National Science Foundation – Building Capacity

Kansas EPSCoR State Conference
Lawrence, KS       October 4, 2010

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Program Director
NSF EPSCoR
EPSCoR Mission

To assist the National Science Foundation in its statutory function

“.... to strengthen research and education in science and engineering throughout the United States and to avoid undue concentration of such research and education.”
NSF EPSCoR Jurisdictions

- **1980**: Arkansas, Maine, Montana, South Carolina, West Virginia
- **1985**: Alabama, Kentucky, Nevada, North Dakota, Oklahoma, Puerto Rico, Vermont, Wyoming
- **1987**: Idaho, Louisiana, Mississippi, South Dakota
- **1992**: Kansas, Nebraska
- **2000**: Alaska
- **2001**: Hawaii, New Mexico
- **2002**: U.S. Virgin Islands
- **2003**: Delaware
- **2004**: New Hampshire, Rhode Island, Tennessee
- **2009**: Iowa, Utah
In the 29 EPSCoR jurisdictions, there are

- 21% of the nation’s total population
- 24% of the research institutions
- 16% of the employed scientists and engineers
- 22% of the nation’s African-Americans
- 36% of American Indians and Alaskan Natives
- 31% of Native Hawaiians and Pacific Islanders
- 16% of the nation’s Hispanics
- 52 of the nation’s 105 HBCUs (50%)
- 74 of the 257 institutions with high Hispanic enrollment (29%)
- 22 of the 32 Tribal Colleges and Universities (68%)

Great Opportunity for Leverage!
EPSCoR Objectives

• Build research capacity and competitiveness
• Broaden participation in STEM (individual, institutional, disciplinary, geographic diversity)
• Promote development of a technically skilled workforce and informed citizenry
• Foster collaborative partnerships and multi-faceted Statewide Programs
EPSCoR Portfolio Activity

• Research Infrastructure Improvement (RII)
  Proposals from eligible jurisdictions submitted by a designee of the jurisdiction’s governing committee
  – Track 1 (up to $4M per year for up to 5 years)
  – Track 2 (new in FY 09; up to $2M per year for up to 3 years; CI enabled S&E; consortia among jurisdictions)
  – Inter-campus and Intra-campus Cyber Connectivity (new in FY 10; up to $1M for up to 2 years)

• Co-Funding with NSF Directorates and Offices
  – Meritorious proposals reviewed in NSF programs

• Outreach Activities and Workshops
## NSF EPSCoR Funding ($M)

<table>
<thead>
<tr>
<th>Activity</th>
<th>FY06</th>
<th>FY07</th>
<th>FY08</th>
<th>FY09</th>
<th>FY10 (est.)</th>
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<tbody>
<tr>
<td>RII</td>
<td>61.7</td>
<td>65.8</td>
<td>72.8</td>
<td>91.5</td>
<td>99.2</td>
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<tr>
<td>Co-Fund</td>
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<td>36.2</td>
<td>46.7</td>
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<td>Outreach Workshop</td>
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<td>0.5</td>
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<td>Total</td>
<td>98.2</td>
<td>102.1</td>
<td>120.0</td>
<td>133.0</td>
<td>145.4</td>
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Co-Funding Essentials

• Reviewed and Recommended for Funding within NSF Directorates and Offices

• Combined leveraged support necessary for funding

• Program Officers from NSF Directorates and Offices contact EPSCoR Office

• Characteristics favoring Co-funding:
  - New PIs
  - Multidisciplinary
  - Broaden participtn
  - R/T Ops for St/Tchrs
  • Tipping Point is Financial!
  - Collaborative
  - Synergistic
  - Instrumentation
  - Integration of R&E
Social and Behavioral & Economic Sciences (SBE)

Priorities
• Innovation
• Learning, Thinking, Behavior
• Climate, Energy, People
• Cross-Cutting Approaches

Dynamics of Coupled Natural & Human Systems
Broad-Based Climate programs – water, climate modeling
Environment, Society, and Economics
Decision Making Under Uncertainty
Disaster Resilience for Rural Communities
Science, Engineering, and Education for Sustainability (SEES)

• A major new emphasis area for NSF
• First described in the FY 2011 budget request
• Builds on previously established and new activities in FY 2010
• Expects to be a major emphasis through 2015 -- with "mainstreaming" to follow
SEES Incorporates Established Activities

- Dynamics of Coupled Natural and Human Systems (CNH)
- Ecology of Infectious Disease (EID)
- Long-Term Ecological Research (LTER), including Urban Long-Term Research Area (ULTRA) activities
Federal Climate Change Education Portfolio

- U.S. Global Change Research Program (USGCRP)
  - Coordination of 13 agencies
    - Education Interagency Working Group (EdIWG)
    - Climate Literacy Framework

- Funding Opportunities
  - NSF Programs
  - NOAA Environmental Literacy Grants
  - NASA Global Climate Change Education
  - USDA/NIFA Agriculture and Food Research Initiative - Climate Change

Climate Change Education (CCE) Program

Pre-FY 09: Core NSF program investments
FY 09: Dedicated CCE funding ($10 M) in EHR NSF 09-058
10 Awards made – PI meeting March 15-16, 2010

FY 10, 11: CCE funding continues; CCEP-I NSF 10-542
$20 M; 15 awards (includes KSU)
co-managed between EHR, GEO, BIO, and OPP
All proposals submitted on or after January 18, 2011 must describe plans for data management and sharing of the products of research, or assert the absence of the need for such plans.

Fastlane will not permit submission of a proposal that is missing the Data Management Plan.

The Data Management Plan will be reviewed as part of the intellectual merit or broader impacts of the proposal, or both, as appropriate.
Thank You