INSPIRE - ENGAGE - EDUCATE - EMPLOY
The Next Generation of Explorers

NASA STEM ENGAGEMENT & SPACE GRANT

Mike Kincaid
Associate Administrator for STEM Engagement
NASA STEM ENGAGEMENT

- Key Updates and FY2018 Accomplishments
- Appropriated STEM Engagement Program
- Space Grant & Upcoming Multi-Year Solicitation
- Upcoming Multi-Year Solicitation – Approach & Funding Model
Vision
We immerse the public in NASA’s work, enhance STEM literacy, and inspire the next generation to explore.

Mission
We engage the nation in NASA’s mission

Focus Areas

Create unique opportunities for students and the public to contribute to NASA’s work in exploration and discovery.

Build a diverse future STEM workforce by engaging students in authentic learning experiences with NASA’s people, content and facilities.

Strengthen public understanding by enabling powerful connections to NASA’s mission and work.
MISSION-DRIVEN STRATEGIC ENGAGEMENT

Engaging the nation in NASA’s mission

EXPLORATION
EARTH FLIGHT
SPACE TECH
SOLAR SYSTEM & BEYOND
MOON TO MARS
HUMANS IN SPACE

Mission Directorate Office
STEM Engagement
Public Engagement
Field Centers

INSPIRE - ENGAGE - EDUCATE - EMPLOY
The Next Generation of Explorers
NEW ARCHITECTURE ENABLING STUDENT OPPORTUNITIES & CONTRIBUTIONS

FOCUS AREAS

Evidence-based strategies
- Create unique opportunities for students to contribute to NASA’s work.

Rigorous planning
- Build a diverse future STEM workforce by engaging students in authentic learning experiences.

Integrated operational model
- Strengthen public understanding by enabling powerful connections to NASA’s mission and work.

Strategic, balanced portfolio
- NASA-unique learning experiences

NASA-unique learning experiences
- Student contributions to NASA’s work in action

SCALABILITY TO MAGNIFY NASA’S REACH AND IMPACT

NASA MISSION DIRECTORATE

DRIVERS & REQUIREMENTS

EVIDENCE-BASED STRATEGIES

RIGOUROUS PLANNING

INTEGRATED OPERATIONAL MODEL

FOCUS AREAS

EVIDENCE-BASED STRATEGIES

RIGOUROUS PLANNING

INTEGRATED OPERATIONAL MODEL

SCALABILITY TO MAGNIFY NASA’S REACH AND IMPACT

BENEFICIARIES OF NASA’S STEM ENGAGEMENT PORTFOLIO

K-Elementary

Enrichment

Middle School

High School

Undergraduate

Graduate
2018 MILESTONES

STEM Engagement Council (SEC)
To make and support decisions affecting the agency STEM engagement strategy, planning, operational oversight, assessment and stakeholder management.

Agency STEM Strategy
A blueprint to frame/guide agency’s work in STEM engagement. Encompasses all endeavors agency-wide to attract, engage and educate students and to support educators, educational institutions and professional organizations.

NASA Advisory Council STEM Engagement Committee
Administrator Bridenstine established NAC’s STEM Engagement Committee and appointed four new members – a great milestone for STEM Engagement.

Charting a Course for Success: A Federal Strategy for STEM Education
The CoSTEM 5 year plan lays out the federal government’s role in furthering STEM education by working with state, local, education, and American employer stakeholders to build a STEM-proficient citizenry, create a STEM-ready workforce and remove barriers to STEM careers, especially for women and underrepresented groups.
NASA STEM ENGAGEMENT

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MISSION-DRIVEN PROGRAMS ENABLING STEM ENGAGEMENT

Space Grant
- National network of 52 Consortia with 850 Affiliate members
- Stimulates cooperative programs among universities, industry, federal/state/local governments
- Encourages interdisciplinary education and research programs
- Incorporates State priorities, needs, and goals

Established Program to Stimulate Competitive Research (EPSCoR)
- 27 eligible jurisdictions (states and territories)
- Contributes to development of research infrastructure and capabilities
- Fosters partnerships between NASA research entities, industry, and academic institutions
- Incorporates state priorities, needs, and goals

Minority University Research & Education Project (MUREP)
- Limited to Minority-Serving Institutions
- Increases retention of underserved and underrepresented groups in STEM
- Enhances infrastructure at MSI institutions
- Portfolio with 7 funded elements

Next Gen STEM
- Informal education and K-12 STEM engagement initiatives aligned to mission priorities
- Richer, more comprehensive STEM engagement opportunities
- NASA’s museum alliance

STEM ENGAGEMENT BENEFICIARIES
STUDENT CONTRIBUTIONS TO NASA’S WORK IN ACTION
K-Elementary School
Middle School
High School
Undergraduate
Graduate
N.GEN STEM
Space Grant
Established Program to Stimulate Competitive Research (EPSCoR)
Minority University Research & Education Project (MUREP)
Next Gen STEM
NASA’S THEMATIC AREAS
STEM ENGAGEMENT BENEFICIARIES
Office of Education – Budget History

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NASA STEM ENGAGEMENT

• Key Updates and FY2018 Accomplishments
• Appropriated STEM Engagement Program

• Space Grant & Upcoming Multi-Year Solicitation

• Upcoming Multi-Year Solicitation – Approach & Funding Model
**At A Glance:**

- Center-based intern placements in 2018 across 52 state-based consortia
- 850 Affiliate members
- Incorporates State priorities, needs, and goals

**Elements of Approach:**

- Mission Directorate collaborations
- Strategic partnership with NASA Centers
- Education, research, and informal education opportunities
- State-based Consortia Partnerships

**Impact:**

- Contribute to solve Mission Directorate challenges
- Increase collaboration and engagement with Space Grant and NASA Centers
- Increase diversity in the Nation’s STEM workforce
FY18 FUNDING STRUCTURE

<table>
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<th>Status</th>
<th>Number of Awards</th>
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NOTE: Funding does not include U.S. VI and Guam as separate Consortia; they are serviced by South Carolina and Hawaii Space Grants respectively.
The first Space Grants represented 21 states, became known as Designated once Congress directed Space Grant expand into more states by offering Program Grant and Capability Enhancement (i.e., Non-designated) -> Designated status is not in the law or regulations.

Congress requested that NASA expand the number of designated states through competitive means in 1999 (25 designated), 2002 (28 designated), and 2004 (35 designated). This competition allowed states to increase to the higher funding level.

Designation status among the 52 Consortia has not changed since 2004.
The value of Space Grant awards has varied:

• 2010 – 2014 base award per year paid:
  • Designated Consortia = $575,000
  • Non-Designated = $430,000
  • Competitive awards:
    • Consortium Development
    • Innovative Pilot
    • Community College and Technical School Opportunity

• 2015 – 2017 augmentations and the 4th year extension (2018) per year paid:
  • Designated Consortia = $760,000
  • Non-Designated = $570,000
  • Competitive awards:
    • Undergraduate Student Instrument Project (USIP)

• 5th year extension paid:
  • Designated = $714,400
  • Non-Designated = $535,800
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FUNDING OPTIONS
Thanks to all of you who have provided substantive feedback

Your feedback is appreciated and helps drives some of our considerations as it relates to:

- Funding Levels
- Funding Options
- Designation vs. Non-designated
- Internships
- NASA Overhead
FUNDING OPTIONS CONSIDERED

• Current designated/non-designated distinction
  • Percentage reduction
• Graduation model (Space Grant’s Executive Committee recommendation)
• Population based
• Equal funding
  • Award same value to each Consortia
• Competitive
  • Base award through competitive process
  • Thematic focus (community college, USIP, etc.) directly aligned with Mission Directorate

NOTE: Funding option presented is based upon a $44M budget
**RECOMMENDED FUNDING MODEL – COMPETITIVE OPPORTUNITIES**

- Consortia eligible for equal amounts of base funding – Dissolution of Designated vs. Non-Designated
- Competitive opportunities from partner driven Mission Directorates will be available via a separate solicitation
  - Mission Directorates will provide a minimum of 1:1 matching funding
  - HEOMD (2020), STMD (2020), SMD (2021) and ARMD (TBD)

### Space Grant

**FY2020 Competitive Funding (Guam and U.S. VI Supplemental)**

<table>
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<th>Funding Levels</th>
<th>Budget Guideline</th>
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<td><strong>Base Awards</strong> (52 @ $675,000)</td>
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<td><strong>Competitive Awards</strong></td>
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<td>Mission Directorate match (total avail ~$6.4M)</td>
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<td><strong>Non-Awards</strong></td>
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<tr>
<td><strong>Total</strong></td>
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**NOTE:** Includes Guam and U.S. VI as $150,000 supplements respectively
WHAT’S NEW IN THE MULTI-YEAR SOLICITATION?

• Increased focus on Mission Directorates
• Base award period of performance is notionally 4 years
• Strongly considering concurrent evaluation during execution of program at the grantee level
• Shifting from training grants to cooperative agreements
• Providing supplemental funding to U.S. Virgin Islands and Guam
• NASA-led PI Meeting
  • Bringing together MUREP, EPSCoR, NextGen STEM and Space Grant PIs
FUNDING OPTIONS CONSIDERED

• Current designated/non-designated distinction
  • Percentage reduction

• Graduation model (Space Grant’s Executive Committee recommendation)

• Population based

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  • Base award through competitive process
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NOTE: Funding option presented is based upon a $44M budget
Space Grant was appropriated $44M for FY19 – an increase of $4M above FY18

**Recommendation 1**
- Augment awards by $45,600; requires an updated statement of work, budget and budget narrative
- Designated: $714,400 -> $760,000 and Non-Designated = $535,800 -> $581,400
- Total = $2,325,600

**Recommendation 2**
- Use $200,000 as first year increment for Evaluation Award (total ~$800,000) to Consortia (will award in FY20)

Seeking feedback from Consortia on options to spend remaining ~$1.4M

**Option 1**
- Pay for Space Grant interns directly this summer and fall since additional funds from Recommendation 1 don’t give Consortia time to make additional selections.

**Option 2**
- Feedback from Consortia for ideas

**Survey** will solicit feedback, will open 3/1/19 (noon) & close 3/5/19 (noon)
The Next Generation of Explorers

THANK YOU!