



# NSF Facility Budget and Facility Management

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# Introduction

- FY13 budget
- FY14 budget request to congress
- NSF facility management
- Safety



# FY13 Budget

- Full year appropriations enacted on March 26th
- Total NSF Budget for FY13 - \$6,884M
- This is 2.1% less than the FY12 enacted level
- An operating plan is due to Congress on or before 10 May



# FY14 Budget

- The President submitted the Budget of the United States Government, FY 2014 to Congress on 10 April
- This Budget includes \$7,626 M for the National Science Foundation



# NSF Funding by account

NSF Funding by Account (Dollars in Millions)				
	FY 2012 Enacted	FY 2014 Request	FY 2014 Request Change Over FY 2012 Enacted	
			Amount	Percent
Research & Related Activities	\$5,689.00	\$6,212.29	\$523.29	9.2%
Education & Human Resources	829.00	880.29	51.29	6.2%
Major Research Equipment & Facilities Construction	197.06	210.12	13.07	6.6%
Agency Operations & Award Management	299.40	304.29	4.89	1.6%
National Science Board	4.44	4.47	0.03	0.7%
Office of Inspector General	14.20	14.32	0.12	0.8%
<b>Total, NSF</b>	<b>\$7,033.10</b>	<b>\$7,625.78</b>	<b>\$592.69</b>	<b>8.4%</b>

Totals may not add due to rounding.

Source: NSF's FY 2014 Budget Request to Congress  
2013 Large Facility Workshop



# MREFC construction fund plan

## MREFC Account Funding, by Project

(Dollars in Millions)

	FY 2012 <sup>1</sup> Actual	FY 2012 Enacted/ Annualized FY 2013 CR <sup>2</sup>	FY 2014 Request	FY 2015 Estimate	FY 2016 Estimate	FY 2017 Estimate	FY 2018 Estimate	FY 2019 Estimate
AdvLIGO	\$20.96	\$20.96	\$14.92	-	-	-	-	-
ALMA	2.50	3.00	-	-	-	-	-	-
ATST	10.00	10.00	42.00	20.00	20.00	9.93	-	-
IceCube	1.52	-	-	-	-	-	-	-
LSST	-	-	27.50	89.76	89.18	55.26	55.56	48.03
NEON	60.30	60.30	98.20	91.00	80.64	-	-	-
OOI	102.80	102.80	27.50	-	-	-	-	-
<b>MREFC Total</b>	<b>\$198.08</b>	<b>\$197.06</b>	<b>\$210.12</b>	<b>\$200.76</b>	<b>\$189.82</b>	<b>\$65.19</b>	<b>\$55.56</b>	<b>\$48.03</b>

Totals may not add due to rounding.

<sup>1</sup> In FY 2012, \$30.0 million was transferred from the Research and Related Activities (R&RA) account to the Major Research Equipment and Facilities Construction (MREFC) account, as provided by the Science Appropriations Act, 2012, P.L. 112-55.

<sup>2</sup> A full-year appropriation for this account was not enacted at the time the budget was prepared; therefore, this account was operating under a continuing resolution (P.L. 112-175). The amounts shown in FY 2013 are placeholders. Upon development of the FY 2013 Current Plan, the FY 2013 funding amounts for each project will be determined.

Source: NSF's FY 2014 Budget Request to Congress  
2013 Large Facility Workshop

# Major Multi-user Facilities Funding



Source: NSF's FY 2014 Budget Request to Congress

Major Multi-user Research Facilities Funding					
(Dollars in Millions)					
	FY 2012 Actual	FY 2012 Enacted/ Annualized FY 2013 CR	FY 2014 Request	Change over FY 2012 Enacted	
				Amount	Percent
<b>Operations and Maintenance of Existing Facilities</b>	<b>\$679.41</b>	<b>\$657.90</b>	<b>\$702.86</b>	<b>\$44.96</b>	<b>6.8%</b>
<i>Engineering</i>					
National Nanotechnology Infrastructure Network (NNIN)	16.00	15.86	15.46	-0.40	-2.5%
Network for Earthquake Engineering Simulation	20.39	20.50	22.00	1.50	7.3%
<i>Geosciences</i>					
Academic Research Fleet <sup>1</sup>	92.96	76.75	85.00	8.25	10.7%
Geodetic Facilities for Advancement of Geoscience & EarthScope (GAGE)	11.92	13.18	12.70	-0.48	-3.6%
International Ocean Discovery Program	51.68	44.40	50.00	5.60	12.6%
Polar Facilities and Logistics	294.63	295.79	314.21	18.42	6.2%
Seismological Facilities for Advancement of Geoscience & EarthScope (SAGE)	26.12	26.76	25.70	-1.06	-4.0%
<i>Mathematical and Physical Sciences</i>					
Arecibo Observatory	9.25	8.70	8.00	-0.70	-8.0%
Cornell High Energy Synchrotron Source (CHESS)	19.67	19.67	20.00	0.33	1.7%
Gemini Observatory	21.57	22.07	19.59	-2.48	-11.2%
IceCube	6.90	6.90	6.90	-	-
Large Hadron Collider	18.00	18.00	18.00	-	-
Laser Interferometer Gravitational Wave Observatory	30.40	30.40	39.50	9.10	29.9%
National High Magnetic Field Laboratory	26.80	25.80	32.64	6.84	26.5%
National Solar Observatory	9.10	9.10	8.00	-1.10	-12.1%
National Superconducting Cyclotron Laboratory	21.50	21.50	22.50	1.00	4.7%
Other Facilities <sup>2</sup>	2.52	2.52	2.66	0.14	5.6%
<b>Federally Funded Research and Development Centers<sup>3</sup></b>	<b>\$201.00</b>	<b>\$195.85</b>	<b>\$201.91</b>	<b>\$6.06</b>	<b>3.1%</b>
National Center for Atmospheric Research	103.00	98.60	99.00	0.40	0.4%
National Optical Astronomy Observatory	26.25	25.50	25.50	-	-
National Radio Astronomy Observatory <sup>4</sup>	71.75	71.75	77.41	5.66	7.9%
<b>Operations and Maintenance of Facilities under Construction</b>	<b>\$28.80</b>	<b>\$28.80</b>	<b>\$75.80</b>	<b>\$47.00</b>	<b>163.2%</b>
Advanced Technology Solar Telescope (ATST)	2.00	2.00	2.00	-	-
National Ecological Observatory Network (NEON)	-	-	21.00	21.00	N/A
Ocean Observatories Initiative (OOI)	26.80	26.80	52.80	26.00	97.0%
<b>R&amp;RA Planning and Concept Development</b>	<b>\$6.20</b>	<b>\$13.50</b>	<b>\$7.50</b>	<b>-\$6.00</b>	<b>-44.4%</b>
Pre-construction Planning <sup>5</sup>	-	2.00	1.00	-1.00	-50.0%
Concept and Development for MREFC projects	6.20	11.50	6.50	-5.00	-43.5%
<b>Major Research Equipment and Facilities Construction</b>	<b>\$198.08</b>	<b>\$197.06</b>	<b>\$210.12</b>	<b>\$13.07</b>	<b>6.6%</b>
<b>Total, Major Multi-User Research Facilities</b>	<b>\$1,113.50</b>	<b>\$1,093.11</b>	<b>\$1,198.19</b>	<b>\$105.09</b>	<b>9.6%</b>

Totals may not add due to rounding.

<sup>1</sup> An additional \$2.0 million in FY 2012 Enacted and \$1.0 million in FY 2013 for Regional Class Research Vessels is included in pre-construction planning.

<sup>2</sup> Other Facilities includes support for other physics and materials research facilities.

<sup>3</sup> Federally Funded R&D Centers does not include support for the Science and Technology Policy Institute, which is an FFRDC but not a multi-user research facility.

<sup>4</sup> Operations and maintenance of ALMA are included in NRAO.

<sup>5</sup> Pre-construction planning includes R&RA funding for potential next-generation major multi-user facilities.



# Increasing interest in NSF's Facility Oversight

- The National Science Board, the Inspector General, and Congress are interested in the level of NSF's oversight of the facilities funded
- Inspector General's alert memo, September 28, 2012, 12-6-001 ([http://www.nsf.gov/oig/Alert Memo on Mgmt of Cooperative Agreements.pdf](http://www.nsf.gov/oig/Alert%20Memo%20on%20Mgmt%20of%20Cooperative%20Agreements.pdf)) – NSF BFA response to the alert memo (<http://www.nsf.gov/bfa/responses.jsp>)
- Subcommittee on Research and Science Education Hearing -Ensuring Fiscal Responsibility and Accountability at NSF, 8 March 2012 (<http://science.house.gov/hearing/subcommittee-research-and-science-education-hearing-ensuring-fiscal-responsibility-and>)





# Increasing interest in NSF's Facility Oversight

- There are a number of studies that have been conducted and reports issued
  - STPI report “Oversight of the National Science Foundation’s Operating Large Facilities” is one such report and will be summarized in the next presentation
- We will be using these reports as well as input from these workshops to refine the NSF processes to maximize scientific return within limited budget



# Safety

- Safety is everyone's business
- Unique facilities have unique risks
  - Environment – altitude, humidity, wildlife
  - Heavy equipment
  - Unusual shifts
- Every facility should have a safety plan that is routinely reviewed by the Project
- The safety plan should identify a Safety Officer that is responsible for being the “voice of caution” – this is to separate safety from schedule as much as possible



# Mishap reporting

- Mishap reporting and investigation
  - Report serious incidents regarding equipment damage or human injury to your Program Officer as soon as possible
  - Serious incidents should be reviewed by and external (independent) panel to determine all the root causes and recommend corrective actions



# Summary

- There continues to be uncertainty in the budget
- All facilities should routinely review their safety plans and policies
- All facility personnel should participate in a culture of safety – where risks are identified and addressed before accidents occur
- The NSF facility management process is continuously being reviewed and refined