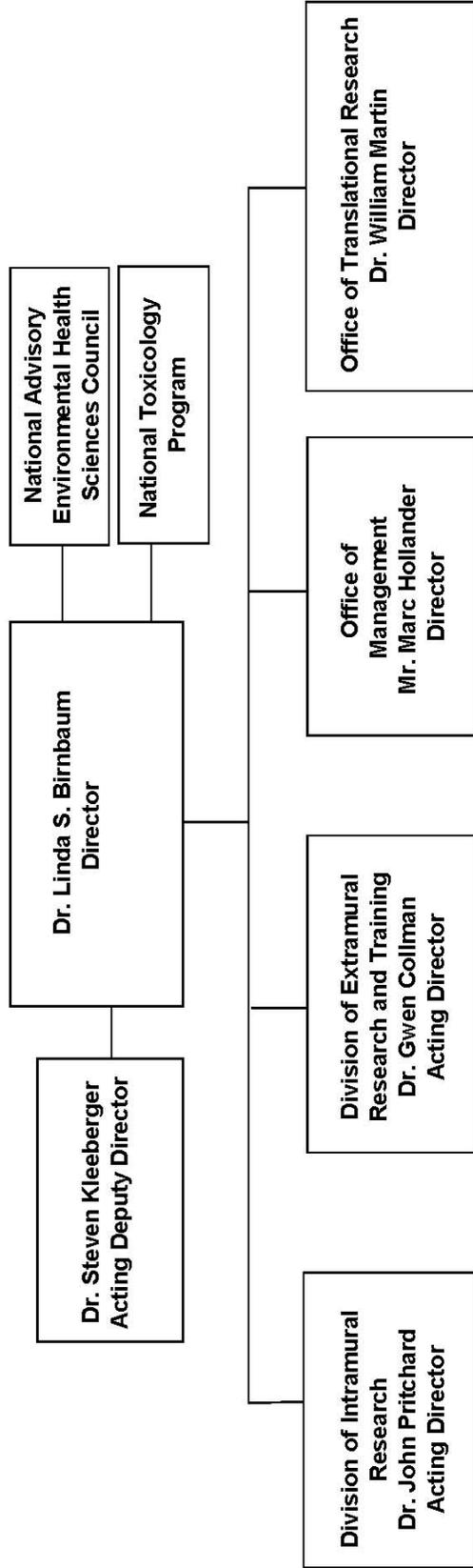
DEPARTMENT OF HEALTH AND HUMAN SERVICES

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 and Related Agencies Appropriations  
Superfund-Related Activities

For necessary expenses for 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, as amended, and section 126(g) of the Superfund Amendments and Reauthorization Act of 1986, [\$79,212,000] \$81,763,000 (Department of the Interior, Environment and Related Agencies Appropriation Act, 2010).

**National Institutes of Health  
National Institute of Environmental Health Sciences Superfund**

**Amounts Available for Obligation 1/**

Source of Funding	FY 2009 Actual	FY 2010 Estimate	FY 2011 PB
Appropriation	\$78,074,000	\$79,212,000	\$81,763,000
Rescission	0	0	0
Subtotal, adjusted appropriation	78,074,000	79,212,000	81,763,000
Subtotal, adjusted budget authority	78,074,000	79,212,000	81,763,000
Unobligated balance, start of year	0	0	0
Unobligated balance, end of year	0	0	0
Subtotal, adjusted budget authority	78,074,000	79,212,000	81,763,000
Unobligated balance lapsing	-4,000	0	0
Total obligations	78,070,000	79,212,000	81,763,000

1/ Excludes the following amounts for reimbursable activities carried out by this account:  
FY 2009 - \$10,000,000    FY 2010 - \$10,000,000    FY 2011 - \$10,000,000

**NATIONAL INSTITUTES OF HEALTH**  
**National Institute of Environmental Health Sciences Superfund**  
(Dollars in Thousands)  
Budget Mechanism - Total

MECHANISM	FY 2009 Actual		FY 2009 Recovery Act Actual		FY 2010 Recovery Act Estimated		FY 2010 Estimate		FY 2011 PB		Change	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
<b>Research Grants:</b>												
<b>Research Projects:</b>												
Noncompeting	18	\$33,879	0	\$0	2	\$3,000	15	\$25,113	13	\$27,012	(2)	\$1,899
Administrative supplements	(13)	1,598	(29)	6,041	(0)	0	(10)	8,356	(9)	7,610	(1)	(746)
<b>Competing:</b>												
Renewal	2	5,302	1	1,200	0	0	2	6,426	3	9,358	1	2,932
New	5	4,204	1	1,800	0	0	2	5,688	1	3,119	(1)	-2,569
Supplements	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal, competing	7	9,506	2	3,000	0	0	4	12,114	4	12,477	0	363
Subtotal, RPGs	25	44,983	2	9,041	2	3,000	19	45,583	17	47,099	(2)	1,516
SBIR/STTR	11	2,199	0	224	0	0	14	2,120	14	2,180	0	60
Subtotal, RPGs	36	47,182	2	9,265	2	3,000	33	47,703	31	49,279	(2)	1,576
<b>Research Centers:</b>												
Specialized/comprehensive	0	0	0	0	0	0	0	0	0	0	0	0
Clinical research	0	0	0	0	0	0	0	0	0	0	0	0
Biotechnology	0	0	0	0	0	0	0	0	0	0	0	0
Comparative medicine	0	0	0	0	0	0	0	0	0	0	0	0
Research Centers in Minority Institutions	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal, Centers	0	0	0	0	0	0	0	0	0	0	0	0
<b>Other Research:</b>												
Research careers	0	0	0	0	0	0	0	0	0	0	0	0
Cancer education	0	0	0	0	0	0	0	0	0	0	0	0
Cooperative clinical research	0	0	0	0	0	0	0	0	0	0	0	0
Biomedical research support	0	0	0	0	0	0	0	0	0	0	0	0
Minority biomedical research support	0	0	0	0	0	0	0	0	0	0	0	0
Other	18	25,913	0	6,646	0	0	18	26,393	18	27,185	0	792
Subtotal, Other Research	18	25,913	0	6,646	0	0	18	26,393	18	27,185	0	792
<b>Total Research Grants</b>	<b>54</b>	<b>73,095</b>	<b>2</b>	<b>15,911</b>	<b>2</b>	<b>3,000</b>	<b>51</b>	<b>74,096</b>	<b>49</b>	<b>76,464</b>	<b>(2)</b>	<b>2,368</b>
<b>Research Training:</b>												
Individual awards	<u>FTTPs</u>	0	0	0	0	0	<u>FTTPs</u>	0	<u>FTTPs</u>	0	0	0
Institutional awards	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total, Training</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>Research &amp; development contracts (SBIR/STTR)</b>	1	1,456	0	0	0	0	1	1,456	1	1,456	0	0
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>Intramural research</b>	<u>FTEs</u>	0	0	0	0	0	<u>FTEs</u>	0	<u>FTEs</u>	0	0	0
Research management and support	0	3,523	0	343	0	43	0	3,660	0	3,843	0	183
Construction	0	0	0	0	0	0	0	0	0	0	0	
Buildings and Facilities	0	0	0	0	0	0	0	0	0	0	0	
<b>Total, NIEHS Superfund</b>	<b>0</b>	<b>78,074</b>	<b>0</b>	<b>16,254</b>	<b>0</b>	<b>3,043</b>	<b>0</b>	<b>79,212</b>	<b>0</b>	<b>81,763</b>	<b>0</b>	<b>2,551</b>

FTEs are included in the NIEHS regular appropriation.

**NATIONAL INSTITUTES OF HEALTH**  
**National Institute of Environmental Health Sciences Superfund**  
**BA by Program**  
(Dollars in thousands)

	<u>FY 2007</u> <u>Actual</u> <u>Amount</u>	<u>FY 2008</u> <u>Actual</u> <u>Amount</u>	<u>FY 2009</u> <u>Actual</u> <u>Amount</u>	<u>FY 2009</u> <u>Comparable</u> <u>Amount</u>	<u>FY 2010</u> <u>Estimate</u> <u>Amount</u>	<u>FY 2011</u> <u>PB</u> <u>Amount</u>	<u>Change</u> <u>Amount</u>
<u>Extramural Research</u>							
<u>Detail:</u>							
Superfund Research	\$50,635	\$48,629	\$49,629	\$49,629	\$50,352	\$51,974	\$1,622
Worker Training	28,482	27,917	28,445	28,445	28,860	29,789	929
<b>TOTAL</b>	79,117	76,546	78,074	78,074	79,212	81,763	2,551

FTEs are included in the regular NIEHS appropriation.

## **Major Changes in the Fiscal Year 2011 Budget Request**

Research Project Grants (RPGs) (+\$1.576 million; total \$49.279 million): NIEHS will support a total of 31 RPG awards in FY 2011. Noncompeting RPGs decrease by 2 awards and increase by \$1.899 million, while the same number of competing RPGs increased by \$363 thousand.

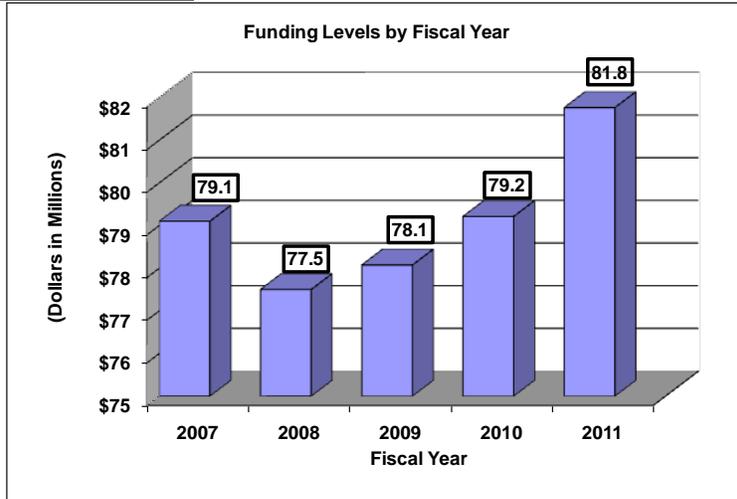
**NATIONAL INSTITUTES OF HEALTH**  
**National Institute of Environmental Health Sciences Superfund**  
**Summary of Changes**

FY 2010 estimate		\$79,212,000		
FY 2011 estimated budget authority		81,763,000		
Net change		2,551,000		
CHANGES	2010 Current Estimate Base		Change from Base	
	No.	Budget Authority	No.	Budget Authority
A. Built-in:				
1. Research management and support:				
a. Annualization of January 2010 pay increase				
		\$1,266,000		\$8,000
		1,266,000		13,000
		1,266,000		0
		34,000		1,000
		2,360,000		38,000
Subtotal				60,000
Subtotal, Built-in				60,000
B. Program:				
1. Research project grants:				
a. Noncompeting				
	15	\$33,469,000	(2)	\$1,153,000
b. Competing				
	4	12,114,000	0	363,000
c. SBIR/STTR				
	14	2,120,000	0	60,000
Total		33	47,703,000	(2) 1,576,000
2. Other research		18	26,393,000	0 792,000
3. Research and development contracts		1	1,456,000	0 0
Subtotal, extramural				2,368,000
4. Research management and support			3,660,000	123,000
Subtotal, program			79,212,000	2,491,000
Total changes				2,551,000

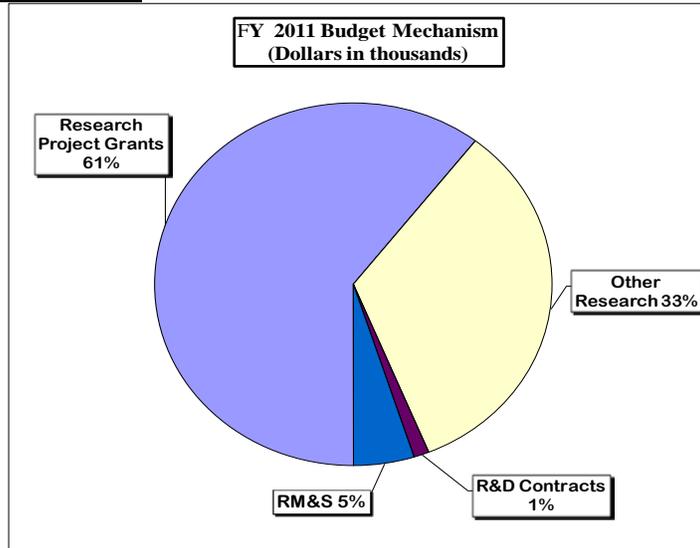
FTEs are included with the regular NIEHS appropriation.

## FY 2009 Budget Graphs

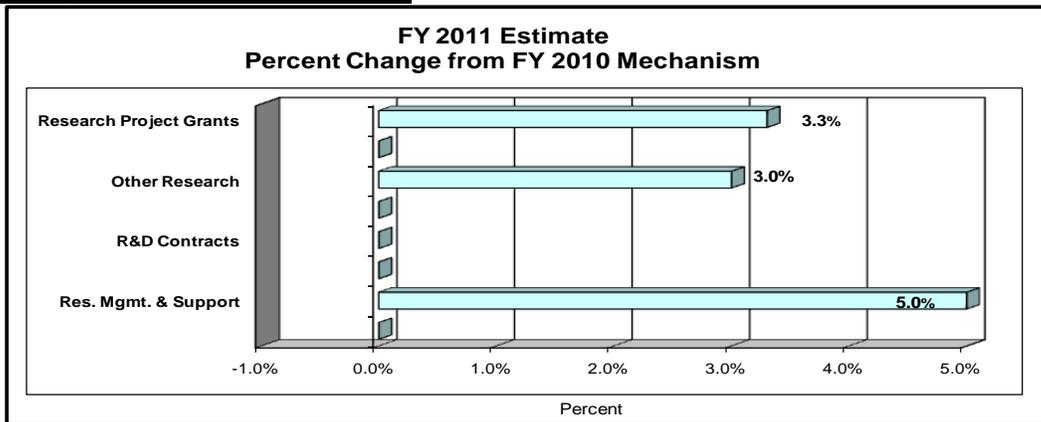
### History of Budget Authority:



### Distribution by Mechanism:



### Change by Selected Mechanism:



## Justification of Budget Request

### *National Institute of Environmental Health Sciences*

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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 1986

Budget Authority:

<u>FY 2009</u> <u>Appropriation</u>	<u>FY 2010</u> <u>Appropriation</u>	<u>FY 2011</u> <u>President's</u> <u>Budget</u>	<u>FY 2011+/-</u> <u>2010</u>
\$78,074,000	\$79,212,000	\$81,763,000	\$2,551,000

FTEs are included with the regular NIEHS appropriation.

### **SUPERFUND DIRECTOR'S OVERVIEW**

The goal of NIEHS' Superfund Program is to improve human health by addressing and preventing diseases and injuries associated with environmental contaminants. The Superfund Research Program (SRP) and the Worker Training Program (WTP) complement each other to create effective community and workplace public health interventions aimed at preventing harmful exposures. SRP provides the scientific research used by WTP and other Federal and state agencies to train workers and educate communities. For example, SRP research provides updated information on exposure risks of arsenic, a component of coal ash dust. This critical information was used by WTP in training workers responding to a massive coal-ash spill in Tennessee, an effort that is still ongoing.

SRP and WTP also work together in partnership with other Federal agencies to prevent harmful environmental exposures. For example, WTP-trained members of the International Union of Operating Engineers, under supervision of the Environmental Protection Agency (EPA), used a science-based worker safety strategy in Tennessee when operating the heavy equipment needed to remediate two rivers and hundreds of acres of land contaminated by over a billion gallons of toxic sludge.

Superfund encourages "green" approaches to remediation, such as recycling and reuse of industrial materials. WTP grantees develop methods for safe green remediation, and SRP scientists develop approaches to reuse industrial solid waste materials. For example, SRP University of Arizona researchers reuse fly ash by incorporating it into an iron/cement sorbent useful for removing environmental contaminants.

SRP researchers at Michigan State University discovered that certain clays are highly effective adsorbents for dioxin, information that provides a potential means for removing dioxins from the environment. SRP researchers at the University of Arizona identified

native drought- and salt-tolerant plants that stabilize metals in their roots without concentrating metals in leaf tissue. They completed a successful field trial at the Boston Mill tailings site, and are working with EPA Region 9 to begin a large field trial at the Iron King Mine Superfund site. This sustainable green remediation approach reduces the air-dispersion of toxic tailings, preventing exposures to nearby communities.

SRP partners with state and community organizations to prevent exposures. For example, it is not uncommon for municipalities to build new schools on or adjacent to former industrial properties, particularly in the northeast where property is extremely expensive. Unfortunately, vapors from industrial contaminants, such as trichloroethylene (TCE), can seep into building structures, resulting in the inhalation of harmful fumes. Constructing schools without proper site assessment may put children at risk of exposure via this vapor intrusion. Vapor intrusion is difficult to predict; however, SRP researchers at Brown University developed 3D models that provide an assessment of the fate and transport of TCE in the subsurface. Partnering with the Rhode Island Department of Environmental Management and an environmental justice community group, the researchers translated their findings into improved sampling and modeling techniques to inform city planners about vapor intrusion risks prior to development projects. This partnership will develop alternative models for future school sites to be used by regulators and community groups.

SRP researchers at the University of Kentucky found one group of polychlorinated biphenyls (PCBs) that disrupts critical cellular pathways, which may lead to cardiovascular diseases, such as atherosclerosis. They also learned that antioxidant nutrients, such as vitamin E, can protect against the cell damage mediated by PCBs. These findings provide a mechanistic basis for the role of antioxidants as a nutritional intervention for PCB exposure. SRP researchers at Columbia University showed that folic acid, a water-soluble B vitamin supplement, lowers total blood arsenic by lowering concentrations of a particular form of arsenic in the blood. These findings imply that folic acid supplementation may reduce body stores of arsenic and has potential for use as a therapeutic strategy to facilitate arsenic elimination from the body. This research offers hope for prevention of arsenic-induced illnesses not only in the U.S., where millions may be exposed to unhealthy arsenic levels in wells, but also in populations overseas, such as Bangladesh, where high arsenic exposures overlap with nutritional deficiencies.

WTP's core commitment to prevention is forward looking, examining breakthroughs and opportunities, such as new control banding techniques used to assess and manage workplace risks, the challenge nanotechnologies place on workplace safety and health policies, and even the need to standardize how hazards are communicated. To meet these challenges, WTP recently held a national conference on global safety and health issues and their impact on WTP worker training that included participation from longtime partners such as National Institute for Occupational Safety and Health. Working for prevention through partnerships, WTP continues to meet its obligation to American workers, providing model safety and health training in all fifty states, Puerto Rico, and the Pacific Territories including American Samoa.

WTP grantees conduct in-depth job site and task studies to tailor training to the workplace. For example, WTP-funded United Steelworkers developed a proactive

technique called “Systems of Safety” that actively seeks to identify, control, and eliminate workplace hazards. This includes a hazard mapping project as part of annual refresher training for hazardous materials workers.

Superfund also addresses communication issues for communities with specific needs, such as non-English speakers. For Spanish-speaking workers, WTP grantees translate written materials and take a programmatic approach, considering cultural factors that influence adult-learning for Hispanic workers, to develop and support Hispanic worker-trainers. SRP grantees at Duke University developed fish advisory pamphlets specifically for Spanish-speaking populations and designated a culturally-sensitive strategy of dissemination, improving the impact in preventing mercury exposure through fish consumption.

These are but a few highlights of NIEHS’ vital Superfund activities aimed at preventing exposures and protecting the health of our Nation’s and the world’s citizens.

## **FY 2011 JUSTIFICATION BY PROGRAM**

### **Program Descriptions and Accomplishments**

**Superfund Research Program (SRP):** 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 accomplishes this through research conducted at universities across the country. Also included in the program is research to develop cost effective approaches to detect, remove and/or reduce the amount of toxic substances found in the environment. In a recent study supported by SRP, researchers at Boston University published results that demonstrate that pregnant women’s exposure to solvents in drinking water led to adverse health effects in their children. The research showed that mothers exposed to perchlorethylene (PCE) in their drinking water around the time of conception had an increased risk of children being born with neural tube defects or cleft palate. This study demonstrates the consequences of *in utero* exposure to hazardous substances and reinforces public health need to protect pregnant women from environmental exposures.

Budget Policy: The FY 2011 budget estimate for SRP is \$51.974 million, an increase of \$1.622 million, or 3.2 percent over the FY 2010 estimate. Resources will be used to support high priority and scientifically rigorous multi-project research grants, covering the diverse areas of science needed to solve complex health and environmental issues associated with the nation’s hazardous waste sites. In FY 2009, NIEHS initiated a new area of investigation in the development of nanotechnology-based tools to understand the mechanisms of bioremediation. These grants will be in their final year of funding in FY 2011. Support of SBIR grants for the development of innovative technologies for monitoring and remediation of hazardous substances in the environment will continue in FY 2011.

### **Portrait of a Program: Consequences of Childhood Exposures to Hazardous Substances**

FY 2010 Level: \$5.584 million  
FY 2011 Level: \$5.584 million  
Change: \$0.000 million

The potential impact from exposure to hazardous substances on children's health is enormous. Children's environmental health research has been a mainstay of SRP since its inception and will continue in 2011. SRP's research efforts have covered all stages of childhood development, with some studies focusing on the effects of prenatal exposures and others on infant, childhood, or adolescence exposures. Studies have focused on a wide range of disorders and diseases, and have spanned a wide array of hazardous substances.

Because the nervous system is still developing during childhood, children exposed to neurodevelopmental toxicants may experience lifelong detrimental effects. In a study of ten-year-old children in Bangladesh, Columbia University SRP investigators found that well water manganese had an adverse affect on children's intellectual functioning. These same levels of manganese are found in infant formulas available in the U.S. Studies conducted at the Duke University SRP showed that new pesticides (fipronil and the perfluoroalkyls) have the same adverse effects on neurodevelopment as the organophosphates they replaced in commerce; furthermore, neurodevelopmental toxicants were found to make lasting changes in children's metabolism, possibly contributing to the recent obesity and diabetes epidemics.

SRP investigators at the University of California (UC) Berkeley identified a mutation occurring in the womb, and associated with childhood leukemia, that appears to be environmentally-induced. Other findings indicate that acute lymphoblastic leukemia risk is associated with paint exposure, and that exposure to petroleum-based solvents is associated with a more rare form of childhood leukemia, acute myeloid leukemia. These findings are important to understanding environmental and genetic causes for childhood leukemia, the number one cause of cancer death in children in the United States.

SRP investigators at UC Berkeley found that pregnant women exposed to high levels of arsenic ( $\geq 200$   $\mu\text{g/liter}$ ) in drinking water were at a six-fold increase in risk of stillbirth and a twofold increase in risk of neonatal death. SRP researchers at Harvard found that pregnant women exposed to relatively low arsenic demonstrated impaired glucose tolerance. This indicates that children born to these women may be at an increased risk of subsequent impaired glucose tolerance and obesity.

**Worker Training Program (WTP):** WTP trains workers to protect themselves and their communities from exposure to hazardous materials encountered during hazardous waste operations, hazardous materials transportation and environmental restoration of contaminated facilities or chemical emergency response. WTP works with a network of experienced worker safety and health experts, trainers and support staff that can be mobilized to protect and assist during times of national crisis. One example of this work is the safety and health training provided for workers still responding to a massive coal-ash spill in Tennessee. 128 WTP-trained members of the International Union of Operating Engineers, under the supervision of the EPA, are running the heavy equipment needed to remediate two rivers and hundreds of acres contaminated by over a billion gallons of toxic sludge. WTP is also providing assistance in the earthquake response in Haiti. NIEHS translated earthquake responder resources into native Creole and posted them on the web for sharing by response agencies, including DHHS, the

Pentagon deployment office, the National Red Cross, CDC/NIOSH and OSHA as part of our role with the National Response Team (DHS/FEMA). These materials are available on NIEHS' Haiti Earthquake Response page at: <http://tools.niehs.nih.gov/wetp/index.cfm?id=2479>. The *NIEHS Earthquake Response Training Tool: Protecting Yourself While Responding to Earthquakes* is an awareness-level health and safety resource for skilled support personnel who will participate in an earthquake response and cleanup. The International Association of Fire Fighters (IAFF), a WTP awardee, has been involved in the initial deployment to Haiti of search and rescue teams from Los Angeles, California and Fairfax County, Virginia, including hazmat technicians. In addition to response training, prevention training is also a critical component of WTP. Through training in accident and "near miss" analysis, and in the proper storage, handling and transportation of hazardous materials, WTP awardees are in the forefront, working to prevent environmental hazards and protect individuals and communities.

**Budget Policy:** The FY 2011 budget estimate for WTP is \$29.789 million, an increase of \$929 thousand, or 3.2 percent over the FY 2010 estimate. During FY 2011, WTP will continue to support occupational safety and health training for workers who are or may be engaged in activities related to hazardous waste removal, containment or chemical emergency response. WTP will also fund comprehensive training to disadvantaged urban youth in order to prepare them for employment in the construction and environmental cleanup fields. WTP plans to continue its support of small businesses through its innovative SBIR e-learning for worker safety and health training program. WTP will also continue to pursue pre-deployment strategies and development of training materials on a number of issues of key national response concern.

#### **Portrait of a Program: Ensuring Green Jobs are Safe Jobs**

FY 2010 Level: \$0.500 million  
FY 2011 Level \$0.600 million  
Change: \$0.100 million

During Fiscal Year 2010, WTP is undertaking a significant effort related to the safety and health training of workers involved in the newly emerging field of "green" remediation and deconstruction. This effort builds upon the lessons learned during a recent national WTP meeting entitled "Implications for Safety and Health Training in a Green Economy," where WTP partner agencies and grantees identified "green approaches" as a commonly held goal. Remediation of hazardous materials has always been a "green" issue - one whose successful achievement benefits individuals, communities, and the environment. WTP has found that many contaminated former industrial sites (Brownfields) can be reclaimed by following green principles of deconstruction, rather than simple demolition. During deconstruction, materials are separated, and often reused, thus greatly reducing the volume of contaminated materials. Compared to traditional clean-up methods, this new green approach, if safely done, holds the promise of lowering clean-up costs while providing additional opportunities for small businesses.

Recent insights from the field show some areas of concern: a new, younger workforce with less experience; health and safety trainers needing updated information; and older construction safety curricula that do not cover these new risks. In addition, it cannot be assumed that a strong safety culture exists throughout the industry; therefore, the WTP model of training, based on published criteria and strong evaluation components, can have a major impact in this field. This effort will be planned and implemented through the existing WTP awardee community and incorporated into training plans, curricula creation and revision, and train-the-trainer sessions.

### **Recovery Act Implementation**

Recovery Act Funding: \$19.297 million

In FY 2009, NIEHS Superfund received \$19.3 million under the Recovery Act. Of this amount, \$16.3 million was obligated in FY 2009 and \$3.0 million will be obligated in FY 2010. These funds support research and training to improve health around hazardous waste sites. The SRP supplements are targeted to promote interdisciplinary research collaborations, especially those with clear impact on translation to improved health, such as adapting epidemiological software tools for use in public health practice and identifying populations at higher risk of environmental exposure. The WTP is providing supplements to support health and safety training for unemployed and underemployed workers hired for cleanup activities supported by other ARRA-funded projects and for new workers in the area of commercial and residential weatherization, alternative energy development, green remediation, green construction and other emerging industries. The benefits of the awards will also reach a much larger audience as on-line training tools funded by these supplements through the Small Business Innovative Research Program are completed, including an interactive safety and health tutorial for workers with green jobs doing solar panel installation.

**NATIONAL INSTITUTES OF HEALTH**  
**National Institute of Environmental Health Sciences Superfund**

**Budget Authority by Object**

OBJECT CLASSES	FY 2010 Estimate	FY 2011 Estimate	Increase or Decrease
Personnel Compensation:			
11.1 Full-time permanent	\$981,000	\$997,000	\$16,000
11.3 Other than full-time permanent	3,000	3,000	0
11.5 Other personnel compensation	29,000	29,000	0
11.7 Military personnel	0	0	0
11.8 Special personnel services payments	0	0	0
<b>Total, Personnel Compensation</b>	<b>1,013,000</b>	<b>1,029,000</b>	<b>16,000</b>
12.0 Personnel benefits	253,000	257,000	4,000
12.2 Military personnel benefits	0	0	0
13.0 Benefits for former personnel	0	0	0
<b>Subtotal, Pay Costs</b>	<b>1,266,000</b>	<b>1,286,000</b>	<b>20,000</b>
21.0 Travel and transportation of persons	186,000	194,000	8,000
22.0 Transportation of things	0	0	0
23.1 Rental payments to GSA	0	0	0
23.2 Rental payments to others	0	0	0
23.3 Communications, utilities and miscellaneous charges	0	0	0
24.0 Printing and reproduction	0	0	0
25.1 Consulting services	18,000	19,000	1,000
25.2 Other services	1,244,000	1,359,000	115,000
25.3 Purchase of goods and services from government accounts	2,379,000	2,417,000	38,000
25.4 Operation and maintenance of facilities	0	0	0
25.5 Research and development contracts	0	0	0
25.6 Medical care	0	0	0
25.7 Operation and maintenance of equipment	0	0	0
25.8 Subsistence and support of persons	0	0	0
<b>25.0 Subtotal, Other Contractual Services</b>	<b>3,641,000</b>	<b>3,795,000</b>	<b>154,000</b>
26.0 Supplies and materials	7,000	7,000	0
31.0 Equipment	16,000	17,000	1,000
32.0 Land and structures	0	0	0
33.0 Investments and loans	0	0	0
41.0 Grants, subsidies and contributions	74,096,000	76,464,000	2,368,000
42.0 Insurance claims and indemnities	0	0	0
43.0 Interest and dividends	0	0	0
44.0 Refunds	0	0	0
<b>Subtotal, Non-Pay Costs</b>	<b>77,946,000</b>	<b>80,477,000</b>	<b>2,531,000</b>
<b>Total Budget Authority by Object</b>	<b>79,212,000</b>	<b>81,763,000</b>	<b>2,551,000</b>

FTEs are included with the regular NIEHS appropriation.

**NATIONAL INSTITUTES OF HEALTH**  
**National Institute of Environmental Health Sciences Superfund**

**Salaries and Expenses**

OBJECT CLASSES	FY 2010 Estimate	FY 2011 PB	Increase or Decrease
<b>Personnel Compensation:</b>			
Full-time permanent (11.1)	\$981,000	\$997,000	\$16,000
Other than full-time permanent (11.3)	3,000	3,000	0
Other personnel compensation (11.5)	29,000	29,000	0
Military personnel (11.7)	0	0	0
Special personnel services payments (11.8)	0	0	0
<b>Total Personnel Compensation (11.9)</b>	<b>1,013,000</b>	<b>1,029,000</b>	<b>16,000</b>
Civilian personnel benefits (12.1)	253,000	257,000	4,000
Military personnel benefits (12.2)	0	0	0
Benefits to former personnel (13.0)	0	0	0
<b>Subtotal, Pay Costs</b>	<b>1,266,000</b>	<b>1,286,000</b>	<b>20,000</b>
Travel (21.0)	186,000	194,000	8,000
Transportation of things (22.0)	0	0	0
Rental payments to others (23.2)	0	0	0
Communications, utilities and miscellaneous charges (23.3)	0	0	0
Printing and reproduction (24.0)	0	0	0
<b>Other Contractual Services:</b>			
Advisory and assistance services (25.1)	18,000	19,000	1,000
Other services (25.2)	1,244,000	1,356,000	112,000
Purchases from government accounts (25.3)	923,000	961,000	38,000
Operation and maintenance of facilities (25.4)	0	0	0
Operation and maintenance of equipment (25.7)	0	0	0
Subsistence and support of persons (25.8)	0	0	0
<b>Subtotal Other Contractual Services</b>	<b>2,185,000</b>	<b>2,336,000</b>	<b>151,000</b>
Supplies and materials (26.0)	7,000	7,000	0
<b>Subtotal, Non-Pay Costs</b>	<b>2,378,000</b>	<b>2,537,000</b>	<b>159,000</b>
<b>Total, Administrative Costs</b>	<b>3,644,000</b>	<b>3,823,000</b>	<b>179,000</b>

**NATIONAL INSTITUTES OF HEALTH  
National Institute of Environmental Health Sciences Superfund**

**Authorizing Legislation**

	PHS Act/ Other Citation	U.S. Code Citation	2010 Amount Authorized	FY 2010 Estimate	2011 Amount Authorized	FY 2011 PB
Environmental Protection Agency's Hazardous Substance Superfund	CERCLA Section 311(a)	42§9660 Section 9660(a)	Indefinite	\$50,352,000	Indefinite	\$51,974,000
	SARA Section 126(a)	42§9660 Section 9660(a)	Indefinite	28,860,000	Indefinite	29,789,000
<b>Total, Budget Authority</b>				<b>79,212,000</b>		<b>81,763,000</b>

**NATIONAL INSTITUTES OF HEALTH  
National Institute of Environmental Health Sciences Superfund**

**Appropriations History**

Fiscal Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
2002	70,228,000	70,228,000	70,228,000	70,228,000
Supplemental				10,500,000
2003	74,471,000	84,074,000	76,074,000	83,528,000
2004	78,744,000	80,000,000	78,774,000	78,774,000
Rescission				(465,000)
2005	80,486,000	80,486,000	80,486,000	80,486,000
Rescission				(644,000)
2006	80,289,000	80,289,000	80,289,000	80,289,000
Rescission				(1,181,000)
2007	79,108,000	79,414,000	78,414,000	79,117,000
2008	78,434,000	79,117,000	78,434,000	78,775,000
Rescission				(1,229,000)
2009	77,546,000	78,074,000	77,546,000	78,074,000
2010	79,212,000	79,212,000	79,212,000	79,212,000
Rescission				---
2011	81,763,000			

1/ Reflects enacted supplementals, rescissions, and reappropriations.

**NATIONAL INSTITUTES OF HEALTH  
FY 2011 President's Budget Request  
(\$000s)**

Appropriation	FY 2009 Omnibus	FY 2009 Recovery Act 4/	FY 2010 Enacted	FY 2011 President's Budget	2011 PB. +/- 2010 Enacted
NCI	4,967,714	\$1,256,517	4,855,179	5,264,643	\$409,464
NHLBI	3,014,873	762,584	3,095,812 2/	3,187,516	91,704
NIDCR	402,531	101,819	413,076	423,511	10,435
NIDDK 3/	1,910,151	445,393	1,957,364	2,007,589	50,225
NINDS	1,592,851	402,912	1,635,721	1,681,333	45,612
NIAID 1/	4,701,456	1,113,288	4,816,726	4,977,070	160,344
NIGMS	1,997,172	505,188	2,050,972	2,125,090	74,118
NICHD	1,294,519	327,443	1,329,027	1,368,894	39,867
NEI	688,276	174,097	706,765	724,360	17,595
NIEHS	662,667	168,057	689,565	707,339	17,774
NIA	1,080,472	273,303	1,109,800	1,142,337	32,537
NIAMS	524,696	132,726	538,854	555,715	16,861
NIDCD	407,125	102,984	418,657	429,007	10,350
NIMH	1,451,053	366,789	1,489,792	1,540,345	50,553
NIDA	1,032,457	261,156	1,059,446	1,094,078	34,632
NIAAA	450,095	113,851	462,167	474,649	12,482
NINR	141,834	35,877	145,600	150,198	4,598
NHGRI	502,261	127,035	515,876	533,959	18,083
NIBIB	308,108	77,937	316,452	325,925	9,473
NCRR	1,226,000	1,610,088	1,268,519	1,308,741	40,222
NCCAM	125,431	31,728	128,791	132,004	3,213
NCMHD	205,912	52,081	211,506	219,046	7,540
FIC	68,655	17,370	70,007	73,027	3,020
NLM	338,842	83,643	350,607	364,802	14,195
OD	1,247,292	1,336,837	1,177,020 4/	1,220,478	43,458
B&F	125,581	500,000	100,000	125,581	25,581
Type 1 Diabetes 3/	-150,000	0	-150,000	-150,000	0
<b>Subtotal, Labor/HHS</b>	<b>30,318,024</b>	<b>10,380,703</b>	<b>30,763,301</b>	<b>32,007,237</b>	<b>1,243,936</b>
Interior/Superfund Research Program	78,074	19,297	79,212	81,763	2,551
<b>Total, NIH Discretionary B.A.</b>	<b>30,396,098</b>	<b>10,400,000</b>	<b>30,842,513</b>	<b>32,089,000</b>	<b>1,246,487</b>
Type 1 Diabetes	150,000	0	150,000	150,000	0
<b>Total, NIH Budget Authority</b>	<b>30,546,098</b>	<b>10,400,000</b>	<b>30,992,513</b>	<b>32,239,000</b>	<b>1,246,487</b>
NLM Program Evaluation	8,200	0	8,200	8,200	0
<b>Total, Prog. Level</b>	<b>30,554,298</b>	<b>10,400,000</b>	<b>31,000,713</b>	<b>32,247,200</b>	<b>1,246,487</b>

1/ Includes funds to be transferred to the Global Fund for HIV/AIDS, Malaria, and Tuberculosis (FY 2008 - \$294,759,000; FY 2009 - \$300,000,000; and FY 2010 - \$300,000,000)

2/ Includes \$8,000,000 for facilities repairs and improvements at the NCI Frederick Federally Funded Research and Development Center in Frederick, MD.

3/ Includes funds for the Type 1 Diabetes Initiative supported with mandatory funds (P.L. 107-360, P.L. 110-173, P.L. 110-275).

4/ Funds are appropriated from the American Recovery and Reinvestment Act, 2009 (P.L. 111-5) and are available until September 30, 2010.

2/ Comparable for ASAM and ASPA transfer - \$62,000.

3/ Comparable for DBEPS program transfer to NIBIB (FY 2007 \$1,528,000).

4/ Comparable for CIO transfer to OD (FY 2007 \$669,000).

5/ Comparable for K-30 transfer to NCRR (\$10,613,000).

6/ Includes funds for the Type 1 Diabetes Initiative supported with mandatory funds.

7/ Comparable for transfer of Advanced Development Fund to ASPR (-\$49,500,000).

8/ Comparable for transfer to DHHS for PHS Historian (\$480,000)

9/ OD comparable (-\$49,500,000) to ASPR for Advanced Development Fund

10/ Includes recession of \$520,929,000.

11/ Includes IC transfer to NIDDK from NHLBI (\$816,000) and from NLM to NIDCR from NLM (\$455,000).

12/ Transfer from DHHS of \$983,000.

NATIONAL INSTITUTES OF HEALTH

Budget Mechanism - Total

(Dollars in thousands)

MECHANISM	FY 2009 Actual		FY 2009 Recovery Act Actual		FY 2010 Recovery Act Estimated		FY 2010 Enacted		FY 2011 PB		Change	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Research Grants:												
Research Projects:												
Noncompeting	26,217	\$11,347,631	0	\$910	4,182	\$1,816,319	25,779	\$11,731,132	26,150	\$12,278,259	371	\$547,127
Administrative supplements	(1,810)	216,894	(3,559)	950,617	(2,917)	399,167	(1,689)	188,293	(1,536)	171,364	(-153)	-16,929
Competing:			132	50,546	24	19,328						
Renewal	2,584	1,313,120	610	275,721	46	18,368	2,940	1,484,747	2,770	1,475,434	(170)	(9,313)
New	6,496	2,576,127	3,308	1,475,880	227	115,705	6,277	2,531,854	6,250	2,530,064	(27)	(1,790)
Supplements	31	6,981	301	148,499	40	17,471	34	8,401	32	8,019	(2)	(382)
Competing	9,111	3,896,228	4,767	2,128,499	367	180,537	9,251	4,025,002	9,052	4,013,517	(199)	-11,485
Subtotal, RPGs	35,328	15,460,753	4,767	3,080,026	4,549	2,396,023	35,030	15,944,427	35,202	16,463,140	172	518,713
SBIR/STTR	1,740	645,587	58	38,241	64	38,560	1,776	653,956	1,799	668,559	23	14,603
Subtotal, RPGs	37,068	16,106,340	4,825	3,544,258	4,613	3,071,060	36,806	16,598,383	37,001	17,131,699	195	533,316
Research Centers:												
Specialized/comprehensive	1,157	2,256,654	183	324,415	162	141,571	1,168	2,263,923	1,197	2,314,845	29	50,922
Clinical research	76	426,138	2	71,932	0	5,664	72	432,404	72	427,860	0	-4,544
Biotechnology	103	144,286	0	28,822	0	1,148	103	150,749	105	155,232	2	4,483
Comparative medicine	47	134,160	0	23,747	0	668	47	127,809	47	131,570	0	3,761
Research Centers in Minority Institutions	23	57,473	0	14,432	0	11,467	23	59,196	23	60,972	0	1,776
Subtotal, Centers	1,406	3,018,711	185	501,225	162	165,271	1,413	3,034,081	1,444	3,090,479	31	56,398
Other Research:												
Research careers	4,166	670,989	36	29,237	15	7,325	4,161	687,847	4,169	700,607	8	12,760
Cancer education	83	31,945	1	1,292	0	0	83	32,438	83	32,762	0	324
Cooperative clinical research	339	404,250	18	33,890	1	2,298	342	410,461	349	421,792	7	11,331
Biomedical research support	122	66,494	90	54,199	432	251,650	123	67,053	123	69,065	0	2,012
Minority biomedical research support	338	106,337	1	14,910	0	1,707	352	106,982	364	110,146	12	3,164
Other	1,644	493,462	75	88,113	376	32,746	1,704	502,291	1,729	519,657	25	17,366
Subtotal, Other Research	6,692	1,773,477	221	232,340	824	295,726	6,765	1,807,072	6,817	1,854,029	52	46,957
Total Research Grants	45,166	20,898,528	5,231	4,277,823	5,599	3,532,057	44,984	21,439,536	45,262	22,076,207	278	636,671
Ruth L. Kirschstein Training Awards:												
Individual awards	3,010	121,653	181	7,724	161	6,841	3,038	123,646	3,086	132,867	48	9,221
Institutional awards	14,280	654,660	303	16,832	14	2,018	14,218	659,108	14,078	691,574	-140	32,466
Total, Training	17,290	776,313	484	24,556	175	8,859	17,256	782,754	17,164	824,441	-92	41,687
Research & development contracts (SBIR/STTR)	2,564	3,387,136	4	385,752	33	329,624	2,607	3,459,304	2,644	3,545,581	37	86,277
Intramural research		3,230,199	0	10,175	0	62,701		3,285,364		3,394,123		108,759
Research management and support		1,425,844	3	153,369	4	115,084		1,451,999		1,524,615		72,616
Extramural Construction		0	0	52,108	0	947,892		0		0		0
Office of the Director 1/ (Appropriation)		616,503	0	0	0	0		632,911		658,849		25,938
Buildings and Facilities 2/ (Appropriation)		(1,247,292)	(0)	(0)	(0)	(0)		(1,177,020)		(1,220,478)		(43,458)
NIH Roadmap for Medical Research 3/		133,501	0	49,717	0	450,283		107,920		133,421		25,501
Type 1 Diabetes 4/		(125,581)	(0)	(0)	(0)	(0)		(100,000)		(125,581)		(25,581)
NIH Roadmap for Medical Research 3/		(541,133)	(0)	(0)	(0)	(0)		(544,109)		(561,629)		(17,520)
Type 1 Diabetes 4/		-150,000	0	0	0	0		-150,000		-150,000		0
Subtotal, Labor/HHS Budget Authority		30,318,024		4,953,500		5,446,500		31,009,788		32,007,237		997,449
Interior Appropriation for Superfund Res.		78,074		0		0		79,212		81,763		2,551
<b>Total, NIH Discretionary B.A.</b>		<b>30,396,098</b>		<b>4,953,500</b>		<b>5,446,500</b>		<b>31,089,000</b>		<b>32,089,000</b>		<b>1,000,000</b>
Type 1 Diabetes 4/		150,000		0		0		150,000		150,000		0
<b>Total, NIH Budget Authority</b>		<b>30,546,098</b>		<b>4,953,500</b>		<b>5,446,500</b>		<b>31,239,000</b>		<b>32,239,000</b>		<b>1,000,000</b>
NLM Program Evaluation		8,200		0		0		8,200		8,200		0
<b>Total, Program Level</b>		<b>30,554,298</b>		<b>4,953,500</b>		<b>5,446,500</b>		<b>31,247,200</b>		<b>32,247,200</b>		<b>1,000,000</b>

1/ Funding for NIH Roadmap for Medical Research and for the NIH Director's Bridge Awards is distributed by mechanism. Roadmap: (funding shown above).

Bridge Awards -- FY 09: 270 awards \$91,250; FY 10: -0-; FY 11 -0-.

2/ Includes the B&F appropriation plus the following included in NCI -- FY 09: \$7,920; FY 10: \$7,920; FY 11 \$7,840.

3/ Included in above mechanisms

4/ Included in NIDDK -- FY 09: \$150,000; FY 10: \$150,000; FY 11: \$150,000.

Numbers of grants identified in FY 2010 and FY 2011 are estimates, and WILL change as applications are received and selected for funding.

## NATIONAL INSTITUTES OF HEALTH

### Full-Time Equivalents

Institutes and Centers	FY 2009 Actual	FY 2010 Enacted	FY 2011 President's Budget
NCI	2,956	2,992	3,127
NHLBI	856	872	911
NIDCR	240	239	250
NIDDK	626	630	658
NINDS	495	492	514
NIAID	1,729	1,703	1,780
NIGMS	138	137	143
NICHD	615	634	663
NEI	241	244	255
NIEHS	635	651	680
NIA	404	407	425
NIAMS	238	231	241
NIDCD	142	150	157
NIMH	625	637	666
NIDA	394	392	410
NIAAA	215	216	226
NINR	57	51	53
NHGRI	327	323	338
NIBIB	89	88	92
NCRR	124	119	124
NCCAM	66	65	68
NCMHD	25	28	29
FIC	58	55	57
Subtotals, ICs	11,295	11,356	11,867
NLM	754	746	780
OD	627	642	761
Central Services	5,110	5,129	5,365
Subtotal, NIH	17,786	17,873	18,773
Undistributed	136	0	0
Reserve	0	3	0
CRADA FTEs <sup>1/</sup>	0	10	11
Total, NIH	17,922	17,886	18,784

<sup>1/</sup> CRADA FTEs are supported by Cooperative Research and Development Agreements.