National Aeronautics and
Space Administration

INSPIRE - ENGAGE - EDUCATE - EMPLOY

The Next Generation of Explorers

NASA STEM Engagement & Space Grant

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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**

Vision & Mission

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

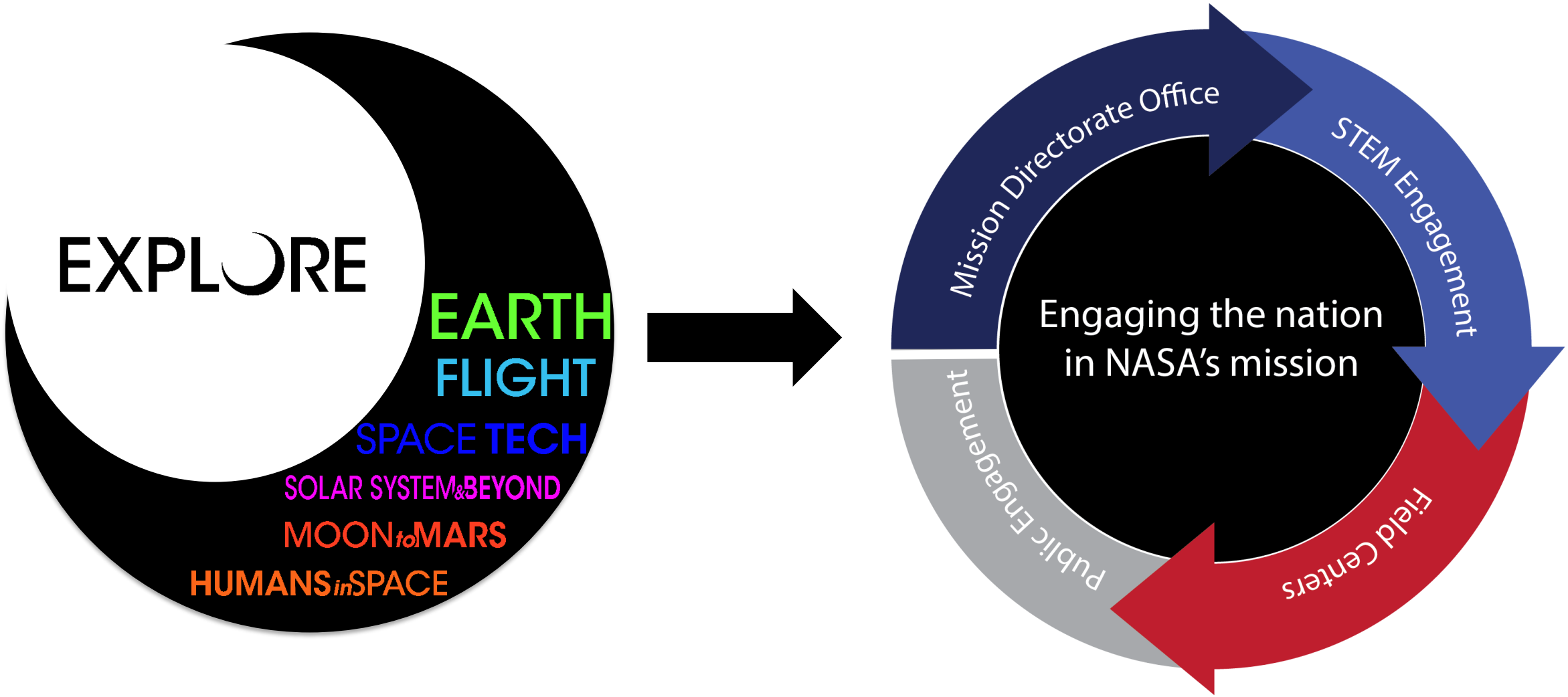
Focus Areas

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.

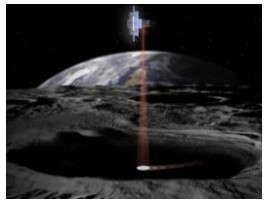
Strengthen **public understanding** by enabling **powerful connections** to NASA's mission and work.

MISSION-DRIVEN STRATEGIC ENGAGEMENT



New Architecture Enabling Student Opportunities & Contributions

NASA Mission Directorate Drivers & Requirements



Focus Areas

Evidence-based strategies

Rigorous planning

Integrated operational model

Create unique opportunities for students to contribute to NASA's work.

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

Strengthen public understanding by enabling powerful connections to NASA's mission and work.

Strategic, balanced portfolio

NASA-unique learning experiences

Student contributions to NASA's work in action

Scalability to magnify NASA's reach and impact

Beneficiaries of NASA's STEM Engagement Portfolio

K-Elementary

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.

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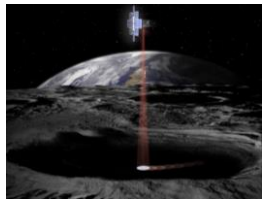
MISSION–DRIVEN PROGRAMS ENABLING STEM ENGAGEMENT

NASA'S THEMATIC AREAS



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

K-Elementary School

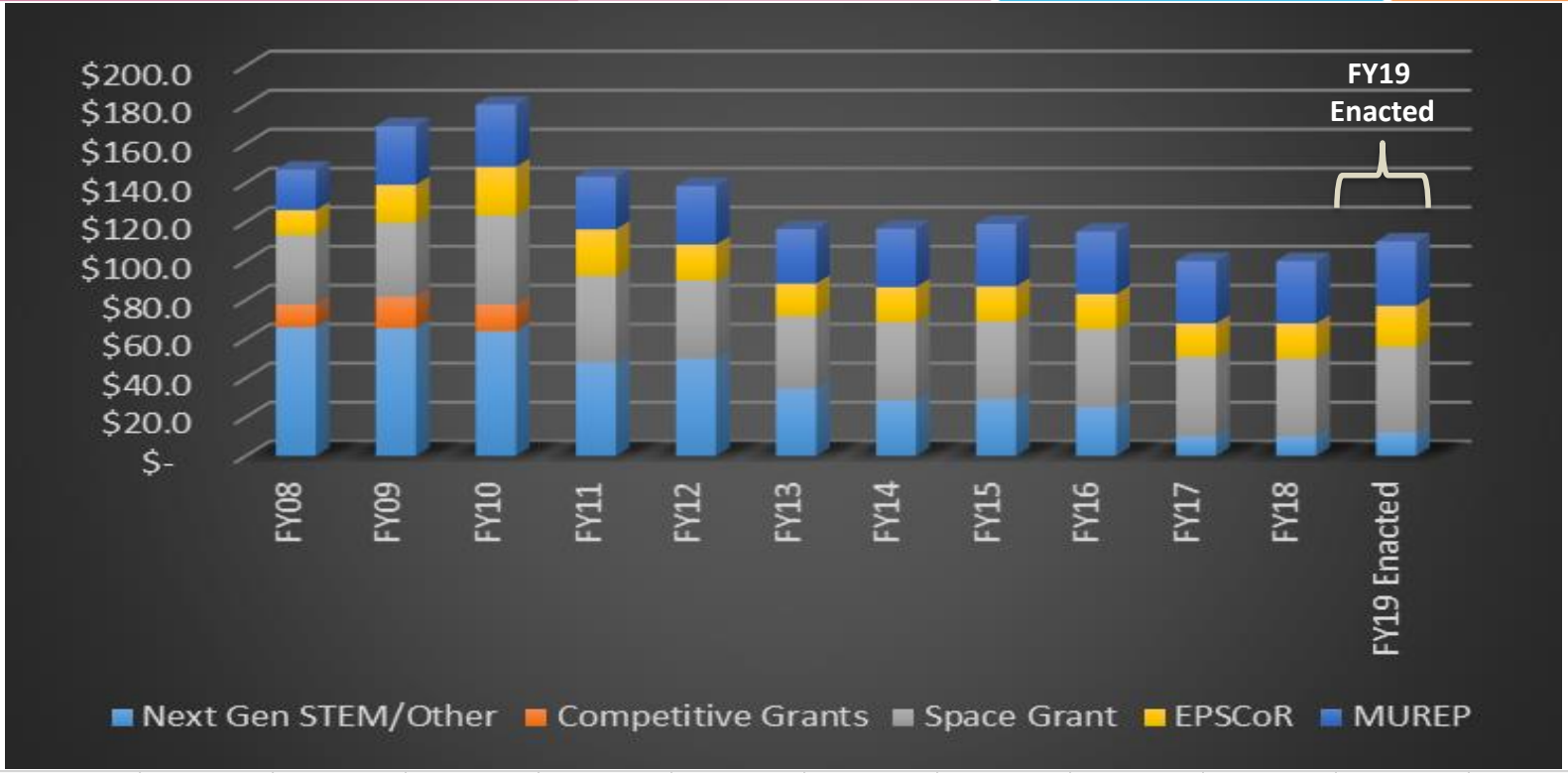
Middle School

High School

Undergraduate

Graduate

Office of Education – Budget History



$M	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19 Enacted
Next Gen STEM/Other	$ 66.1	$ 65.6	$ 64.1	$ 48.1	$ 50.0	$ 34.4	$ 28.6	$ 29.0	$ 25.0	$ 10.0	$ 10.0	$ 12.0
Competitive Grants	$ 11.6	$ 16.0	$ 13.5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Space Grant	$ 35.6	$ 37.9	$ 45.6	$ 44.3	$ 40.0	$ 37.2	$ 40.0	$ 40.0	$ 40.0	$ 40.9	$ 40.0	$ 44.0
EPSCoR	$ 12.8	$ 19.5	$ 25.0	$ 23.8	$ 18.4	$ 16.7	$ 18.0	$ 18.0	$ 18.0	$ 17.1	$ 18.0	$ 21.0
MUREP	$ 20.7	$ 30.2	$ 31.9	$ 26.9	$ 30.0	$ 27.9	$ 30.0	$ 32.0	$ 32.0	$ 32.0	$ 32.0	$ 33.0
Total OE Funding	**$ 146.8**	**$ 169.2**	**$ 180.1**	**$ 143.1**	**$ 138.4**	**$ 116.3**	**$ 116.6**	**$ 119.0**	**$ 115.0**	**$ 100.0**	**$ 100.0**	**$ 110.0**

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National Space Grant College and Fellowship Program

NASA Mission Directorate Drivers & Requirements

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

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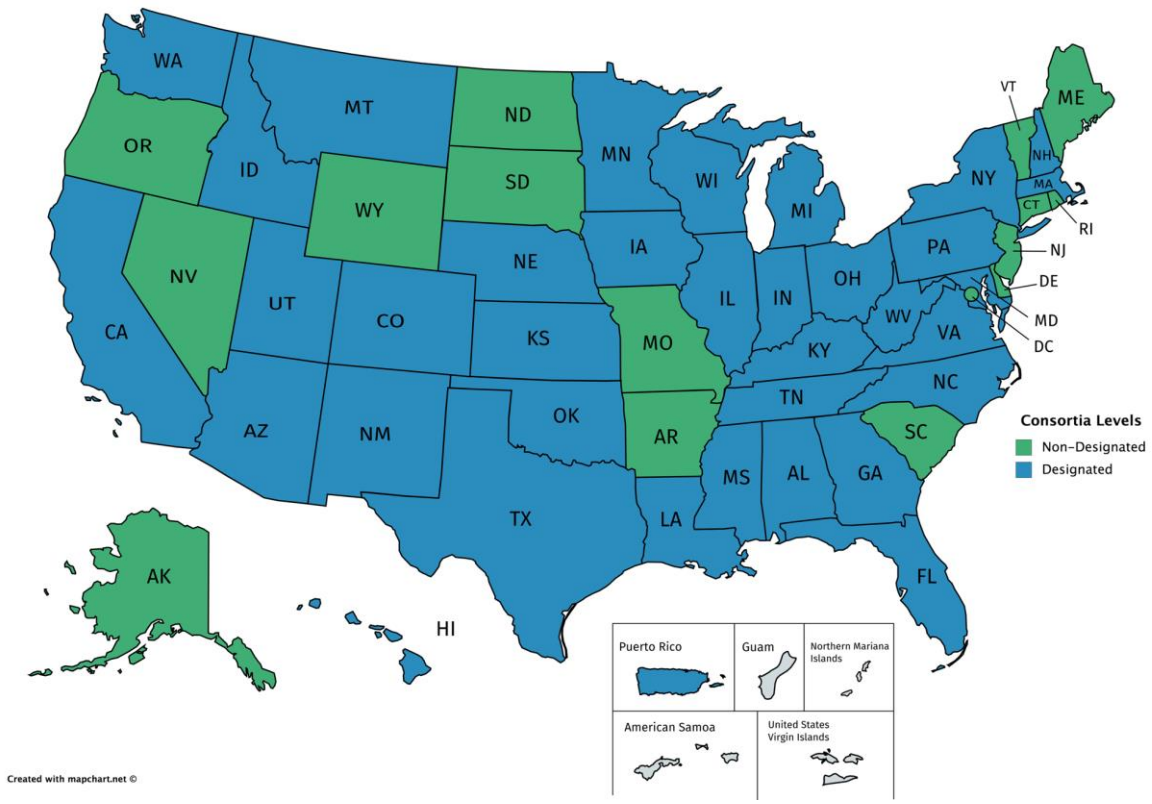
FY18 Funding Structure

Status	Number of Awards	Award Value	Award Total
Designated	35	$760,000	$26,600,000
Non-Designated	17	$570,000	$9,690,000
		Grand Total	**$36,290,000**



NOTE: Funding does not include U.S. VI and Guam as separate Consortia; they are serviced by South Carolina and Hawaii Space Grants respectively

History of Space Grant Consortia Designations

- 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

Previous Award Levels

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

Feedback Received

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) Funding Levels	
Budget Guideline	***$44,000,000***
Base Awards (52 @ $675,000)	$35,400,000
Competitive Awards Mission Directorate match (total avail ~$6.4M)	$3,200,000
Non-Awards	$5,400,000
Total	$44,000,000

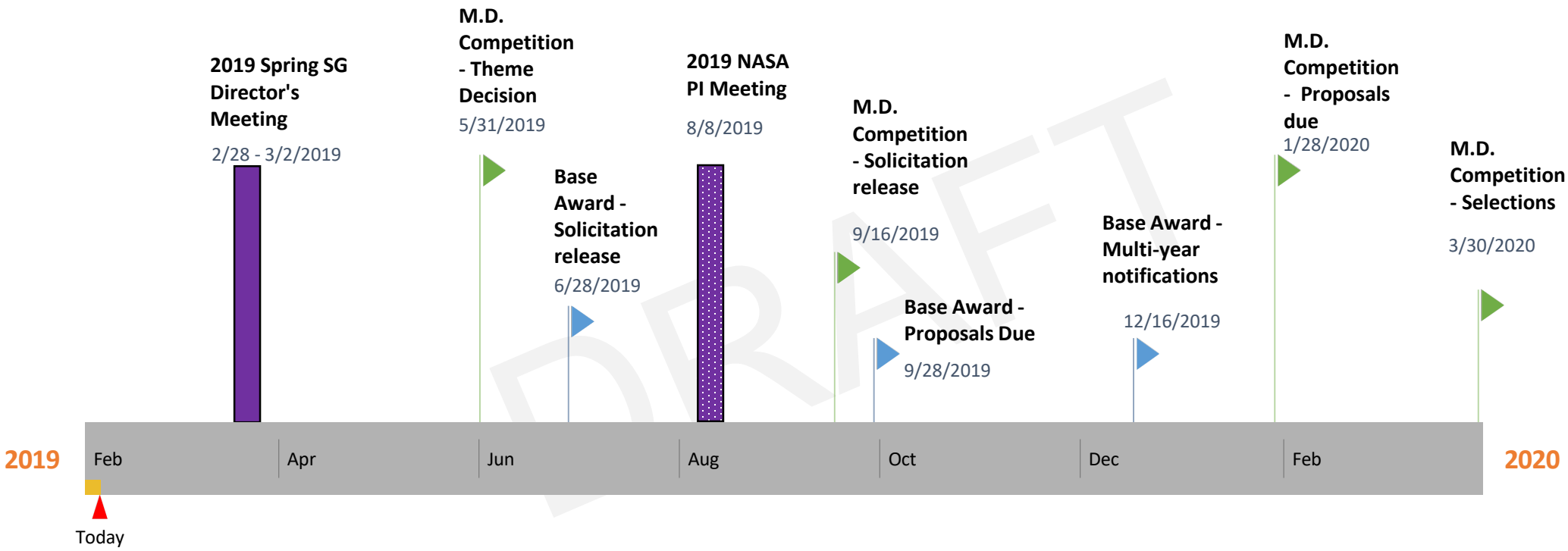
Space Grant FY2020 Competitive Funding (Guam and U.S. VI Supplemental) Funding Levels	
Budget Guideline	***$44,000,000***
Base Awards (52 @ $625,000)	$32,800,000
Competitive Awards Mission Directorate match (total avail ~ $11.6M)	$5,800,000
Non-Awards	$5,400,000
Total	44,000,000

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

MULTI-YEAR MILESTONES



Base Award

M.D. Competition

DRAFT

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PLAN FOR FY2019 APPROPRIATION

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)**

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THANK YOU!