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## ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY

## EXECUTIVE SUMMARY

Federal Agency Name(s): Office of the Under Secretary (USEC), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce

Funding Opportunity Title: Financial Assistance to Establish Four NOAA Cooperative Science Centers at Minority Serving Institutions

Announcement Type: Initial

Funding Opportunity Number: NOAA-SEC-OED-2016-2004758

Catalog of Federal Domestic Assistance (CFDA) Number: 11.481, Educational Partnership Program

Dates: Applications must be submitted through Grants.Gov no later than 11:59 p.m. EASTERN TIME on March 30, 2016. No hard copy or email applications will be accepted. Grants.gov requires applicants to register with Grants-dot-gov and with the System for Award Management (SAM.gov) prior to submitting an application. These registration processes can take several weeks and involve multiple steps. In order to allow sufficient time for this process, applicants should register as soon as they decide they intend to apply, even if they are not yet ready to submit an application. Applications submitted through Grants.gov are automatically date/time stamped when validated and submitted to the Agency. PLEASE NOTE: When submitting through Grants.gov, an applicant will receive two emails before learning whether it has met the deadline. An initial email will be sent to confirm your attempt to submit an application. This is NOT a confirmation of acceptance of an application. It may take Grants.gov up to two business days to validate or reject the application and to send a validation email. Please keep this in mind in developing your submission timeline. PLEASE ALSO NOTE: For a list of software applications that allow you to successfully navigate the Grants.gov pages and complete your application visit <http://www.grants.gov/web/grants/support/technical-support/recommended-software.html>.

Two optional informational webinars with the NOAA Educational Partnership Federal Program Office will occur on December 17, 2015 and February 2, 2016 (time 3:00 p.m. Eastern Time). Interested applicants should register by contacting [oed.epp10@noaa.gov](mailto:oed.epp10@noaa.gov) and include in the Subject line of the e-mail: "Register for CSC FFO Webinar - Need Details" and provide the interested party's name, institution, telephone number, and email address. An email response from [oed.epp10@noaa.gov](mailto:oed.epp10@noaa.gov) will be sent with the login information and date for the webinar. Whenever possible, individuals from the same institution should join the webinar from the same computer/phone line. After the events, webinar information will be posted at [www.epp.noaa.gov](http://www.epp.noaa.gov).

Funding Opportunity Description: In Fiscal Year 2016, the NOAA Office of Education (OEd) Educational Partnership Program (EPP) with Minority Serving Institutions (MSI) solicits applications from eligible, accredited MSIs that confer a doctoral degree in one of the areas of the NOAA mission identified as a Cooperative Science Center (CSC) Type in this announcement. The MSI designation is determined by statute, with the U.S. Department of Education serving as the cognizant Federal education agency. The U.S. Department of Education provides the following MSI information:

- (1) a part B institution (a historically Black college or university) (§322 of the HEA, 20 U.S.C. §1061);
- (2) a Hispanic-serving institution (§502 of the HEA, 20 U.S.C. §1101a);
- (3) a Tribal College or University (§316 of the HEA, 20 U.S.C. §1059c);
- (4) an Alaska Native-serving institution or a Native Hawaiian-serving institution (§317(b) of the HEA, 20 U.S.C. §1059d(b));
- (5) a Predominantly Black Institution (§§318(b) and 371(c)(9) of the HEA; 20 U.S.C. §§ 1059e(b) and 1067q(c)(9));
- (6) an Asian American and Native American Pacific Islander-serving institution (§§ 320(b) and 371(c)(2) of the HEA, 20 U.S.C. §§1059g(b) and 1067q(c)(2); or
- (7) a Native American-serving nontribal institution (§§319(b) and 371(c)(8) of the HEA; 20 U.S.C. §§ 1059f(b) and 1067q(c)(8).

This Federal Funding Opportunity (FFO) plans to support four awards to establish CSCs at MSIs through NOAA cooperative agreements. CSCs are designed to create collaborative partnerships with other academic institutions, including MSIs. Partnerships are also required between the designated Center, OEd EPP/MSI, and NOAA's "Line Offices" listed at <http://www.noaa.gov/organizations.html>. Each CSC must conduct education and research that directly supports NOAA's mission to recruit, train and graduate students, particularly from underrepresented communities, for the agency mission workforce.

The applicant shall propose to establish a CSC in one (1) of the following areas, also known as Center Type:

- (i) Atmospheric Sciences and Meteorology;
- (ii) Coastal and Marine Ecosystems;
- (iii) Earth System Sciences and Remote Sensing Technologies; and,
- (iv) Living Marine Resources

Applicants are required to seek partners with other academic institutions, NOAA and its affiliates, as well as, public and private entities, in fields that support the NOAA mission. Potential NOAA Partners will be listed on [www.epp.noaa.gov](http://www.epp.noaa.gov). CSC award recipients of this

Federal Science, Technology, Engineering, and Mathematics (STEM) education workforce investment are expected to ensure that the Center educate and graduate an increased diverse pool of candidates from which the agency may select its future workforce.

NOAA plans to make four awards with an anticipated total funding of \$62 million over five years. Proposed Centers should be for five (5) years in duration and have annual budgets of approximately \$3.1 million, with a total Federal funding request of \$15.5 million over the duration of the five-year project period. Awards will be funded in annual increments, subject to Congressional appropriations for OEd EPP/MSI. It is anticipated that awards funded through this announcement will have a start date no later than September 1, 2016.

## FULL ANNOUNCEMENT TEXT

## I. Funding Opportunity Description

## A. Program Objective

## 1. NOAA's Mission and Strategic Priorities

NOAA's mission is "To understand and predict changes in Earth's environment and to conserve and manage coastal and marine resources to meet our nation's economic, social, and environmental needs." Interested applicants are encouraged to examine the NOAA Next Generation Strategic Plan (published 12/2010), [www.noaa.gov/ngsp](http://www.noaa.gov/ngsp), that provides the environmental intelligence context for the agency's mission. NOAA identifies four mission goals: Weather Ready Nation; Climate Adaptation and Mitigation; Healthy Oceans; and Resilient Coastal Communities and Economies. Additional information about NOAA may be found on the Web site: [www.noaa.gov](http://www.noaa.gov). The NOAA Education Strategic Plan 2015- 2035 Goal 4 identifies a diverse workforce as a priority (<http://go.usa.gov/c4BC3>). NOAA has also developed a social science plan to guide the integration of human dimensions in the implementation of NOAA's mission and goals (<http://go.usa.gov/c4B3Y>). NOAA mission research guidance is provided through a Strategic Research Guidance Memorandum (<http://go.usa.gov/c4Bc5>). This document sets the NOAA research direction. Further guidance for the agency's approach to research and development, is provided at <http://go.usa.gov/c4Bx4>.

## 2. National Demographics and Trends

EPP/MSI is providing access to underrepresented minority students as participants and beneficiaries while also addressing the changing demographics of the Nation. The U.S. Department of Commerce (DOC), Census Bureau 2014 National Projections (<http://go.usa.gov/c4BrB>) data indicate the Nation is becoming more ethnically diverse. African Americans are projected to increase from 42 million in 2014 to 59 million in 2060, a 28 percent increase. The Hispanic population is projected to increase from 55 million in 2014 to 119 million in 2060, an increase of 115 percent. The U.S. Department of Labor, Bureau of Labor Statistics' projections are that with the changing demographics, increased participation of underrepresented minority groups in STEM occupations will enable the Nation to meet the anticipated workforce demand (<http://go.usa.gov/c4BYx>).

The Nation's underrepresented minority students enrolled in undergraduate STEM degree programs and gaining degrees, are an untapped talent pool. The total undergraduate enrollment across all fields for each racial/ethnic minority group increased between 2009 and 2013. The changing demographics are evidenced in increased numbers of underrepresented minority students gaining STEM degrees (<http://go.usa.gov/c2VGR>).

NSF's National Science and Engineering (S&E) Indicators illustrate the persisting decades-long degree attainment gap, at all degree levels, in NOAA's mission fields. At multiple levels, the degree attainment gaps continue (see Chapter 2. Higher education in "Science and Engineering Indicators: 2014." NSB 14-01. Arlington, VA, 2014, <http://go.usa.gov/c2V7T>). The Administration has placed higher education policy in the expanding contexts of social policy and global readiness. This program expands access, participation and higher education degree attainment to a widened pool of citizenry for U.S. global leadership in the 21st Century.

### 3. Administration STEM Priorities

At the Federal level, the Federal STEM Education 5-Year Strategic Plan (<http://go.usa.gov/c2VdT>), identified NOAA OEd EPP/MSI (Box 3) as a model program. EPP/MSI is scalable and transferable with quantitative and anecdotal best practices that yield success in meeting the goal of increasing the numbers of students, particularly from traditionally underrepresented minority communities who are awarded NOAA mission relevant STEM, management and policy degrees.

### 4. Role of CSCs

CSCs have the unique niche within NOAA extramural awards to expand participation in education, training, capacity building, and collaborative research focusing on groups that are traditionally underrepresented in NOAA mission-relevant STEM, natural resources management, and policy disciplines. Center awards are competitively made to increase the participation of traditionally underrepresented students, scientists, managers and policy individuals in NOAA mission fields.

Since 2001, when the first CSC grants were made, a total of 1310 degrees have been awarded by CSCs. Of these, 998 were awarded to students who self-reported in a race/ethnicity defined as underrepresented. Successful CSC award recipients are required to create collaborative partnerships among MSIs, NOAA EPP and NOAA's Line Offices, to

conduct education, training and scientific research that support and stimulate NOAA's mission, strategic plans, objectives and outcomes.

With the history of educating and investing in underrepresented students, MSIs are well positioned to develop candidates for career opportunities in NOAA mission related fields in STEM, including geosciences, environmental sciences, natural resource management, and policy. MSIs address persistent opportunity gaps in higher education and increase opportunity to improve the outcomes of all eligible students from traditionally underrepresented groups, in NOAA mission fields, that participate in higher education. The National Science Foundation reported that Historically Black Colleges and Universities were the top eight baccalaureate institutions for African Americans who later earned science and engineering Ph.D. degrees (Table 2, National Science Foundation, Division of Science Resources Statistics. 2008. "Baccalaureate Origins of S&E Doctorate Recipients." InfoBrief. NSF 08-311. Arlington, VA; URL - <http://go.usa.gov/c2VHG>).

CSC awards are an investment in MSIs to:

- (i) Promote equity and access to training in NOAA mission fields;
- (ii) Strengthen education and research capacity in NOAA mission fields;
- (iii) Increase student recruitment, retention and graduation in NOAA mission fields;
- (iv) Establish partnerships ([www.epp.noaa.gov](http://www.epp.noaa.gov)) with NOAA, other governmental and/or private sector organizations; and,
- (v) Engage with communities traditionally underrepresented in NOAA mission STEM, natural resources management, and policy careers.

## 5. CSC Desired Program Level Outcomes and Outputs

Awards made under this announcement enhance national competitiveness and innovation in support of NOAA's mission, strategic plans, objectives and outcomes. Applicants should clearly describe how they will support all of the following CSC desired Program-level outputs and outcomes.

### 5.1 Education and Training

In comparison with national statistics for Under Represented Minorities (URMs) in NOAA mission-relevant fields, using 2011 data as a baseline (NSF S&E Indicators, <http://go.usa.gov/c2VwV>), at the Program level the CSC awards contribute to:

Outcome 1. Increased number, annually, of CSC post-secondary students, trained.

Outputs

- o Increased quantitative and analytical skills;
- o Increased competence in applying STEM to decision making, policy and management; and,
- o Increased skills to use large data sets, geographical information systems (GIS) and statistical analysis, computer modeling, and algorithm development.

Outcome 2. Increased number of CSC post-secondary students educated and graduated annually.

Outputs

- o The number of degrees earned annually in NOAA mission-related disciplines.
- o The number of students (total and URM) who participated in professional development opportunities, to include at least one on-site experiential research and training opportunity at a NOAA lab, office, or facility with tangible training and research: (a) for a minimum duration of 4 consecutive weeks, and (b) resulted in a publication or an oral or poster presentation to experts, peers, and/or other stakeholders.

Outcome 3. Increased CSC capacity to train and graduate students.

Outputs

- o Number of seminars, new courses, new programs, and new degrees offered to develop working skills and functional competencies to support the NOAA mission and workforce.
- o Total numbers of students supported by the CSCs and degrees awarded that reflect the changing demographics of the nation (Census Bureau 2014 National Projections, <http://go.usa.gov/c2VfP>).

Outcome 4. Reduce the attainment gap for URM students in NOAA mission-relevant fields

Outputs

- o Increased number of URM students in student development activities that will lead them to the attainment of degrees and/or employment in NOAA mission fields.
- o Increased number of URM students who select to pursue higher education in NOAA mission fields.

## 5.2 Scientific Research

Outcome 1. Increased NOAA mission-relevant research capacity at MSIs.

### Outputs

- o Number of research collaborations with NOAA and CSC faculty, staff and students.
- o Number of NOAA scientists serving as mentors and advisors for student research.
- o Number of intra-institutional collaborative partnerships established and maintained in support of NOAA's mission.
- o Number of uses of NOAA data in research and tool development.
- o Number of inter-institutional collaborative partnerships established and maintained in support of NOAA's mission.

Outcome 2. CSC-supported faculty, staff and students' research directly aligned with NOAA's mission and strategic priorities.

### Outputs

- o Number of peer reviewed publications, presentations, and tools developed by faculty, staff and students.
- o Use of CSC research results and tools by NOAA and other stakeholders.
- o Number of instances CSC publications are cited.
- o Number of CSC students, staff or faculty recognized nationally for CSC research.

## 5.3 CSC Administration

Outcome 1. Increased CSC capacity to support and sustain education and research in NOAA mission areas.

### Output

- o Amount of funds leveraged with CSC award to support NOAA mission in education and research.

Outcome 2. Increased engagement by CSCs with the URM communities to enhance the mission workforce pipeline.

### Output

- o Number of structured activities to recruit and retain students, particularly from URM communities, in NOAA mission-relevant higher education programs.
- o Number of MSI inter-institutional collaborative partnerships established and maintained in support of NOAA's mission.

Outcome 3. To increase communication of CSC accomplishments and capacity

Output

- o Number of CSC products used by stakeholders.
- o Number of featured articles in print or digital media referencing the NOAA CSC.

Outcome 4. Increased use of post-secondary education evaluation methodologies

Output

- o Number of best practices that are measurable, scalable and transferrable.
- o Consistent use of established evaluation practices, including higher education practices, to measure effectiveness of each component of the award.

## B. Program Priorities

The goal of this Federal Funding Opportunity is, through full and open competition, to make awards to applicants that successfully describe proposed education and research that support NOAA's mission, strategic plans, objectives and outcomes. The intent of the EPP/MSI-funded CSC is to make a significant impact on the challenge and opportunities being addressed in this announcement, with the expectation that major outcomes will be sustained after NOAA funding ends. Applicants should show how they will increase participation of the currently untapped pool of students from traditionally underrepresented minority groups, and address changing national demographics and the persistent degree attainment gap in NOAA STEM, policy and management fields.

Each CSC must conduct both education and research. The Center education and research shall directly support NOAA's mission, strategic plans, objectives and outcomes to recruit,

train and graduate post-secondary students, particularly from underrepresented minority communities, to become eligible to successfully compete and enter the agency mission workforce, academia, and other STEM focused management agencies. The overall Program level metrics for this FFO are:

1. Annually, number of EPP-funded post-secondary students from underrepresented communities who are trained and graduate in NOAA-mission sciences.
2. Annually, number of EPP-funded post-secondary students who are trained and graduate in NOAA-mission fields relevant to this announcement.
3. Annually, number of EPP-funded graduates who enter the NOAA mission workforce as hires by NOAA, NOAA contractors, NOAA partners, or resource management agencies, or academia or as entrepreneurs.
4. Annually, number of EPP-funded graduates who participate in and complete agency mission-related postdoctoral level programs.
5. Funds leveraged with NOAA EPP award (including post-secondary student support).

### C. Program Authority

The applicable statutory authorities and Executive Orders for this program follow:

The America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Act (America COMPETES Act), 33 U.S.C. 893a (see P.L. 110-69 and P.L. 111-358);

Cooperative Agreements, 15 U.S.C. 1540;

White House Initiative on Educational Excellence for Hispanic Americans Commission, Executive Orders 13230;

White House Initiative on Historically Black Colleges and Universities, Executive Order 13256;

White House Initiative on Tribal Colleges and Universities, Executive Order 13270;

American Indian and Alaska Native Education, Executive Order 13336; and,

Increasing Economic Opportunity and Business Participation of Asian Americans and Pacific Islanders Executive Order 13339.

## II. Award Information

### A. Funding Availability

All funding is contingent upon availability of Federal appropriations. NOAA anticipates that approximately \$3.1 million will be available annually for each CSC for a period of five years. Four awards may be made to establish four (4) CSCs. Proposed Centers should be for five (5) years in duration and have annual budgets of \$3.1 million with a total funding request of \$15.5 million over the five year project period. Subject to Congressional appropriations, NOAA anticipates making awards no later than September 1, 2016.

### B. Project/Award Period

Projects with an award period of 5 years will be considered for funding under this competition; the requested award start date should begin on the first day of the month and end on the last day of the month. Proposals may include an award start date no earlier than September 1, 2016. Awards will be funded incrementally with one year budget periods. Funding for the next budget period is contingent on satisfactory progress and the availability of Federal funds.

After the initial five-year project period, a subsequent 5-year award may be issued without competition based on the outcome of an independent and technical administrative review in the fourth year, and contingent on funding and continued relevance to NOAA. This ensures continuity within the program and allows for full development of trainees through the course of their education.

### C. Type of Funding Instrument

CSC financial assistance awards are established through cooperative agreements. The cooperative agreements are five-year awards made to the lead MSI. A NOAA cooperative agreement means that NOAA will collaborate with the award recipient in the design and implementation of the program. A cooperative agreement is appropriate when substantial NOAA involvement is anticipated.

#### Substantial Involvement

There will be substantial NOAA involvement, collaboration and/or participation, in Center performance. Substantial involvement exists when responsibility for the management, direction, or performance of the award is shared by the assisting agency and the recipient or the assisting agency has the right to intervene (including interruption or modification) in the conduct or performance of award activities.

NOAA will be significantly involved in the planning of education, training, and research activities at the CSCs. For example NOAA will:

- (i) identify agency directors and managers to serve as the Technical Monitor to ensure science, natural resource management and policy conducted at the CSC is compatible with NOAA and the respective Line Office (LO);
- (ii) participate on the science committees that evaluate projects submitted for approval through the CSC administrative structure;
- (iii) participate on the education and outreach committees that evaluate projects submitted for approval through the CSC administrative structure;
- (iv) serve as subject matter expert mentors and/or advisors on graduate student thesis or dissertation committees;
- (v) coordinate and/or facilitate experiential research and training opportunities for CSC post-secondary students and postdoctoral fellows at NOAA facilities;

- (vi) serve as mentors for CSC post-secondary students to facilitate student preparation and professional development for the NOAA mission workforce;
- (vii) provide post-award guidance on the CSC Implementation, Science, and Student Development Plans;
- (viii) facilitate hosting of CSC faculty at NOAA facilities or other bi-directional collaboration; and,
- (ix) coordinate with the CSCs on the Biennial Education and Science Forum planning.

### Institutional Awards

In accordance with the Department of Commerce Interim Grants Manual, Chapter 6, Section 2., “the Grants Officer is responsible for determining whether a program is designated as an institutional award program and may determine that only one or more awards under a program are institutional awards.” The Educational Partnership Program with Minority Serving Institutions (EPP/MSI) is designated by the Director of the NOAA Grants Management Division as an Institutional Program. Beginning with this Federal Funding Opportunity (FFO) in FY 16, Cooperative Science Center awards will be made for a project performance period of 5 years with the potential for an additional 5 years.

The first five-year award will be made based on the outcome of the FY 16 FFO through open competition, pursuant to the procedures for initial selection of a new recipient under a discretionary institutional program as described in the DOC Interim Grants Manual Chapter 8, Section D. The performance of FY 16 award recipients will be subject to periodic reviews. Additionally, in Year 4 (FY 20), award recipients will be externally reviewed by subject matter experts and NOAA Grants Officer to evaluate the effectiveness and continued desirability of the use of institutional awards in accordance with Chapter 16, Section K.2 of the DOC Interim Grants Manual. The results of the review must be a consideration by both the Program Officer and Grants Officer in making a determination to continue providing funding without competition to each recipient of an institutional award.

Pursuant to procedures for non-discretionary funding as described in Chapter 8, Section G, of the DOC Interim Grants Manual, future applications for subsequent new awards, if the

incumbent is performing satisfactorily will utilize a non-competitive renewal application process. In FY 21, incumbent award recipients may be invited to respond to a non-competitive request for applications. The incumbent award recipients may respond by submitting a renewal application. The renewal application process, in FY 21, will enable Program to ensure performance of recipients continues to be in alignment with agency priorities.

Renewal applications will be reviewed by an independent expert panel. Successful renewal applicants may be awarded a second 5-year award period. The performance of awardee shall continue to align with the NOAA mission priorities and Line Office strategic objectives.

If a recipient is unsuccessful in the renewal application process, NOAA may publish an FFO to allow for an open competition for the specific Center type(s). New award recipients under a discretionary institutional program are selected as specified in the DOC Interim Grants Manual Chapter 8, Section D.

### III. Eligibility Information

#### A. Eligible Applicants

For the purpose of this program, Minority Serving Institutions, as designated by the U.S. Department of Education as to current MSI status, are eligible to apply. Each applicant or academic partner indicating MSI status shall append official documentation of such designation, from the U.S. Department of Education, at the time of the application submission. To continue to be eligible to receive award funds as an MSI, supporting documentation is required to NOAA each year, no later than, the anniversary date of the award. The U.S. Department of Education provides the following Minority Serving Institution information:

- (1) a part B institution (a historically Black college or university) (§322 of the HEA, 20

U.S.C. §1061);

- (2) a Hispanic-serving institution (§502 of the HEA, 20 U.S.C. §1101a);
- (3) a Tribal College or University (§316 of the HEA, 20 U.S.C. §1059c);
- (4) an Alaska Native-serving institution or a Native Hawaiian-serving institution (§317(b) of the HEA, 20 U.S.C. §1059d(b));
- (5) a Predominantly Black Institution (§§318(b) and 371(c)(9) of the HEA; 20 U.S.C. §§ 1059e(b) and 1067q(c)(9));
- (6) an Asian American and Native American Pacific Islander-serving institution (§§ 320(b) and 371(c)(2) of the HEA, 20 U.S.C. §§1059g(b) and 1067q(c)(2); or
- (7) a Native American-serving nontribal institution (§§319(b) and 371(c)(8) of the HEA; 20 U.S.C. §§ 1059f(b) and 1067q(c)(8).

The following are requirements for prospective CSCs:

1. the lead academic institution must be an accredited MSI with a Ph.D. degree-granting program in a STEM field that directly supports NOAA's mission and addresses the proposed Center Type in the application;
2. the lead and partner institutions must demonstrate a proven track record of educating, training and graduating post-secondary students, particularly from traditionally underrepresented minority groups, in NOAA mission sciences, management and policy;
3. the lead and partner institutions must demonstrate that resources are available to conduct NOAA mission research;
4. the lead and partner institutions must demonstrate the capability to manage the education and training, scientific research, and administrative aspects of a Center program; and,
5. the lead and partner institutions must demonstrate the capability to recruit, retain, train and graduate post-secondary students, particularly for underrepresented minority communities, in NOAA mission science fields of study that align with this Federal Funding Opportunity.

Applications will not be accepted from non-profit organizations (except organizations that are classified as Institutions of Higher Education), foundations (except foundations that represent Institutions of Higher Education), auxiliary services or any other entity submitted on behalf of MSIs. Private and /or public sector and community college partnerships are encouraged.

Partnerships with community colleges may be considered as a mechanism to build the undergraduate pipeline of four-year academic institutions. A CSC may partner with one or more institutions that have demonstrated education and research performance in NOAA-related sciences.

An application can only address one center type. An institution shall only submit one application as the lead. Institutions may collaborate on up to two proposals as partners.

#### B. Cost Sharing or Matching Requirement

There are no matching funds requirements for the Educational Partnership Program with Minority Serving Institutions. Matching resources will not be factored into the review process as evaluation criteria. Inclusion of voluntary committed cost sharing is prohibited under this announcement.

#### C. Other Criteria that Affect Eligibility

Each application deemed responsive to this announcement must address PART I A. and PART I B. The participants must satisfy all the requirements in this announcement to receive award funds. Eligibility for student and postdoctoral fellows as participant beneficiaries follows:

CSC Postdoctoral Fellowship Eligibility Requirements: (1) United States (U.S.) Citizenship; (2) Recent doctoral graduate – within two (2) years of graduation; (3) Doctoral degree field must support NOAA’s mission; and (4) Period of eligibility for the fellow to be supported on award funds in the CSC Postdoctoral Fellowship Program is 24 months within a 26-month period.

Student Eligibility for CSC Beneficiary Support Requirements: (1) must be U.S. citizen; (2) full-time post-secondary student; however, graduate students at the writing stage of their thesis or dissertation, having met all other course requirements, could be exempt from the “full-time post-secondary student” requirement when enrolled in thesis or dissertation

credits; and, (3) must maintain a minimum 3.0 grade point average (GPA) per school term, whether quarter or semester system, and satisfy the following support time periods:

1. No more than four (4) years for students pursuing baccalaureate degrees;
2. No more than three (3) years for students pursuing Master's degrees; and,
3. No more than five (5) years for students pursuing doctoral degrees.

EPP/MSI funds may not be used to support post-secondary students who do not meet the minimum 3.0 GPA for every school term or to repeat courses previously paid for with EPP/MSI funds. A student may return to the Program when the GPA is 3.0 or higher.

EPP/MSI funds may not be used to support any student engaged in full-time employment, outside of the Center, degree program, and/or the academic institution. For the purpose of this FFO, full-time employment is considered 40 hours per week.

Each application may request any combination of undergraduate and/or graduate and/or professional NOAA mission-field degree level support for education and training towards a postsecondary degree. There is no limit to the number of post-secondary students an institution may propose to support.

Post-secondary students attending two-year colleges that are legally authorized to offer a two-year or equivalent program of college-level studies which are principally creditable toward a baccalaureate degree, may be awarded an undergraduate scholarship from eligible baccalaureate academic partner institutions in cases where an articulation agreement, bridging agreement, or other type of collaborative arrangement exists between the subject baccalaureate-level institution(s) and the two year college.

No international travel is supported with award funds through this program.

While the Center will be established at an MSI, consortia with non-minority serving institutions partners is unrestricted. If a cooperative agreement is awarded to a consortium of institutions, the consortium must propose a governance structure that includes a single Center Director for an award. Where multi-institutional applications between majority and

MSIs are submitted, no less than eighty percent (80%) of the total funds shall be awarded to the MSI(s). The MSI lead cannot issue sub-awards for more than twenty percent (20%) of the total proposed CSC costs to majority institutions. Proposal shall describe approaches for majority institution partners to actively collaborate to build NOAA mission capacity at MSIs in the Center.

The application must state how the proposed CSC will address the following EPP/MSI Program-level CSC Responsiveness Criteria. Proposals that do not meet the following responsiveness criteria will not be forwarded to technical review:

C.1 Responsiveness Criterion 1. Applications for the CSCs shall support NOAA's mission. The application must support the future agency mission workforce and Strategic Plans, Program Objective and Description (Part I, A - B).

C.2 Responsiveness Criterion 2 - Center Academic Partnerships. The CSC's lead academic institution must be an accredited MSI with a Ph.D. program in one of the NOAA-mission science areas of the Center Types. NOAA requires partnerships for the performance of the award (see [www.epp.noaa.gov](http://www.epp.noaa.gov) for list of NOAA Partners related to this announcement). A CSC may partner with one or more institutions that have demonstrated education and research performance in NOAA mission-related STEM, natural resource management, and policy.

C.3 Responsiveness Criterion 3 - Accountability for Performance and Key Outputs and Outcomes. Any eligible academic institutions submitting an application for a Center Award must, as a part of the application, describe alignment that will result in increased participation of students from traditionally underrepresented minority communities for the future workforce to support NOAA's mission, strategic plans, objectives and outcomes.

Proposed CSC activities should be presented in sufficient detail to allow assessment of their intrinsic merit and potential effectiveness. Applicants must show how they will increase degree attainment, and advance Program-level outputs and outcomes in NOAA mission STEM, policy and management fields. Ultimately, awards are to yield a diverse pool of candidates that that will result in increased numbers of CSC graduates from traditionally underrepresented minority communities eligible to enter the workforce at NOAA and in NOAA mission-relevant occupations.

#### IV. Application and Submission Information

##### A. Address to Request Application Package

The standard application forms are available at through the “Apply” function on Grants.gov or <http://www.grants.gov/web/grants/forms/sf-424-family.html#sortby=1>.

Only electronic applications, as Adobe Acrobat (.PDF) files, may be submitted via Grants-dot-gov to NOAA in response to this Federal Funding Opportunity. For an overview of the Grants.gov application process see <http://www.grants.gov/web/grants/applicants.html>. Applicants are urged to submit application early in the Grants.gov portal.

Complete application packages, including required Federal forms and instructions may be found on [www.grants.gov](http://www.grants.gov). Electronic access to the Full Funding Opportunity Announcement for this program is available via [www.grants.gov](http://www.grants.gov). The Federal Funding Opportunity announcement will also be available at the NOAA EPP/MSI web site: [www.epp.noaa.gov](http://www.epp.noaa.gov).

Grants.gov requires applicants to register with the system prior to submitting an application. This registration process can take several weeks and involves multiple steps. In order to allow sufficient time for this process, applicants should register as soon as they decide they intend to apply, even if they are not yet ready to submit their applications. Also, even if an applicant has registered with Grants.gov previously, the applicant's password may have expired or their System for Award Management (SAM) registration (formerly Central Contractor Registration [CCR]) may need to be renewed or updated prior to submitting to Grants.gov. (Note that your CCR username will not work in SAM; you must create a new SAM User Account to renew or update your registration.) Grants.gov will not accept submissions if the applicant has not been authorized or if credentials are incorrect. Authorizations and credential corrections can take several days to establish. Please plan accordingly to avoid late submissions. For further information please visit the SAM web portal (<https://www.sam.gov/portal/public/SAM/>).

## B. Content and Form of Application

Successful applications adhere to the guidance in this announcement for establishing CSCs.

NOAA reserves the right to make awards that will assure all Americans have access to this opportunity, across racial and ethnic groups, eligible institution types, geography, and/or demographics.

### 1. Proposal Electronic File Size

The total electronic file size, as recommended by Grants.gov for the complete application package, should not exceed 200 megabytes in storage space. Files that cannot be opened or downloaded will not be reviewed. There is no file size limit for NOAA Grants Online. If an applicant has a challenge uploading the application package then splitting the document into small files is recommended. Applicants shall be responsible for uploading the complete application package in response to this solicitation. Pages shall be numbered.

### 2. Proposal Pagination Instructions

Applicants are advised to adhere to the pagination as specified in this announcement. Each section of the proposal that is uploaded as a separate file must be individually paginated prior to being uploaded to the Grants.gov electronic system. Submitted pages beyond the limitations will not be reviewed.

### 3. Proposal Margin and Spacing Requirements

All application materials should use a legible 12-point font with 1-inch margins on all sides. All figures and tables are included in the page limitation. These requirements apply to all uploaded sections of a proposal, including supplementary documentation.

### 4. Page Formatting

Applicants are strongly encouraged to use only a standard, single-column format for the text. A two-column format should be avoided since it can cause difficulties when reviewing the document electronically.

The guidelines specified above establish the minimum type size requirements; however, applicants are advised that readability is of paramount importance and should take precedence in selection of an appropriate font for use in the proposal. Small type size makes it difficult for reviewers to read the proposal; consequently, the use of small type not in compliance with the above guidelines may be grounds for NOAA to return the proposal without review. Adherence to type size and line spacing requirements is also necessary to ensure that no applicant will have an unfair advantage, by using smaller type or line spacing to provide more text in the proposal.

## 5. Page Limitation

The 55-page limit for Narrative Description does not include Supplemental Elements, Required Standard Forms, Appendices, or the Budget Justification. Supplemental Elements should not total more than 10 total pages excluding National Environmental Policy Act (NEPA) information, governmental forms, and information provided to complete government forms. Pages submitted that exceed the page limitations listed below will not be forwarded to reviewers for consideration, e.g. only the first 55 pages will be reviewed for the narrative description.

Proposed CSC Narrative Description, Elements, and Plans (Total: max 55 pages):

- o Proposed CSC Narrative Description: (recommended 15 pages) and includes the 5-page limit for previous accomplishment in area of application over the past five years
- o Education and Training Plan: recommended 15 pages
- o Research Science Plan: recommended 10 pages
- o Data Management Plan: 5 pages and includes a Data Sharing Plan of up to two (2) pages (see PART IV, B., 8)

- o Center Administration Plan: (max 10 pages) includes but not limited to –
- o Structure and Management;
- o Resumes of Principal Investigator for the project and other key personnel critical to success of the project. Ensure resumes address qualifications relevant to conducting the proposed work. Limit each resume to a maximum of two pages; and,
- o Plan for Evaluation of up to two (2) pages.

Supplemental Elements (max 10 pages):

- o Letter of Commitment from Chief Executive Officer of the applicant institution;
- o Institutional data and profile that includes: numbers for post-secondary student enrollment, retention and graduation by gender, racial groups, ethnic groups for the past five (5) years; placement of graduates during the past five years; and, enrollment and graduation numbers and placement for graduated post-secondary students from traditionally underrepresented groups, for the past five (5) years;
- o Institutional Review Board Approval for Research on Human Subjects; and,
- o Letters of Collaboration. Letters of collaboration may be submitted from NOAA mission related entities, external to NOAA, for education and training and/or research collaborations. These letters should be brief and restricted to a statement of intent only to collaborate. Additional information on the nature of the collaboration and the roles should be included in the Center application, within the page limitations for proposed CSC narrative description.

Appendices should not total more than 10 pages:

- o Strategic Plan;
- o Center Logic Model;

- o Results from Assessment of Needs for NOAA mission future workforce; used to baseline and benchmark the proposal;
- o Proof of MSI designation per U.S. Department of Education; and,
- o Risk Assessment.

Budget Explanation (no limit on pages):

- o Funds for salaries and fringe benefits may be requested only for those personnel who are directly involved in implementing the proposed project and whose salaries and fringe benefits are directly related to specific outputs and outcomes of the proposed CSC. NOAA strongly encourages applicants to request reasonable amounts of funding for salaries and fringe benefits to ensure that the application is competitive.
- o Salary line shall not be used for funds to support student beneficiaries. All students supported through the CSC award are to be included in participant costs.
- o For more information see NOAA budget narrative description guidance (<http://go.usa.gov/c2p2F>).
- o This program limits indirect cost (IDC) recovery. See Section IV.E. Funding Restrictions. The IDC rate limitation flows down.

6. File Names.

A complete application package for this solicitation, in addition to the required SF-424 form family (see PART IV B, 9), will contain required and supplemental elements. The application package (see PART IV B, 8.4) should be uploaded as a single .pdf file. It is the responsibility of the applicant to ensure a complete application package is uploaded. Should there be challenges in uploading a single document, then two .pdf files may be uploaded as follows:

- 1) Required Elements (see PART IV B, 8.4.1-5) that are uploaded as a single .pdf file

with name containing Narrative Description; and,

2) Supplemental Elements (see PART IV B,8.4.6 that are uploaded as a single .pdf file with name containing Supplemental Elements.

#### 7. Description of CSC Structure and Management.

In this FY 2016 announcement, NOAA informs applicants that achievement, more than activities, will be measured. All applicants are required to describe how their Center, if supported, will contribute to: (i) the stated targets; and (ii) establishment of trajectories to produce Program-specific required outputs and outcomes for this Federal STEM education investment.

Awards made under this announcement should have a clear management structure and decision making process that specifies the roles of each of the collaborative applicant and key personnel. Applicants may choose their preferred method for managing their collaborative partnership and should explain the management structure in the proposed CSC narrative. The lead institution and the submitting Principal Investigator/Center Director (PI/CD) lead in coordinating the Center award (see PART III, A and PART IV, B.).

The lead and performance of activities at each Center shall be coordinated and led by the lead institution and through sub-awards to partner institutions. The applicant must follow the requirements for sub-award, subcontracts and/or consultants as set out at 2 C.F.R. 200.330 through 200.332 and 200.317 through 200.326, as applicable.

Where the applicant selects a consultant, subcontractor and/or sub-awardee prior to submitting an application, indicate the process that was used for selection and provide a statement of his/her qualification or background.

**Description of CSC Type.** An applicant selects from one of the four (4) CSC Types. The applicant may submit only one application as the lead institution under this funding opportunity. All applications responding to this announcement shall align with the Strategic

Plans for NOAA, NOAA Education Goal 4, and the Primary Line Office Strategic Objectives.

Eligible institutions may compete for an award to establish a CSC based on the Center Type criteria provided herein. Each application must address all criteria for a single Center Type. This announcement requests applications for four (4) CSC Types. The criteria for each CSC Type follows:

#### 7.1.0 Center Type: Atmospheric Sciences and Meteorology (ASM)

National Weather Service (NWS) – Primary Line Office  
NWS Strategic Plan, <http://www.nws.noaa.gov/sp/>  
Weather Ready Nation Plan, [www.weather.gov/com/stratplan](http://www.weather.gov/com/stratplan)

7.1.1 Applicants must address, for the Atmospheric Sciences and Meteorology CSC, the following priorities:

- o developing a candidate pool of Center graduates, especially from traditionally underrepresented groups, with working technical skills, knowledge and competencies that integrate academic training, experiential learning, professional development, socioeconomic and behavioral science factors for competitive career paths in atmospheric sciences and/or meteorology to support the NOAA Education Strategic Plan diverse future workforce goal, NWS Weather Ready Nation strategic objective, and NOAA's Strategic Plan;
- o identifying and describing impacts of changing climate on communities & ecosystems;
- o quantifying and communicating forecast uncertainty/risks for decision making;
- o understanding the causes and impacts of changing atmospheric composition and crafting options for strategic actions; and,
- o developing decision support information and tools using NOAA and other source data

to contribute to enhanced forecasts with integrated ecosystem level modeling (physical + biological + socio-economic impacts) to improve and translate research findings to application.

#### 7.1.2 Key focus areas.

Atmospheric Sciences and Meteorology CSC applications should address the ability to train and graduate post-secondary students for operational meteorology and to conduct collaborative research in integrated environmental forecasting, numerical weather prediction, data assimilation, climate modeling, climate analysis and prediction, water resources, and/or studies that lead to improvements in warning and forecast operations. Key area of focus shall include collaborative research that: (1) advances the understanding of the weather-climate linkage, cloud and precipitation processes, airborne particulate matter, health sensitivities to weather and climate, and planetary boundary layer processes (especially in complex terrain); (2) improves quantification of forecast uncertainty, long-range forecasting and regional downscaling, storm prediction accuracy (including initiation of convection), precipitation type and start/stop times; (3) advances the development of high resolution coupled models within an Earth system framework, and the assimilation and integration of observations (especially for hard-to-observe areas); (4) integrates social science studies with weather and climate studies to enhance decision support capabilities; and (5) create Weather Ready Nation messaging to enhance decision making by the public, policy makers, and targeted end user groups. Applications should demonstrate the mechanism by which the Atmospheric Sciences and Meteorology CSC will utilize strategic partnerships, scientist exchanges, and experiential opportunities to enhance training in the fields of study above and to facilitate the research and education priorities of NOAA.

#### 7.1.3 Knowledge, working skills, and competencies.

Atmospheric Science and Meteorology CSC graduates should have competencies identified in the Weather Ready Nation Workforce Plan (<http://go.usa.gov/cZrnC>) and a degree in Meteorology, Atmospheric Science or other natural science major that included at least 24 semester hours (36 quarter hours) in meteorology/atmospheric science including:

1. Six (6) semester hours in Atmospheric Dynamics;\*

2. Six (6) semester hours of analysis and prediction of weather systems (synoptic/mesoscale);
3. Three (3) semester hours of physical meteorology; and
4. Two (2) semester hours of remote sensing of the atmosphere and/or instrumentation.
5. Six (6) semester hours of physics with at least one course that includes laboratory sessions.\*
6. Three (3) semester hours of ordinary differential equations.
7. At least nine (9) semester hours of course-work for a physical science major in any combination of three or more of the following: Physical Hydrology, Chemistry, Physical Climatology, Aeronomy, Computer Science, Advanced Electricity and Magnetism, Statistics, Physical Oceanography, Radiative Transfer, Advanced Thermodynamics, and Light and Optics.

\* Prerequisite or co-requisite of calculus for course work in atmospheric dynamics and thermodynamics, physics and differential equations. Calculus courses must be appropriate for a physical science major.

The application must address how the Center graduates will meet these course requirements.

#### 7.2.0 Center Type: Earth System Sciences and Remote Sensing Technologies – ESSRST

National Environmental, Satellite, and Data Information Service (NESDIS) – Primary Line Office

NESDIS Resources, <http://www.nesdis.noaa.gov/index.html>

NESDIS STAR Planning Matrix, <http://www.star.nesdis.noaa.gov/star/PlanningMatrix.php>

NESDIS Office of Satellite and Product Operations (OSPO), <http://www.ospo.noaa.gov/>

#### 7.2.1 Applicants must address, for the Earth System Science and Remote Sensing

Technologies CSC, the following priorities:

- o developing a candidate pool of Center graduates, especially from traditionally underrepresented groups, with working technical skills, knowledge and competencies that integrate academic training, experiential learning, professional development, socioeconomic and behavioral science factors for competitive career paths that supports the NOAA's Education Strategic Plan diverse future workforce goal, strategic objectives of NOAA NESDIS Satellite Applications and Research (STAR) Planning Matrix, Office of Satellite and Product Operations (OSPO) (<http://www.ospo.noaa.gov/>), NOAA's National Centers for Environmental Information (NCEI) (<http://www.ncei.noaa.gov/>), and NOAA's Strategic Plan;
- o ensuring traceable calibration and inter-calibration process standards among remote observing sensors, platforms and systems;
- o improving situational awareness for forecasting and other decision support, based on adaptation of advanced dynamical-mathematical optimization methods employed in NOAA's hydrodynamic prediction model data assimilation;
- o developing integrated information systems to ensure transparency, visibility, repeatability, statistical and parametric uncertainty, and time/space dependent biases for available environmental monitoring data and information products;
- o integrating composition of changing Earth's atmosphere to modeling tools that characterize abundance and type of natural and man-made emissions and the influence of a changing climate on emissions and their transport and chemical transformation; and,
- o enhancing earth systems predictions including model components that integrate predictions for water resources, Arctic sea ice, and extremes including drought, floods and heat waves for applications to fire hazards, human health, sea level surges and living marine resources management.

#### 7.2.2 Key focus areas.

Earth System Science and Remote Sensing Technologies CSC applications should have

particular emphasis in environmental satellite related research and operational activities directed toward helping to sustain healthy coasts, to build sustainable fisheries, to recover protected species, to improve understanding of human-climate interactions, to develop satellite based methods for mapping and estimating carbon sources and sinks, to help improve weather forecasts and warnings, to provide improved environmental forecasts or analyses, and to prepare for future NOAA operational environmental satellite missions. The applications should address satellite meteorology research and applications; satellite sensors and techniques; environmental models and data assimilation. Applications should demonstrate the mechanism by which the Remote Sensing Technology CSC will utilize training in the fields of study above to facilitate the research and education priorities of NOAA. The center will be expected to:

1. Provide an organizational setting to promote and establish programs and research relating to remote sensing technology by drawing upon multiple disciplines and involving collaboration with multiple performing and research-sponsoring partners;
2. serve as a model for developing data scientists, and collaboration that help ensure that research can be applied to solving priority NOAA remote sensing technology, current satellite system optimization;
3. Expand research in remote sensing technology, satellite data management, and user access technologies; and,
4. Support multi-disciplinary research aimed at NOAA's mission remote sensing technologies responsibilities, to include: (a) Passive radiometric remote sensing technology; (b) Passive multi-spectral remote sensing technology; (c) High spectral resolution (hyperspectral) remote sensing technology; (d) Active and passive microwave remote sensing technology; (e) Sensor technologies including calibration and data analysis techniques; (f) Satellite sensor development and demonstration in the categories above; (g) Technologies relating to satellite data acquisition, data distribution, mission operations, and mission planning; and, (h) Technologies relating to improved user data access and data management for earth systems and remote sensing.

### 7.2.3 Knowledge, working skills and competencies.

Through such multi-disciplinary research, ESSRST Center shall explore new approaches

to enhance the use of present and future environmental satellites and earth systems science to meet the rapidly changing environmental needs of the Nation. Additionally, Center graduates are expected to have working skills in radiometry, spectroscopy, geolocation validation; data science (understand data trends, analyze clean up and package data) and visualization.

The application must address how the Center graduates will meet these requirements.

### 7.3.0 Center Type: Coastal and Marine Ecosystems (CME)

National Ocean Service (NOS) – Primary Line Office

NOS Roadmap (May 2014), <http://oceanservice.noaa.gov/about/NOSRoadmap.pdf>

7.3.1 Applicants must address, for the Coastal and Marine Ecosystems CSC, the following priorities:

- 1) Developing a candidate pool of Center graduates, especially from traditionally underrepresented minority groups, with working technical skills, knowledge and competencies that integrate academic training, experiential learning, professional development, socioeconomic and behavioral science factors for competitive career paths that supports the diverse NOAA's Education Strategic Plan workforce goal, strategic objectives of NOS Priorities Roadmap, and NOAA's Strategic Plan;
- 2) Enhancing resilience of coastal communities and economies;
- 3) Utilizing new and existing large data in decision support data, tool development, and generate information that promotes coastal and marine ecosystems vibrancy; and,
- 4) Changing climate, coastal and marine conservation, and vulnerabilities

### 7.3.2 Key focus areas.

Coastal and Marine Ecosystems CSC applications should address the development of science and management tools to support balancing the often competing and/or conflicting demands of coastal resource use, economic development. The CSC shall also address approaches to conservation, including protected areas.

Key focus areas should include approaches to:

1. Understand, assess, forecast and manage coastal impacts of changing climate (e.g., sea level rise, ocean warming, ocean acidification), harmful algal blooms and coastal contaminants;
2. Develop science-based support and guidance for coastal and marine special area management and injured habitat restoration, including use of satellite data;
3. Foster and develop coastal decision-making tools to help resolve coastal management challenges. These tools and techniques should be replicable; and,
4. Provide information that is accurate, timely, and in the end-user required formats to facilitate environmental/natural resource management, policy and decision making.
5. Applications should demonstrate the mechanism by which the Coastal and Marine Ecosystems CSC will utilize training in the fields of study above to facilitate the research and education priorities of NOAA.

### 7.3.3 Knowledge, working skills, and competencies.

Graduates should have at least twenty-four (24) semester hours in core sciences including physics, chemistry, biology, oceanography or environmental science; and coursework in mathematics, engineering, hydrology, geodynamics/geodesy, sociology, environmental ethics, economics, environmental law, public policy, natural resource management, geographic information systems, global positioning system, or statistics would be an asset. Knowledge of pertinent research and analytical methodology, as well as the ability to apply the core sciences to policy and management issues, is required. The application must address how the Center graduates will meet these requirements.

#### 7.4.0 Center Type: Living Marine Resources (LMR)

National Marine Fisheries Service (NMFS) – Primary Line Office  
NMFS Strategic Science Plan, [www.st.nmfs.noaa.gov/strategic-plan/index](http://www.st.nmfs.noaa.gov/strategic-plan/index)

7.4.1 Applicant must address, for the Living Marine Resources CSC, the following priorities:

- 1) developing a candidate pool of Center graduates, especially from traditionally underrepresented groups, with working technical skills, knowledge and competencies that integrate academic training, experiential learning, professional development, socioeconomic and behavioral science factors for competitive career paths that supports the NOAA's Education Strategic Plan future workforce goal, strategic objectives of NOAA Fisheries Strategic Science Plans, and NOAA's Strategic Plan;
- 2) establishing stock assessment capabilities;
- 3) developing science-based management tools (e.g., genetic and ecosystem models) and technology development for transfer to the aquaculture industry;
- 4) developing science and tools, modeling framework and forecasting, in support of Ecosystem Based Fishery Management;
- 5) developing innovative advanced sampling technologies to improve living marine resource surveys and to provide alternatives to existing ship or aircraft based survey; and,
- 6) integrating socioeconomic and behavioral science factors in creating robust information systems with tools for end user to enhance fisheries and marine ecosystems management.

#### 7.4.2 Key focus areas.

Applications shall fully address the ability to support education and research in marine

science with an emphasis on biological assessments, stock assessment, marine chemical assessments, habitat quality, coastal ecology - including ecosystem management and monitoring, aquaculture, social science, economics, and climate impacts on marine ecosystems). Applications should demonstrate the mechanism by which the Living Marine Resources CSC will utilize training in the fields of study above to facilitate the research and education priorities of NOAA.

Living Marine Resources CSC graduates should have core competencies in the course requirements with a major studies in biology, zoology, or biological oceanography that include at least thirty (30) semester hours in biological, marine, and aquatic science and fifteen (15) semester hours in a combination of physical, mathematical, and social sciences. The course work must include:

1. At least fifteen (15) semester hours in zoology beyond introductory biology or zoology in such course as invertebrate zoology, comparative anatomy, histology, physiology, embryology, advanced vertebrate zoology, genetics, entomology, and parasitology.
2. At least six (6) semester hours of training applicable to fishery biology in such subjects as fishery biology, ichthyology, limnology, oceanography, algology, planktonology, marine or freshwater ecology, invertebrate ecology, principles of fishery population dynamics, or related course work in the field of fishery biology.
3. At least six (6) semester hours of training in chemistry, physics, mathematics, or statistics.
4. At least six (6) semester hours of training applicable to fishery or resource economics or social science.

The nine courses listed below were identified by NOAA's National Marine Fisheries Service (NMFS) (U.S. Dept. of Commerce and Dept. of Education. 2008) as required for knowledge and competency in NOAA Fisheries. The shortage in the number of individuals with post-baccalaureate degrees in subjects related to fishery science, and a citation in NOAA Tech. Memo. NMFS-F/SPO-91, 84 p. –

([http://www.st.nmfs.noaa.gov/report\\_congress/ShortageOfDegrees.pdf](http://www.st.nmfs.noaa.gov/report_congress/ShortageOfDegrees.pdf)) identified the essential courses in preparing post-secondary students to conduct high-level quantitative population dynamics/stock assessments for the Federal government and elsewhere.

The courses are:

1. Stock Assessment, including use of satellite data;

2. Fisheries or Natural Resources Computer Programming;
3. Multivariate Statistics;
4. Sampling Theory;
5. Fisheries or Natural Resources Modeling and Forecasting;
6. Bayesian Statistics;
7. Population Dynamics;
8. Risk and Decision Analysis; and,
9. Resilient and Sustainable Fisheries Ecosystem.

#### 7.4.3 Knowledge, working skills, and competencies.

Graduates must be able to carry out a variety of tasks including: predicting population trends of living marine resources (LMR); developing harvest strategies that are consistent with National Standard 1 of the Magnuson Stevens Fishery Conservation and Management Act, estimating the social and economic impacts of various management decisions on communities by decisions related to LMR. In addition, graduates must be able to design and carry out projects for LMR. The application must address how the Center graduates will meet these requirements.

#### 8. Application Development and Submission

Each CSC application must address a single Center Type and proposed activities in the following four components:

- a. Center Education and Training;

- b. Center Scientific Research;
- c. Center Administration, Structure, Management (Communication, Data, Recruitment, Retention, Pipeline to NOAA Mission Workforce and Further Education), and, Engagement; and,
- d. Evaluation.

The CSCs are to leverage existing education and research program capabilities, and capacity; enhance existing and build new NOAA mission relevant capacities at MSIs to train and graduate post-secondary students, particularly from traditionally underrepresented minority communities, in NOAA-mission STEM, natural resources management and policy fields for the agency mission workforce. In response to this announcement, successful Center applicants will describe approaches that support the referenced NOAA Strategic Plans and:

- (1) enhance and develop sustainable NOAA mission relevant education and research capacity at MSIs to graduate post-secondary students, particularly from traditionally underrepresented minority groups, who will increase the pool of candidates for the NOAA-mission STEM, natural resources management, and policy fields for the agency mission workforce;
- (2) contribute to a resilient pipeline of post-secondary students from traditionally underrepresented groups, in NOAA mission fields;
- (3) enhance established program(s) and create new curricula and/or programs that support recruitment, retention and graduation of post-secondary students, particularly from traditionally underrepresented groups, in NOAA-mission STEM, natural resources management and policy fields;
- (4) engage education and research participants in transdisciplinary collaborations systems to address environmental challenges;
- (5) generate and deliver environmental information systems that will, for example:
  - a. enhance decision support;
  - b. support communities to become resilient to severe environmental stressor; and,

- c. create award outputs that have the potential to be commercialized.

Required Elements for Applications submitted in response to this Federal Funding Opportunity.

8.1.0 Education and Training. All applicants must fully address the following: Postsecondary student education and training for agency mission workforce advancement. The Center applicant may use this funding to support undergraduate scholarships and graduate fellowships that increase the participation of students from traditionally underrepresented minority communities in NOAA's mission related scientific, management and policy professional workforce and advance the educational achievement of all Americans. For this solicitation:

- o Post-secondary students supported by the Center are required to be engaged in Center activities including but not limited to: mentoring, tutoring, Center research, STEM engagement with local communities, etc.; and,
- o Student support and duration(s) are limited as defined in this FFO (PART III. C and PART IV, B, 2).

Each application may request any combination of undergraduate and/or graduate and/or professional NOAA mission-field degree level support for education and training towards a postsecondary degree. There is no limit to the number of students an institution may propose to support. NOAA reserves the right to fund fewer students than requested in any application.

8.1.1 Each applicant must request NOAA EPP/MSI CSC Student Education and Training funding for a minimum of fifty percent (50%) of total annual funding for direct student support for a cohort of students. A cohort of post-secondary students can be comprised of any combination of two-year, three- year, four-year, or five-year appointments. All scholars/fellows in the cohort must be appointed within 9 months of the initial award start date for Year 1. For subsequent annual award funding periods, a cohort must be appointed within 90 days of acceptance of annual award amendments. The Center student

appointments must conform to the CSC eligibility requirements. Applicants, in any Center Type, may not request partial scholarships/fellowships in direct support for Student Education and Training.

Program recognizes the inherent challenges to a streamlined approach to post-secondary student support. However, for evaluation comparisons and performance outcomes to be meaningful across Center Types, all Centers must utilize the same award funding levels for direct post-secondary student support. This standardization of student support allows NOAA to assess Program-level effectiveness of student support across Center types and differing academic systems. For the purpose of this program direct support for eligible Center student at:

(i) Baccalaureate level is a minimum rate of \$12,000 per year in scholarship tuition, stipend, and post-secondary student-travel support, for up to four (4) years, per undergraduate Scholar;

(ii) Master's level is a minimum rate of \$25,000 per year in fellowship tuition, stipend and travel, up to three years, along with: (i) a one-time support of up to \$10,000 for research support, not including use to cover cost for computer or data resources and supplies, and (ii) a one-time \$5,000 for NOAA Experiential Research and Training Opportunity (NERTO) per Master's level Center Student Fellow;

(iii) Professional level is at a minimum rate of \$15,000 per year in stipend and travel, for up to two years, along with a one-time \$5,000 for an 8-week NOAA mission-relevant experiential training per NOAA mission-related professional level Center Student Fellow;

(iv) Doctoral level is at a minimum rate of \$36,000 in tuition, stipend, and travel, for up to five years, along with: (i) a one-time support of up to \$20,000 for research support, not including use to cover cost for computer or data resources and supplies, and (ii) a one-time \$10,000 for a NERTO per doctoral level Fellow; and,

(v) The scholarship for eligible post-secondary students attending a two-year institution as defined in FFO (PART IV, B.2) is at an annual rate of up to 75% of tuition and not to exceed \$5,000.0

8.1.2 Student professional development is a requirement.

Each applicant must request up to a maximum of \$150,000 per year for Center-wide Student Professional Development (including robust matrix communications and expanded networks in NOAA mission relevant fields). An applicant must describe approaches to ensure:

- (i) a rising sophomore summer experiential training summer program is created to:
  1. provide summer NOAA mission-relevant research and training experience to post-secondary students at CSC institutions who have completed their freshman year;
  2. train post-secondary students to create successful applications specifically for the NOAA undergraduate scholarship programs, as well as similar opportunities; and,
  3. annually, increase the total number of competitive applications submitted from MSI post-secondary students from traditionally underrepresented communities in NOAA mission fields.
- (ii) every Center award-supported post-secondary student shall have an Individualized Student Development Plan within 30 days after the start of Center support as a participant beneficiary - where the IDP has built-in assessments of educational outcomes and includes, but is not limited to, research internships at NOAA Facilities, core competencies attainment, integrative mechanism for social sciences in NOAA mission areas relevant to the Center Type of the award, writing for peer review and non-peer reviewed publications, and presentations in varied professional environments;
- (iii) student preparation for success in the career paths relevant to the Center type address, at a minimum: (a) post-secondary student mentoring, (b) NOAA experiential learning, (c) generating team-level outputs, including peer reviewed publications, (d) data science – skill development to handle big data, geographical information system (GIS), statistical analysis, computer modeling, and algorithm development. Student participants in Centers must be effective both in communicating significance of their training and research in support of NOAA’s mission; and,
- (iv) conduct training Center-wide, where applicants shall:
  - o develop mechanisms and approaches that increase post-secondary student learning and future career professional development opportunities; and,

- o make courses and seminars offered at the any Center available to post-secondary students at other Center partner institutions.

#### 8.1.3 NOAA Mentor for graduate level student.

Each applicant must address the NOAA requirement that each graduate student supported with EPP/MSI award funds have a NOAA mentor. The role of the NOAA mentor, collaborating with the academic Center mentor, is to assure the NOAA mission-relevance of the student's project. The NOAA mentor may also provide and/or support guidance to enhance development of skills and competencies for the NOAA mission future workforce.

#### 8.1.4 Longitudinal Student Outcomes Tracking.

Applicant must address the NOAA requirement that a student tracker database be created and maintained at the Center's lead and partner academic institutions. The student tracker database tracks direct student support and funding (direct and indirect) as well as the students' progress. Award data tracking includes alumni and post-CSC employment and/or pursuit of further education. The applicant must define the approach for longitudinal tracking of Center-supported students after completion of period of CSC award support; include strategies for tracking of Center students up to three years after completion – exit point and if employed where and at what level, if in graduate training: what institution and in what level/areas of study or postdoctoral arrangement – at what institution/employment sector and position. Applicants provide sufficient information in the proposed CSC narrative description section of the application to allow assessment of feasibility and likelihood for successful outcomes. The detailed description of the approach with measures for Longitudinal Tracking would be provided in the Implementation Plan for award recipients.

#### 8.2.0 Center Scientific Research

The scientific research proposed by the Center must address the Program Purpose and Priorities in this announcement. All proposed Center research must integrate education and training as well as socio-economic and socio-behavioral sciences.

#### 8.2.1 The Proposed Center Science Plan. The applicant addresses in the Center Science

Plan with approaches that:

- o demonstrate student training integrated across all higher education degree levels;
- o are NOAA mission relevant, Center-wide, supporting Center-type priorities in this announcement;
- o fully integrate socioeconomic and behavioral sciences into the proposed Center research;
- o collaboratively establish or strengthen partnerships, in the area of the proposed Center Type, with NOAA, and/or NOAA mission-related enterprises, including the NOAA EPP/MSI CSC Recipient Network;
- o engage eligible Center students, at lead and partner institutions, pursuing a postsecondary degree in a NOAA mission field in the area of the proposed Center type;
- o build NOAA mission related research capacity at MSIs to sustain, produce, and pipeline a of post-secondary student from traditionally underrepresented communities in NOAA mission relevant future workforce;
- o support or build NOAA mission-relevant scientific research capacity aligned with the Strategic Plans of the Center academic institutions; and,
- o create opportunities for professional development along with post-secondary student internships, faculty exchanges, and Inter Personnel Agreement.

8.2.2 Postdoctoral Program is to be addressed in the Science Plan. Each Center shall include a Postdoctoral Program that supports two-year fellowships. All NOAA EPP/MSI-funded postdoctoral fellows must be United States citizens. The CSC is required to provide funding for two postdoctoral positions. The Center Postdoctoral Fellows must be appointed within the first nine months of the award start date. During the two-year fellowship tenure:

- i. the postdoctoral research should be collaborative among the postdoctoral fellows, CSC scientists, and NOAA scientists;
- ii. postdoctoral research must address NOAA-mission science priority areas;

iii. postdoctoral fellow must be co-located at a NOAA facility for a minimum duration of six (6) consecutive months and not to exceed one (1) year to: engage and expand the Center collaboration with NOAA in the area of the Center type, work on an area of priority for the NOAA facility, increase NOAA mission capacity of the Center, and support student training and professional development for the agency's future mission workforce; and,

iv. postdoctoral fellow development plan must: be developed in collaboration with NOAA prior to announcing a call for applications, include the criteria for selection; if/when an offer is to be made, NOAA is engaged in review prior to such an offer being made for support with EPP/MSI funds; and, within 30 days of the fellow's initial support by the Center award, Program must receive the Final Individualized Postdoctoral Fellow Development Plan, for such postdoctoral fellow.

8.2.3 Training in Responsible and Ethical Conduct of Research. The training of the future workforce in ethical conduct of research is critical for excellence and to maintaining the public trust. Applicant must describe how students and researchers supported by award funds. Across the Center partnership will be trained. For research supported under this announcement, it is an expectation that in preparing graduates for the agency mission workforce, students and faculty foster an atmosphere conducive to research integrity, take responsibility for prevention and detection of research misconduct. The applicant must maintain training and effectively communicate Center-wide, the policies, guidelines, and procedures relating to ethical conduct of research.

### 8.3.0 Center Administration

For the proposed Center, the applicant submits the information to address strategies as provided for in PART I. and Part IV. B. of this announcement. The applicant, at the time of application submission describes the travel plans for the Center. Each applicant includes and allocates in budget documents travel requests for:

- o Annual Center Directors (CD) including Partnering Institutions' Lead Investigators (PILIs) Meeting, and support for participation by lead institution and sub-award PIs (NOAA Headquarters);

- o Individual Center Annual Meetings; and,

- o EPP/MSI Biennial Education and Science Forum.

### 8.3.1 CSC Management Key Positions

The following positions are required to be filled within the first 9 months of the cooperative agreement.

(a) Center Director: The Center Director is the Principal Investigator and must be based at the lead MSI Ph.D. -granting institution. The Center Director must have the credentials and experience of successfully leading multidisciplinary teams in NOAA mission-related post-secondary education, STEM, natural resources management and policy to achieve outcomes aligned with the requirements in this FFO. The Center Director must allocate a minimum of forty percent (40%) of their time to lead the CSC. The CSC Director is also responsible for leading the activities associated with establishing and developing a CSC by conducting the following:

- o Executive leadership, strategic communications and visibility, managing, planning, coordinating, organizing, implementing, reporting and monitoring the CSC finances, administration, education, scientific research, engagement and recruitment-retention through graduation;
- o Providing all grant deliverables (e.g., performance and financial reports, required plans and student and performance tracking database inputs);
- o Ensuring the Center Annual Meeting is held at a NOAA facility at least 9 months before award anniversary;
- o Oversight for student education, training, and professional development to yield NOAA mission workforce outcomes;
- o Oversight for Center outputs and outcomes that include: education and related products (such as tool for educational outreach, data management, etc.), innovation (i.e. patents, licenses, etc.), peer reviewed publications by students, postdoctoral fellows, faculty, and scientists, presentations at national/international conferences (such as American Fisheries Society-AFS, American Geophysical Union-AGU, American Meteorological Society-AMS, American Society of Limnology and Oceanography-ASLO), and accessibility

of Center research results;

- o Contributing to the OEd EPP/MSI Outcomes reporting;
- o Co-planning the biennial NOAA EPP/MSI Education and Science Forum;
- o Developing comprehensive reporting for all CSC sponsored activities; and,
- o Incorporating activities (e.g., leveraging) to make the CSC sustainable.

(b) Assistant Director: An Assistant Director must be identified at each center to work with the Center Director and administratively assure effective and timely accomplishments for award objectives, reporting, products and outcomes generation. The Assistant Director shall have a minimum of 3 years of management experience, plus NOAA mission-relevant academic credentials and experience. The Assistant Director acts on behalf of the Center Director, as needed and allocates 100% of their time to CSC activities. Activities include day-to-day Center administration, budget tracking, oversight of coordination for execution of all Center Plans and timelines, meetings, engagement with internal and external groups to promote the Center, development of key messaging, responsibility for Center accessibility and visibility, and robust matrix communication within the Center, lead institution with partner and funding agency. The Assistant Director, under direction of the Center Director, coordinates planning and logistics for Center Meetings (at a minimum: Annual Meeting at a NOAA facility within 9 months of the award start date and at the same anniversary period each year; Advisory Board Meetings set to occur at the front or backend of Center Annual Meetings; Center Student Seminar Series; Quarterly Meetings with NOAA Line Office and Monthly Center-wide Principal Investigator Meetings).

(c) Education Expert: An Education Expert must be identified at each Center. The minimum credentials for the Education Expert is a terminal degree in education either as an Ed.D. or Ph.D., experience in higher education workforce development to successfully graduate students traditionally underrepresented in agency mission fields, and assessments to demonstrate students attain the requisite working skills and competencies for the workforce. The Education Expert must allocate fifty percent (50%) of their time in Center-wide level leadership and coordination to assure that all Center-supported students are successfully gaining the Center's Education Plan-defined, education, training, experiential and professional development to attain the working skills and competencies for the agency mission future workforce. The Education Expert works closely with the Data, Information, and Communication Manager to monitor, guide, and provide timely interventions. The

Education Expert with the Data, Information, and Communication Manager have responsibility to produce data for timely award-required reporting for Center-wide education and training, including all students gaining Center-wide core competencies, communicating achievements, identifying evidence-based best practices and strategies for continual internal assessments. The Education Expert is responsible for leading Center outcomes aligned to support the CSC program purpose, priorities and expected outcomes.

(d) Distinguished Research Scientist: EPP/MSI recognizes individuals who have made distinguished contributions to advancing science, technology, or environmental and natural resource management or policy relevant to the agency mission through a significant body of research as judged by publications, awards and peer reviews, and have made a major impact upon a field of study, both nationally and internationally as a science and/or profession. Criteria include the identification of and/or solution for significant scientific/social problems, unique initiatives, or dedication in activities that meet needs in NOAA mission-relevant future workforce fields. A CSC Distinguished Research Scientist tenured position must be filled within one year of CSC establishment at the lead MSI institution. The Distinguished Research Scientist must allocate one hundred percent (100%) of their time, in a 9-month period, in Center-wide level coordination, leadership and management of Center research at all levels, including students.

The CSC Distinguished Scientist is responsible for:

- o Developing and managing significant research projects for the CSC including its partnering academic institutions;
- o Leading the achievements and assessment of the CSC Science Plan;
- o Facilitating and coordinating scientific research between NOAA and CSC scientists including other CSC scientists;
- o Leading, organizing and conducting scientific meetings;
- o Coordinating scientific research among the CSC partners and ensuring that research conducted is in support of NOAA's mission;
- o Maintaining outstanding research accomplishments;
- o Writing successful research proposals;

- o Leveraging resources - submit proposals to other funding organizations;
- o Developing reports on research accomplishments for all CSC supported activities;
- o Making Center research results publicly accessible, within one-year, along with the standards to be used for data/metadata format and content; and,
- o Mentoring Center students in development of research plans, etc., and development of postdoctoral fellows.

(e) Data, Information, and Communication Manager: A Data, Information, and Communication Manager position must be created to manage the CSC education, research, student tracking data and information systems, communicating center achievements for high visibility with internal and external stakeholders, management of the center web site. The requisite technical knowledge, expertise and data management skills are to be commensurate with the Center Type proposed and the published requirements under this announcement. The Data, Information, and Communication Manager must allocate a minimum of fifty percent (50%) of their time to the CSC activities. The Data, Information, and Communication Manager is also responsible for facilitating the process that produces the Center performance report and the annual CSC student tracker deliverables. The Center Director with the Data, Information, and Communication Manager should be responsible for increased public access to results from Federally-funded research as provided for in NOAA published guidance.

#### 8.3.2 Center-wide Framework for:

(a) Center-wide Core Competencies: NOAA expects the Center to develop mechanisms and approaches that provide Center student course and seminar offerings among the center institutions to deliver training in Center-identified core competencies relevant to the agency mission workforce. The Center must identify how attainment of the competencies will be validated.

(b) Center-wide Social Science Integration: Social science must be an integral component of the Center's education and training and scientific research. Each applicant

should describe the strategies and approaches that integrated social science from the Center planning stages.

(c) Communication, Engagement and Sustainability: Each application at submission, should clearly describe the proposed Center approach to achieve measurable Center objectives, the role and responsibility of lead and partner institutions, student beneficiaries, postdoctoral fellows, faculty, staff, and administration for successful Center products and outcomes. The applicant should clearly describe strategies for development and sustaining of a Center-approach to developing candidates for the NOAA mission workforce.

#### 8.4.0 Complete Application Package

A complete package should be submitted in accordance with the guidelines in this solicitation. Each application must include the application forms from the SF-424 form family (see PART IV, B).

8.4.1 Required Elements. In addition to the Standard Forms, each application package should include the following required elements.

8.4.2 The title page should include the Principal Investigator's full name, title, organization, telephone numbers, email and mailing address.

The requested budget for each fiscal year should be included on the summary title page. A multi-institution application must identify the lead institution and the lead investigator for each institution and the requested funding for each fiscal year for each institution on the title page, but no signatures are required on the title page from the additional institutions. The lead investigator and separate budget information is not requested on the title page for institutions that are proposed to receive funds through a sub-agreement to the lead institution; however, accompanying budget justification must be submitted for each subcontractor or sub-grantee. For further details on budget information, please see Budget Section.

8.4.3 One-page abstract summary. An application abstract summary that is submitted at the time of application shall include the following: (1) name of the proposed CSC; (2) name of the school, college, or department of the applying institution and demographic profile; (3) the NOAA Line Office that will align with the proposed center; (4) education and training

focus and objectives of the proposed center; (5) research focus and objectives of the proposed center; (6) administrative structure at a high-level of the proposed center and, (7) a brief summary of work to be completed. The abstract summary should clearly address program priorities (see PART I – PART IV of the FFO). The summary should appear on a separate page, headed with the application title, institution(s), Center Director, partner institution lead investigator(s), total proposed cost, and budget period. It should be written in the third person. The summary is used to help compare applications quickly and allows the respondents to summarize key points in their own words.

8.4.4 Proposed CSC narrative description. The description of the proposed CSC must be complete and divided into annual increments over a five-year period. Applicant should include the approach proposed to achieve measurable Center objectives including measurable targets for all partners in Center activities. The approach should indicate in the narrative description, plans for early integration of statistical analysis before implementation and data collection, include approaches for quantitative measures for Center best practices for generating a pool with increased numbers of candidates from traditionally underrepresented minority groups for the NOAA mission workforce. The expected outputs and outcomes for the proposed should be clearly described the aligned with CSC and EPP/MSI program priorities outlined in the FFO. The CSC narrative description should address the following published in this announcement:

- (1) NOAA Mission and Strategic Priorities;
- (2) National Demographics and Trends;
- (3) Role of CSCs;
- (4) Program and Priorities;
- (5) Responsiveness Criteria;
- (6) CSC Desired Program-level Outcomes and Outputs;
- (7) CSC Type the Proposal Addresses Must Be Clearly Identified;
- (8) CSC Activities Proposed for:
  - a. Education and Training with Clear NOAA Mission-Alignment and Objectives;

- b. Center Scientific Research with Clear NOAA Mission-Alignment and Objectives; and,
- c. CSC Administrative Structure (school, college, department and/or reporting structure) and Management.

The proposed CSC description should include relevant accomplishments from prior programs awarding degrees to students from traditionally underrepresented minority communities, in NOAA mission-relevant fields, particularly programs funded by NOAA and organizations in support of education and research. Also, include past collaborative projects to indicate record of successful, meaningful collaboration(s) in education and training, and scientific research. Using 2011, as a baseline, applicants should document the NOAA mission-STEM education, research (capability and capacity), and other administrative outcomes (institutionalized programs) that were achieved as a result of NOAA or other funding in support of education and research. In the documentation, also include a summary of the graduation rates at the bachelor, master's, and doctoral degree levels. If yearly analyses of graduation rates versus national statistics were conducted, please include the information. Any links to published summary reports or articles that illustrate program performance may be provided. This section should clearly identify program management with a description of the role of the Center Director, Assistant Director, Education Expert, Distinguished Scientist, Data, Information, and Communication Manager, and each partner academic institution principal investigator. The time allocation of the Principal Investigator identified in the application should be clearly described.

An application should allocate a minimum of forty percent (40%) of the Center Director's time to the CSC. It should also include:

- o the goals and measurable outcomes for the period of proposed work and its expected relevance to NOAA's mission;
- o a discussion of how the proposed program will enhance and support NOAA's Strategic Plan and Objectives in developing candidates for the future NOAA mission-related workforce; and,
- o potential coordination with other academic partners and/or the public/private sectors.

8.4.5 Description of Required Plans. At time of application, in FY 2016, all applications to establish a CSC are required to develop and submit plans that shall include performance

metrics with targets / goals across all components of the Center. Plans submitted in the application package must include:

a. Education and Training including Student Professional Development Plan. The applicant provides the approach to train and graduate post-secondary students particularly from traditionally underrepresented minority groups to be candidates for future NOAA and NOAA related occupations and meets requirements for Center Type as outlined in this announcement.

b. Scientific Research and Postdoctoral Fellows Plan. The Center Science Plan should provide an approach to accomplish the proposed Center Scientific Research and meet requirements for Center Type as outlined in this announcement.

c. Data Management Plan. The applicant describes a plan of up to 5 pages that will: include plan to satisfy the requirements for public access to research results from this Federal assistance program; allow both current and longitudinal tracking for award products, outputs, and impacts. Applicants should describe plan for data sharing using up to two pages within the 5-page limit for the data management plan.

#### Data/Information Sharing Plan.

The Data/Information Sharing Plan will be reviewed as part of the NOAA Standard Evaluation Criteria, Item 1--Importance and/or Relevance and Applicability of Proposed Project to the Mission Goals.

PIs must indicate how and when they have made their data accessible and usable by the stakeholder community in the past. NOAA's Administrative Order on the Management of Environmental Data Management and Information is accessible at, <http://go.usa.gov/c2dZW>. Applicants and award recipients shall comply with any future data sharing and management guidance issued by NOAA.

i. Environmental data and information, collected and/or created under NOAA grants/cooperative agreements must be made visible, accessible, and independently understandable to general users, free of charge or at minimal cost, in a timely manner (typically no later than two (2) years after the data are collected or created), except where limited by law, regulation, policy or by security requirements.

1. Unless otherwise noted in this federal funding announcement, a Data/Information Sharing Plan of no more than two pages shall be required as part of the Project Narrative. A typical plan may include the types of environmental data and information to be created during the course of the project; the tentative date by which data will be shared; the

standards to be used for data/metadata format and content; policies addressing data stewardship and preservation; procedures for providing access, data, and security; and prior experience in publishing such data. The Data/Information Sharing Plan will be reviewed as part of the NOAA Standard Evaluation Criteria, Item 1 -- Importance and/or Relevance and Applicability of Proposed Project to the Mission Goals.

2. The Data/Information Sharing Plan (and any subsequent revisions or updates) will be made publicly available at time of award and, thereafter, will be posted with the published data.

3. Failing to share environmental data and information in accordance with the submitted Data/Information Sharing Plan may lead to disallowed costs and be considered by NOAA when making future award decisions.

ii. Proposals submitted in response to this Announcement must include a Data Sharing Plan of up to two (2) pages describing how these requirements will be satisfied. The Data Sharing Plan should be aligned with the Data Management Plan included (or referenced) in the Announcement, and the contents of the Data Sharing Plan will be considered as part of proposal review. A typical plan should include descriptions of the types of environmental data and information expected to be created during the course of the project; the tentative date by which data will be shared; the standards to be used for data/metadata format and content; policies addressing data stewardship and preservation; procedures for providing access, sharing, and security; and prior experience in publishing such data. The costs of data preparation, sharing, or archiving may be included in the proposal budget. Accepted submission of data to the NOAA National Centers for Environmental Information (NCEI) shall meet these requirements. However, NCEI is not obligated to accept all submissions and may charge a fee. If NCEI submission is intended then Data Sharing Plans must describe the outcome of any relevant preliminary discussions with NCEI to that effect.

iii. NOAA may, at its own discretion, make publicly visible the Data Sharing Plan from funded proposals or use information from the Data Sharing Plan to produce a formal metadata record and include that metadata in a Catalog to indicate the pending availability of new data.

iv. Proposal submitters are hereby advised that the final pre-publication manuscripts of scholarly articles produced entirely or primarily with NOAA funding will be required to be submitted to NOAA Institutional Repository after acceptance, and no later than upon publication. Such manuscripts shall be made publicly available by NOAA one (1) year after publication by the journal.

d. Center Administration Plan. Plan should provide adequate information to indicate feasibility of proposed strategic vision for the Center, necessary for the proposed Center to support and deliver Program-level outcomes, and sustainability resulting from Center institutions' commitment to facilitating and furthering the Center's post-secondary education and training, research plans and goals. The alignment of the Center with the institutional strategic plans should be described. The strategies should address student recruitment, support for success, and sustaining newly established curricula and programs if NOAA funding is not immediately available at the end of the five-year Center award cycle. The approach should indicate the plans for early integration of statistical analysis before implementation and data collection, include approaches for quantitative measures for Center best practices for generating a pool with increased numbers of candidates from traditionally underrepresented minority groups for the future NOAA mission workforce. Applicant should provide a Milestone Chart with timelines of major tasks covering the duration of the proposed CSC.

e. Center Plan for Evaluation. Proposed CSC evaluation should be led by an expert independent evaluation team. The budget MUST include adequate resources for proposed CSC evaluation. Applicants are required to provide a plan for external evaluation of Center accomplishments with specific criteria and performance measures for education and training, scientific research, and administrative activities. Applicants shall describe the professional experience and qualifications that justify selection of the proposed CSC evaluator(s). Due to the nature of these activities, an Institutional Review Board (IRB) approval for research involving human subjects should be included at the time of application submission, under this announcement. Applicants, at time of proposal submission, should describe approaches for: developing and refining a logic model; including plans for measurement of effectiveness in meeting the CSC goals and objectives, as well as, the requirements of this funding program for producing a pool of candidates from traditionally underrepresented minority communities eligible for the agency STEM, management and policy workforce. Plans for formative and summative CSC evaluations should be well constructed and should use best practices for evaluating the performance of the Center as announced in this FFO. If the names and affiliation of the proposed evaluator(s) are known, these should be included at time of application. Evaluators are expected to adhere to the Guiding Principles for Evaluators (<http://www.eval.org/p/cm/ld/fid=51>) and proposed CSC evaluations should be consistent with standards established by the Joint Committee on Standards for Educational Evaluation (<http://www.jcsee.org/>). If known, the following information should be included in the description of the plan for evaluation: the professional experience and qualifications that justify the selection of the proposed CSC's external evaluator. In addition, applicants

shall include: (i) formative and summative approaches to measuring progress towards the objectives of the center and the goals of the Program; (ii) strategies that will be utilized to track student trajectories for a minimum of three (3) years after program completion or departure; (iii) process be utilized for the development of the logic model and future refinements; and, (iv) proposed resources needed to carry out the evaluation successfully.

SUCCESSFUL AWARD RECIPIENTS, post-award, shall submit the following two (2) plans to NOAA for review within the timeframe indicated: (i) No later than 60 days from award start date, recipient must submit a comprehensive Center Implementation Plan, and, (ii) no later than the 6 months from the award start date, the recipient must submit a comprehensive Evaluation Plan for the Center award.

The Implementation Plan. The Implementation Plan shall specifically address the functional integration of all Center partners in performance, throughout the award period to satisfy the funded award objectives for post-secondary education and training, scientific research, and administration of the Center. Social science must be an integral component of the Center. Suggested social science fields include those currently emerging within NOAA such as economics, sociology, public policy, communications, and geographical information systems. The Plan shall include a matrix approach for communicating with and engaging all partnering institutions, NOAA, and key stakeholders.

The Implementation Plan should include approaches to synchronize "best practices" in post-secondary education and training, scientific research, communication and management practices among the partnering institutions.

Post Award Recipient Center Evaluation Plan: Each recipient will develop an evaluation plan that assesses program progress and measures the impact of activities related to intended education and training, research and outcomes of the CSC. Therefore, each recipient is required to hire a third-party, external evaluator who understands the scope and mission of the CSC. The evaluator(s) should be an expert in postsecondary education to assess education and training outcomes using protocols developed by the U.S. Department of Education and the National Science Foundation, <http://www.nsf.gov/pubs/2013/nsf13126/nsf13126.pdf>.

The evaluation must be designed to formatively and summatively assess progress towards objectives and intended outcomes of the CSC. The applicant should describe their procedures for data collection and analysis and include the steps they will take to apply evaluation findings to the continuous improvement of the CSC.

The Recipient Center Evaluation Plan will be reviewed and provided feedback by EPP/MSI upon award. Based on the feedback received, a fully developed evaluation plan will be submitted. Award recipient provides proof of IRB approval for the full evaluation plan at the time of submission.

Review Criteria of Post Award Recipient Center Evaluation Plan. The Award Recipient Center evaluation plan will be reviewed by NOAA using the criteria below:

- o External evaluator demonstrates expertise necessary to successfully conduct the proposed CSC evaluation;
- o The extent to which methods for conducting formative and summative evaluations are rigorous and appropriate for the CSC;
- o The extent to which the formative and summative evaluation methods will provide high-quality data and performance feedback and permit periodic assessment towards reaching intended outcome; and,
- o The extent to which the evaluation plan includes sufficient resources to carry out the evaluation.

8.4.6 Supplemental Elements. A complete application should include the following along with the required elements:

1. References cited. Each reference must include the names of all authors in the same sequence they appear in the publications, the article title, volume numbers, and year of publications.
2. Letter of commitment from Chief Executive Officer (CEO)
3. Institutional data and profile that includes: numbers for post-secondary student enrollment, retention and graduation by gender, racial groups, ethnic groups, for the past five-(5) year period; placement of graduates during the past five-year period; and, enrollment and graduation numbers and placement for graduated post-secondary students from traditionally underrepresented groups, for the past five-year period should be provided to demonstrate that a track record exists for likelihood of success if funded.
4. Institutional review board approval for research on human subjects should be included at time of application to ensure successful applicants will start performance without delays.

5. Letters of collaboration. Letters of collaboration may be submitted from NOAA mission related entities, external to NOAA, for education and training and/or research collaborations. These letters should be brief and restricted to a statement of intent only to collaborate. Additional information on the nature of the collaboration and the roles should be included in the Center application, within the page limitations for proposed CSC narrative description.

6. Federal, state and local government activities. The application should include a list of related Federal, state and local government activities, and may include other efforts funded through NOAA, that the proposed work would affect and describe the relationship between the proposed CSC and those plans or activities.

7. Current and pending support. Describe all current and pending federal financial/funding support for all principal and co-investigators, including subsequent funding in the case of continuing grants. For each principal investigator, should submit a list which includes a title, supporting agency with grant number, investigator months, dollar value, and duration. Requested values should be listed for pending support. Describe the capability of the investigator and collaborators to complete the proposed work in light of present commitments to other projects. Therefore, please discuss the percentage of time investigators and collaborators have devoted to other Federal or non-Federal projects, as compared to the time that will be devoted to the proposed CSC solicited under this notice.

8.4.7 Appendices should not exceed a maximum of ten (10) pages. Applicants should append, for the proposed CSC:

- o Strategic Plan;
- o Center Logic Model should provide conceptual framework for proposed CSC;
- o Results from Assessment of Needs for NOAA mission future workforce used to form baseline and benchmark the CSC proposal;
- o Proof of MSI designation per the U.S. Department of Education; and,
- o Risk assessment. At time of submission, the applicant shall append the internal controls procedures for assessing risk for the proposed CSC if funded and for sub-recipients. Factors for grantees to consider when developing their risk tools can be found at 2 CFR §200.331.

8.4.8 Budget. At time of application submission, all applicants are required to submit a

SF-424 A Budget Form for each fiscal year increment. Multi-institution applications must include the SF-424 A for each institution, and a multi-investigator application using a lead investigator with a sub-grantee approach must submit a SF-424 A for each sub-grantee. The lead institution shall identify the partnering institutions as OTHER on the budget form (not Contractor). Each subcontractor or sub-grantee should be listed as a separate item. Describe products/services to be obtained and indicate the applicability or necessity of each to the proposed CSC activities. Provide separate budgets for each subcontractor or sub-grantee regardless of the dollar value and indicate the basis for the cost estimates. .

8.4.9 Budget justification. All applications must include a detailed budget narrative and a justification to support all proposed budget categories. The detailed budget breakdown shall also include details for each proposed partnering institution. All applications also must clearly identify the funds for direct post-secondary student support, annual meetings, evaluation by external expert, and equipment purchases. At time of application - Budget for Evaluation - MUST include adequate resources for proposed CSC evaluation. Any ship and/or aircraft time needs must be clearly identified in the proposed budget. The applicant is responsible for requesting ship and aircraft time through appropriate channels and for meeting all requirements to ensure the availability of requested platform time. Copies of relevant ship and/or aircraft time request forms should be included with the application. Instructions on submission of budget justifications can be found at: [http://www.ago.noaa.gov/grants/docs/budget\\_narrative\\_guidance-04.09.2015.pdf](http://www.ago.noaa.gov/grants/docs/budget_narrative_guidance-04.09.2015.pdf).

## 9.0 Standard Forms

### 9.1. Standard Form 424

At the time of application submission, all applicants must submit a signed and dated copy of Standard Form SF-424, "Application for Federal Assistance," to indicate the total amount of Federal funds and non-Federal matching funds proposed for the project period. Digital signatures are encouraged (see <http://go.usa.gov/cWfqm>, and <http://go.usa.gov/cWf3Q>) on all SF-424 forms submitted submitted via [www.grants.gov](http://www.grants.gov).

### 9.2. Standard Form 424 A

At time of application submission, all applicants are required to submit a SF-424 A Budget Form. The first column of Sections A and B shows the Federal funds requested, while the second column of Sections A and B shows the non-Federal matching funds provided for the project. Total funding is shown in the final column of section B. Non-federal funding is broken out by source in Section C. Forecasted cash needs in Section D are inclusive of all funding for the project; in the case of an 18-month project, each 'quarter' represents 4.5 months. Both Federal and non-Federal funds should be expended at a similar rate throughout the course of the project. Section E may be left blank. Section F summarizes the direct charges in line 21 and lists the indirect charges requested; please show the rate used in line 22. Please note that completion of the SF-424 A as described above represents NOAA's preference and may not be consistent with the instructions that accompany the SF-424 A. All budget figures should match the funding requested on the application cover sheet and correspond with the descriptions contained in the project and budget narratives.

Consistent with the Federal Funding Accountability and Transparency Act (FFATA; <https://www.fsrs.gov/>), all subawards should also be accompanied by a separate SF-424 A form to fully document the proposed subaward budget. See section IV.B.5. for more detail.

### 9.3. Standard Form 424 B

All applicants are required to submit a signed SF- 424 B, Assurances for Non-Construction Programs.

### 9.4 Standard Form CD-511

All applicants are required to submit a completed form CD-511, Certifications Regarding Debarment, Suspension, and Other Responsibility Matters, Drug-Free Workplace Requirements, and Lobbying.

### 9.5 Other Federal Forms (if applicable)

Applicants may be required to disclose certain lobbying activities by filling out form SF-LLL, regarding any payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of

Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action under 31 U.S.C. § 1352,

9.6 National Environmental Policy Act (NEPA) and Environmental Compliance - Under (NEPA), NOAA must analyze the potential environmental impacts of projects or proposals seeking funding from NOAA.

After the application is submitted, NOAA may require additional information to fulfill NEPA and other compliance requirements. If NOAA determines that an environmental assessment is required, applicants may also be requested to assist in drafting the assessment. Applicants may also be required to cooperate with NOAA in identifying and implementing feasible measures to reduce or avoid any identified adverse environmental impacts of their proposal. The failure to do so shall be grounds for the denial of an application. In some cases if additional information is required after an application is selected, funds can be withheld by the Grants Officer under a special award condition requiring the recipient to submit additional environmental compliance information sufficient to enable NOAA to make an assessment on any impacts that a project may have on the environment.

The applicants selected for funding may be required to complete subset sections A, B, C, D, E, F, G, or H (based on activities outlined your application as identified by the Federal Program officer) of the Environmental Compliance Questionnaire for National Oceanic and Atmospheric Administration Federal Financial Assistance Applicants accessible at <http://www.nepa.noaa.gov/questionnaire.pdf> to provide detailed information on the activities to be conducted, locations, sites, species and habitat to be affected, possible construction activities, and any environmental concerns that may exist (e.g., the use and disposal of hazardous or toxic chemicals, introduction of non-indigenous species, impacts to endangered and threatened species, aquaculture projects, and impacts to coral reef systems).

Detailed information on NOAA compliance with NEPA can be found at the following NOAA NEPA websites: <http://www.nepa.noaa.gov/> including NOAA Administrative Order 216-6 for NEPA, [http://www.nepa.noaa.gov/NAO216\\_6.pdf](http://www.nepa.noaa.gov/NAO216_6.pdf) and the Council on Environmental Quality implementation regulations [http://ceq.hss.doe.gov/ceq\\_regulations/regulations.html](http://ceq.hss.doe.gov/ceq_regulations/regulations.html) or [http://coast.noaa.gov/funding/\\_pdf/CEQ%20Regulations%20for%20Impl](http://coast.noaa.gov/funding/_pdf/CEQ%20Regulations%20for%20Impl).

9.7 Paperwork Reduction Act - This collection of information contains requirements subject to the Paperwork Reduction Act. The use of Forms SF- 424, SF- 424A, SF-424B, and SF-LLL has been approved by the Office of Management and Budget (OMB). Form CD-511 and CD- 512 are also required by the DOC. Applicants shall not submit form CD-512 with their application package; this form must remain on file with the applicant only. Form SF-LLL is required only if lobbying activities are being reported; otherwise, this form shall remain on file with the applicant only and not with the federal program office. The NEPA Questionnaire has been approved by OMB.

Notwithstanding any other provision of law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA unless that collection of information displays a currently valid OMB control number.

#### C. Unique entity identifier and System for Award Management (SAM)

To enable the use of a universal identifier and to build the quality of information available to the public as required by the Federal Funding Accountability and Transparency Act, 31 U.S.C. 6106 Note, any application awarded in response to this announcement will be required to use the Data Universal Numbering System and Federal System for Award Management referenced in Section IV.A. to the extent applicable.

Each applicant (unless excepted under 2 C.F.R. 25) is required to (i) be registered in SAM before submitting its application; (ii) provide a valid unique entity identifier in its application; and (iii) continue to maintain an active SAM registration with current information at all times during which it has an active federal award or an application or plan under consideration by a federal awarding agency. Applicants are also required to use the Dun and Bradstreet Universal Numbering System referenced in Section IV.A. See 2 C.F.R. Part 25, <http://go.usa.gov/cTbMk>.

#### D. Submission Dates and Times

Full applications must be submitted through Grants.Gov no later than 11:59 p.m. EASTERN TIME on March 30, 2016. No hard copy or email applications will be accepted.

#### E. Intergovernmental Review

Applications under this program are not subject to Executive Order 12372, "Intergovernmental Review of Federal Programs."

## F. Funding Restrictions

### 1. Indirect Cost Rate

Consistent with of 2 CFR Part 200., Section 414, indirect costs recovery is limited to 25% of modified total direct costs. This indirect cost rate limitation flows to all subawards issued under this program. Expenses for meetings and conferences such as the EPP forum will not recover any indirect costs.

### 2. Direct Student Support

(i) The total dollar amount of the direct student support, annually, must be equal to and no less than 50% of the annual award funding. The requirement is applicable across total annual award funding and pertains across all academic institutions. The allowable direct student support includes stipends, scholarships, travel, and student research and experiential training. A budget and budget justification must be provided that includes the breakdown of approximate costs and narrative description for the applicable direct student support sub-categories indicating for student participants: degree level and number of students to be supported as specified Center-wide academic institutions, NOAA Experiential Research and Training, Participant Travel, and Participant Professional (see PART IV. B.), as provided in this announcement.

(ii) Student Professional Development. Each applicant must request up to a maximum of \$150,000 per year for Center-wide Student Professional Development. This is to be included in the above (2. (i)) \$1,500,000 and used as described in PART IV. B. for this announcement.

### 3. Foreign Travel Support

Foreign travel support is not available under this funding opportunity.

## G. Other Submission Requirements

Note: Due to the nature of the evaluation activities, an Institutional Review Board approval for research involving human subjects should must be included in the application at

the time of submission via Grants.gov, or a description of the timing and plans for obtaining such approval for research involving human subjects anticipated later in the project period.

Office of Education  
Educational Partnership Program with Minority Serving Institutions  
1315 East West Highway, SSMC 3-10742  
Silver Spring, MD 20910

## V. Application Review Information

### A. Evaluation Criteria

Requirements provided in the FFO ensure that the applicant includes information that is considered important during the proposal evaluation, in addition to any other information provided by the applicant. NOAA screens each application to ensure that it meets the administrative requirements as set forth in this FFO. A technical review panel will evaluate applications that meet the administrative requirements.

Applications will be evaluated on the basis of the following evaluation criteria at the indicated weights.

#### 1. Importance and/or Relevance and Applicability of Proposed CSC to the Requirements of this FFO. (20 points)

This ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, Federal, regional, state, or local entities; potential effectiveness of the Center Data/Information Sharing Plan; and, alignment with developing a candidate pool for the agency mission workforce.

#### 2. Technical/Scientific Merit. (20 points)

This assesses whether the approach is technically sound and/or innovative, if the methods are appropriate, and whether there are clear CSC goals and objectives that align with PART I - IV of this FFO.

#### 3. Overall Qualifications of Applicants. (20 points)

This ascertains whether the applicant possesses the necessary education, experience, training, facilities, and administrative resources to accomplish the proposed Center activities.

- o The relevance of the qualifications of the PIs, co-PIs, and key personnel;
- o The PI's, co-PIs and key personnel's previous experience in managing, designing, and implementing the proposed activities;
- o The evaluators' previous experience in managing, designing and implementing evaluations appropriate for the Center and proposed activities aligned with this FFO;
- o The likelihood that the applicants and CSC partners have the appropriate resources to carry out the proposed activities and have the ability to complete the proposed Center activities successfully.

4. Proposed CSC costs. (5 points)

The Budget is evaluated to determine if it is realistic and commensurate with the proposed CSC needs and time-frame.

- o The adequacy of the proposed resources to accomplish the proposed work within the indicated time-frame;
- o Whether the budget is sufficient for the scope of the evaluation planned;
- o The adequacy of detail in the budget table and narrative to allow an informed determination of how well all costs associated with the proposed CSC are justified.

5. Education and Training. (35 points)

NOAA assesses whether this application provides a focused and effective education and training strategy aligned with publicly accessible Strategic Plans for NOAA, NOAA Education – Goal 4: Future workforce; and, primary Line Office strategic directions and/or priorities.

- o How well the outcomes of the proposed Center will produce graduates for the agency mission workforce;

- o How well the outcomes will support the NOAA Education Strategic Plan agency mission workforce goal (Goal 4);
- o How well communities traditionally underrepresented in NOAA mission fields become aware of the agency mission as a career option.

## B. Review and Selection Process

**Administrative Review.** Once a full CSC application has been received by NOAA, an initial administrative review is conducted to determine compliance with the minimum review requirements and completeness of the application. This will include a determination by the Federal Program Officer as to:

1. **Eligibility** - Applications will only be accepted and reviewed for eligibility as MSIs as defined in III. A. Eligibility Information. In addition, the CSC's principal academic institution must be an accredited MSI with a Ph.D. program in one of the NOAA mission science areas in atmospheric, oceanic and coastal and marine sciences; living marine resources science; remote sensing science and technology; and, fields with doctoral degrees in research utilizing emergent science and technologies.
2. **Submission Date** - Applications will only be accepted and reviewed if they are received in the NOAA by the designated deadline, March 23, 2016.
3. **Program Objectives and Priorities** - Applications will only be accepted and reviewed if based upon a review of the abstract, the application meets the program requirements provided in this announcement (see PART I – Part IV. B).
4. **Proposed CSC Cost** - Applications will only be accepted and reviewed if MSIs clearly demonstrate in the budget and detailed budget justification how requirements for fifty percent (50%) in direct student support will be met, and the maximum allowable budget of \$15.5 million is not exceeded.

Applications that do not meet the administrative minimum review requirements will be deemed unacceptable and will not be evaluated and scored. The Grants Online system will

document the results of the administrative review and notify the applicant.

**Technical Review, Ranking and Selection.** Eligible applications for CSCs will undergo a technical review, ranking, and selection process to determine how well they meet the stated evaluation criteria. All applications will be evaluated and scored individually by each technical reviewer in accordance with the assigned weights of the above evaluation criteria. An independent peer panel review comprised of Federal and non-Federal experts, external to the agency, with education, scientific, and administration expertise will be formed to review the applications. The peer panel will be comprised of approximately five to seven individuals, with each individual having expertise in a separate area. The peer panelist scores for each application will be used to create a rank order presented to the Selecting Official. No consensus advice will be given by the independent peer review panel as more than one non-Federal reviewer will be used. The reviewer's ratings are used to produce a rank order of the proposals.

The Federal Program Officer uses the panel review results and selection factors listed in Part IV.C. below to recommend applications for funding consideration to the Selecting Official. In making the final selections, the Selecting Official will award in rank order, per Center Type, unless the proposal is justified to be selected out of rank order based upon one or more of the selection factors. The Selecting Official makes the final award recommendation to the Grants Officer authorized to obligate funds. Applicants may be asked to modify objectives, work plans or budgets, and provide supplemental information required by the agency prior to award.

The NOAA Grants Officer will review financial and grants administration aspects of a proposed award, including conducting an assessment of the risk posed by the applicant in accordance with 2 C.F.R. 200.205. In addition to reviewing repositories of government-wide eligibility, qualifications, or financial integrity information, the risk assessment conducted by NOAA may consider items such as financial stability of an applicant, quality of the applicant's management systems, an applicant's history of performance, previous audit reports and audit findings concerning the applicant, and the applicant's ability to effectively implement statutory, regulatory, or other requirements imposed on non-Federal entities. Applicants should be in compliance with the terms of any existing Federal awards, or make arrangements satisfactory to the Grants Officer.

Upon review of these factors, if appropriate, specific award conditions that respond to the degree of risk may be applied by the NOAA Grants Officer pursuant to 2 C.F.R. 200.207. NOAA also reserves the right to reject an application in its entirety where information is

uncovered that raises a significant risk with respect to the responsibility or suitability of an applicant. In addition, NOAA may not make a Federal award to an applicant until the applicant has complied with applicable unique entity identifier and System for Award Management requirements referenced in this Announcement, and if an applicant has not fully complied with the requirements by the time NOAA is ready to make a Federal award, NOAA may determine that the applicant is not qualified to receive a Federal award and use that determination as a basis for making a Federal award to another applicant. The final approval of selected applications and issuance of awards will be by the NOAA Grants Officer. The award decision of the grants Officer is final and there is no right of appeal.

#### Conflicts of Interest and Confidentiality

During the peer evaluation process for applications, NOAA takes extreme care to prevent any actual or perceived conflicts of interest that may impact review or evaluation.

#### Organizational Management Information

Specific management information relating to an applicant shall be submitted on a one time basis, with updates on an as needed basis. Although an applicant may be eligible based on its status as one of the eligible entities, there are factors that may exclude an applicant from receiving federal financial and nonfinancial assistance benefits under this program (e.g. debarment or suspension of an individual involved or a determination that an applicant is not responsible based on submitted organizational management information).

#### Application Disposition

An application may be withdrawn at any time before a final funding decision is made regarding the application. Each application that is not selected for funding, including those that are withdrawn, will be retained by Program for a period of three years.

### C. Selection Factors

Selection factors for meritorious applications from the evaluation and technical peer

review for this Federal Funding Opportunity are fully described here. The technical peer review score allows for meritorious applications to be placed in rank order per Center Type. The funding recommendation to the Selection Official shall be based on rank order unless an application is justified to be selected out of rank order based upon one or more of the following factors:

1. Availability of funding;
2. Balance/distribution of funds;
  - a. By Center Types;
  - b. By education, training, and research focus areas;
  - c. By type of eligible institutions;
  - d. By type of partners;
  - e. Geographically
3. Whether this proposed CSC duplicates other projects funded or considered for funding by NOAA or other Federal agencies;
4. Program priorities and policy factors as set forth in PART I – PART IV;
5. Applicant’s prior award performance;
6. Participation of targeted groups; and,
7. Adequacy of information necessary for NOAA to make a NEPA determination and draft necessary documentation before recommendations for funding are made to the Grants Officer.

#### D. Anticipated Announcement and Award Dates

NOAA anticipates that applicants will be notified of award or declination by September, 2016. The anticipated start date for funded awards on applications for the first year is no later than September 1, 2016 and is dependent on the completion of all NOAA/applicant negotiations and documentation supporting cooperative agreement activities and the availability of funds.

## VI. Award Administration Information

## A. Award Notices

When applications recommended for funding by the Selecting Official are forwarded to the NOAA Grants Management Division by the Program Office, the applicant may be notified by Program Office by email that its application was recommended for funding and remains under consideration. The applicant must be aware that this notification by the Program Office is not the official award notice and funding is not assured. Official funding happens only when the applicant receives an award notice from the Grants Officer electronically. The official notice of award is the Standard Form CD-450, Financial Assistance Award, issued by the NOAA Grants Officer electronically through NOAA's online grants management system, Grants Online. The CD-450 award cover page is available at <http://go.usa.gov/SNMR>. The Internet Explorer browser should be used with Grants Online.

The Department of Commerce Financial Assistance Standard Terms and Conditions will apply to awards in this program. A current version of this document is available at <http://go.usa.gov/hKbj>. These terms will be provided in the award package in Grants Online at <http://www.ago.noaa.gov>. In addition, award documents provided by NOAA in the Grants Online award package may contain NOAA administrative terms related to usage of Grants Online and special award conditions unique to this program and the applicant's project, including conditions that may limit the use of funds for activities that have outstanding environmental compliance requirements and/or stating other compliance requirements for the award as applicable and will be applied on a case-by-case basis. Applicants are strongly encouraged to review award documents carefully before accepting a Federal award to ensure they are fully aware of the terms and conditions that have been placed on the award.

Once an application has been selected for funding and an award has been extended to the applicant, application materials may be considered public documents and may be released to individuals outside the agency pursuant to the Freedom of Information Act (FOIA). NOAA reserves the right to share application materials with relevant individuals and organizations for the purposes of improved coordination and collaboration.

### 1. Programmatic Terms and Conditions

The following programmatic Terms and Conditions similar to the following are expected to be incorporated into the award. statement and will be provided to the Principal Investigator as well as to the appropriate institutional official, at the time of award.

#### 1.A. Cooperative Agreement Terms and Conditions of Award

The following special terms of award are in addition to, and not in lieu of, otherwise applicable OMB administrative guidelines, DOC grant administration regulations and Financial Assistance Standard Terms and Conditions referenced in Part VI.A. and B. and other NOAA administration policies. The administrative and funding instrument used for this program will be the cooperative agreement an "assistance" mechanism (rather than an "acquisition" mechanism), in which substantial NOAA programmatic involvement with the awardees is anticipated during the performance of the activities. Under the cooperative agreement, the NOAA purpose is to support and stimulate the recipients' activities by involvement in, and otherwise working jointly with, the award recipients in a partnership role; it is not to assume direction, prime responsibility, or a decision-making role in the activities. Consistent with this concept, the decision-making role and prime responsibility resides with the awardees for the project as a whole, although specific tasks and activities may be shared among the awardees and the NOAA as defined below.

##### 1.A.1. Principal Investigator Roles and Responsibilities

The Principal Investigator will have the primary responsibility for defining the Center objectives, scope and framework within the guidelines of the NOAA Federal Funding Opportunity Announcement applicable to and incorporated by reference in this award, and for performing the education and training, and scientific research activities. The P.I. agrees to collaboration with the other members of the NOAA EPP/MSI CSC Recipient Network and to accept close coordination, cooperation, and participation of NOAA staff and advisors in those aspects of scientific and technical management of the project as described under 1.A.2. NOAA Responsibilities.

The P.I. will:

- o Establish partnership with NOAA.
- o Conduct an annual internal Centerwide review to: (i) assess whether CSC is accomplishing goals according to the milestones agreed to at the time of award; (ii) identify challenge areas; (iii) make adjustments, as appropriate; and, (iv) communicate with NOAA EPP/MSI about the results, identifying areas or adjustments, and solutions that will be implemented.;
- o Communicate to provide annual updates to the NOAA Chief Scientist, the NOAA Science Advisory Board, and relevant NOAA Councils.
- o Determine approaches for achieving goals and set project milestones.
- o Meet or exceed stated milestones.
- o Accept and participate in the cooperative nature of the NOAA EPP/MSI CSC Recipient Network.
- o Interact with all of the participants of the NOAA EPP/MSI CSC Recipient Network to determine data standards and exchange mechanisms to coordinate data received from each CSC component – Centerwide administration and Management, education and training, scientific research.
- o Determine database schema, develop data acquisition procedures, set curatorial standards for annotation, and set project milestones.
- o Ensure that the data accumulated under the NOAA EPP/MSI CSC award are made publicly available and can be retrieved from the awardee through multiple methods of querying, including simple web interfaces for common standard queries and tools to allow the downloading of large datasets.
- o Ensure that data accumulated at the NOAA EPP/MSI CSC Recipient Network are distributed to other resources in a standard data format that can be used by the stakeholders.
- o Ensure that the NOAA EPP/MSI CSC award performance meets the quality standards and costs agreed upon at the time of award.
- o Submit reports tracking progress of the CSC projects in any manner specified by award

documents or the External Review Panel.

- o Submit data for quality assessment in any manner specified for awardee by the NOAA Plan for Increasing Public Access to Research Results or the External Review Panel.
- o Adhere to the general NOAA policies regarding sharing resources, data release, and resource sharing, as well as the specific NOAA data and resource-sharing policies proposed for recipients of Federal financial assistance awards, as modified by any negotiation prior to award or that might be established by the Program, during the course of performance of this activity.
- o Submit periodic progress reports in a standard format that clearly aligns with and demonstrates activities and products from EPP/MSI funding for award objectives, as agreed upon by the Program, Technical Monitor, and the External Review Panel.
- o Accept and implement any other common policies, guidelines and procedures that are developed and approved for the CSC awards by the NOAA OEd EPP/MSI CSC Program Manager.
- o Keep the NOAA OEd EPP/MSI CSC Program Manager informed of all interactions with NOAA scientist(s), manager(s), and leadership.
- o Attend annual Directors Meetings and the Biennial EPP/MSI Education and Science Forum.
- o Ensure Center-wide application and adherence to the award terms and conditions for the funded objectives.

#### 1.A.2. NOAA Responsibilities

NOAA will have substantial programmatic involvement that is above and beyond the normal stewardship role in awards, as described below. NOAA will have substantial scientific/programmatic involvement during the conduct of this activity through technical assistance, advice and coordination by the EPP/MSI Program Manager. The Program Manager's responsibilities include but are not limited to the overall administration and management of this Cooperative Agreement.

NOAA will conduct an interim administrative review of the each EPP/MSI CSC awardee in 4th year, by an independent, expert external review team to assess whether the Program is accomplishing its goal and to set the stage for developing an additional 5-year award renewal opportunity. In the 4th year an independent expert panel review will be conducted. Additionally, the agency program officer will be responsible for the normal education and training, scientific and programmatic stewardship of the award and will be named in the award notice. The assigned NOAA scientist or manager will serve as a NOAA Technical Monitor.

NOAA shall retain the option, including with the advice of the External Review Team and/or CSC Advisory Science Board, to withhold or reduce support for any cooperative agreement that substantially fails to achieve its goals according to the milestones agreed to at the time of award.

For the awardee, a Technical Monitor will be appointed from each of the NOAA Line Offices that is primary for the participating cooperative agreement. The role of the NOAA Technical Monitor will be to facilitate and not to direct the activities. It is anticipated that decisions in all collaborative activities will be reached by agreement of the NOAA EPP/MSI CSC Recipient Network, of which the PI is a member, and that the NOAA Technical Monitor will participate in this process. The NOAA Technical Monitor shall participate as a member of the NOAA EPP/MSI CSC Recipient Network.

The Technical Monitor will:

- o Participate in awardee monitoring visit;
  
- o Participate (with the Program Officer, P.I. and the other NOAA EPP/MSI CSC Recipient Network members) in the group process of contributing to: (i) collaboratively crafting research priorities for student research, (ii) deciding optimal research approaches and protocol designs, and (iii) contributing to the adjustment of research protocols or approaches as warranted. The Technical Monitor will assist and facilitate the group process and not direct the group process;
  
- o Serve as a liaison between the awardee and the Line Office, NOAA advisory councils or boards;
  
- o Coordinate the efforts of the awardee with other participants in the Line Office

programs;

- o Facilitate collaborations with the larger NOAA mission-relevant research community and hosting of CSC faculty at NOAA facilities or other bi-directional collaboration;
- o Attend all NOAA EPP/MSI CSC Recipient Network meetings, assist in developing operating guidelines, quality control procedures, and consistent policies for dealing with recurrent situations that require coordinated action;
- o Periodically report progress to the Line Office (including Assistant Administrator), EPP/MSI CSC Program Manager, and the annual NOAA EPP/MSI CSC Recipient Network meeting;
- o Lend relevant expertise and overall knowledge of NOAA-sponsored research to facilitate the selection of scientists not affiliated with the awardee institutions who may serve on the CSC Advisory Boards, as appropriate;
- o Serve as liaison between the NOAA EPP/MSI CSC Recipient Network and the CSC Advisory Board;
- o Serve on awardee subcommittees, graduate student committees, and/or as mentors, as appropriate, and to evaluate projects submitted to the CSC for approval through the CSC administrative structure;
- o Provide advice in the management and scientific technical performance of the award;
- o Participate in data analyses, interpretations, and where warranted, co-authoring of the publication of results of studies conducted as part of the NOAA EPP/MSI CSC Recipient Network;
- o As requested, assist awardees in the development, of policies for dealing with situations that require coordinated action at CSCs; and,
- o Advocate for and engage CSC in Line Office priorities, meetings, councils, and subcommittees, as appropriate.

### 1.A.3. Collaborative Responsibilities

In order to avoid duplication, enhance collaboration, expand impact, and develop synergies, the NOAA EPP/MSI CSC Recipient Network is expected to work cooperatively with government stakeholders at the national and/or local level. Collaboration includes with other relevant NOAA award recipients, as appropriate, in implementing projects, and with the EPP/MSI Forum that will achieve EPP/MSI CSC Program purpose and description.

NOAA collaboration and coordination with the CSC award recipient shall include, as appropriate:

- o disseminating the products and impacts of the award jointly with recipient,
- o working jointly with a recipient scientist or technician in carrying out the scope of work,
- o training recipient personnel, or Federal personnel to work on the specific projects, as requested by award recipient; and,
- o limiting recipient discretion with respect to scope of work, organizational structure, staffing, mode of operations, and other management processes, coupled with close monitoring or operational involvement during performance, as determined by the award terms and conditions.

Successful applicants, as a Center award recipient, will also participate in hosting the EPP/MSI Biennial Education and Science Forum. On a rotational basis, established CSCs are required to host the biennial NOAA Education and Science Forum and lead with NOAA the planning of the event. The Forum provides a venue where Center educational and scientific research results are shared. The purpose of the Forum is to allow NOAA education and scientific research accomplishments to be presented via technical and poster sessions by students, faculty, and NOAA scientists. Funding for the Forum will be provided to the host center via the Grants process. The hosting center submits an Education and Science Forum application (including a detailed budget and budget justification) via Grants Online.

#### 1.A.4. Dispute Resolution Process

Any disagreements that may arise in scientific or programmatic matters (within the scope of the award) between award recipients and the NOAA may be brought to Dispute Resolution. A Dispute Resolution Panel composed of three members will be convened which will include: a designee of the NOAA EPP/MSI CSC Recipient Network, one NOAA designee, and a third designee with expertise in the relevant area who is chosen by the other two; in the case of individual disagreement, the first member may be chosen by the individual awardee. This special dispute resolution procedure does not alter the awardee's right to appeal an adverse action that is otherwise appealable in accordance with DOC regulations.

## B. Administrative and National Policy Requirements

### 1. Pre-Award Notice

The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements contained in the Federal Register notice of December 30, 2014 (79 FR 78390) are applicable to this solicitation and may be accessed online at <http://www.gpo.gov/fdsys/pkg/FR-2014-12-30/pdf/2014-30297.pdf>.

### 2. Uniform Administrative Guidance

The Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance) at 2 C.F.R. Part 200, adopted by the Department of Commerce through 2 C.F.R. § 1327,101, applies to awards in this program. Refer to <http://go.usa.gov/SBYh> and <http://go.usa.gov/SBg4>.

### 3. Limitation of Liability

There is no guarantee that funds will be available to make awards for this federal funding opportunity or that any proposal will be selected for funding. If an applicant incurs any costs prior to receiving an award agreement signed by the NOAA Grants Management Division Grants Officer, it does so at its own risk of not receiving an award or of these costs not being included in a subsequent award. In no event will NOAA or the Department of Commerce be responsible for any proposal preparation costs. Recipients and sub-recipients are subject to all federal laws and agency policies, regulations, and procedures applicable to

federal financial assistance awards. Publication of this announcement does not oblige NOAA to award any specific project, obligate any available funds, or provide special fishing privileges. Funded awards are subject to enforcement and termination provisions under 2 C.F.R. §§ 200.338-.342.

4. National Environmental Policy Act (NEPA). See the NEPA information in Section IV. B. of this announcement.

5. Unpaid or delinquent tax liability

If applicable under Pub. L. No. 113-235 (Division B, Section 523, and Division E, 744 and 745) or another appropriations law, an authorized representative of the selected applicant(s) will be required to provide certain representations regarding Federal felony and Federal criminal tax convictions, unpaid Federal tax assessments, and delinquent Federal tax returns." In accordance with current Federal appropriations law, NOAA will provide a successful corporate applicant a form to be completed by its authorized representative making a certification regarding Federally-assessed unpaid or delinquent tax liability or recent felony criminal convictions under any Federal law.

6. Review of Risk

After applications are proposed for funding by the selecting official, the Grants office performs administration reviews. These may include financial stability of an applicant, quality of the applicant's management system, history of performance, and the applicant's ability to effectively implement statutory, regulatory, or other requirements imposed on non-Federal entities. Upon review of these factors, if appropriate, special conditions that correspond to the degree of risk may be applied.

C. Reporting

Financial and performance progress reporting requirements are described in 2 C.F.R.

200.327 through 200.329, the Department of Commerce Financial Assistance Standard Terms and Conditions, and NOAA administrative terms describing Grants Online instructions, referenced in Part VI.A. and B., and further implemented as described below.

Progress reports should be submitted electronically through the NOAA Grants Online system and are due semi-annually on March 31st and August 31st for the preceding 6-month period (September 1st to February 28 and March 1st to August 31st) or portion thereof if the CSC award start or end-date falls in the middle of one of these intervals. A final comprehensive report is due no later than 90 days after the expiration date of an award. Progress reports should detail the accomplishments, outputs and outcomes that have occurred during the reporting period, correspond with the goals and objectives identified in the proposed CSC narrative and provide specific, CSC-related information. A suggested template for progress reports will be provided to grantees. Progress on each award is communicated to NOAA in the form of performance progress reports, the requirements of which are outlined in 2 C.F.R. 200.301.

Annual Student and Performance Measures Tracking System. All grantees are required to submit annually, the student tracker database Center input via a web-based application. The data entry must be completed by September 30th each year.

Award recipient host for the biennial EPP/MSI Education and Science Forum shall provide a comprehensive Forum Report no later than 90 days after the end of the Forum.

Federal Cash Transaction reports, form SF-425, should be submitted electronically through the NOAA Grants Online system and are due semi-annually on March 31st and August 31st for the preceding 6-month period (September 1st to February 28 and March 1st to August 31st) or portion thereof if the proposed CSC start or end-date falls in the middle of one of these intervals. Financial reports are due for all award recipients no later than 30 days after each 6-month period. The Final Financial Status report, form SF-425, is a comprehensive financial report that is due no later than 90 days after the expiration date of an award.

The Federal Funding Accountability and Transparency Act of 2006, 31 U.S.C. 6106 Note,, includes a requirement for awardees of applicable Federal grants to report

information about first-tier sub-awards and executive compensation under Federal assistance awards. issued in FY 2011 or later. All awardees of applicable grants and cooperative agreements are required to report to the Federal Sub-award Reporting System (FSRS) available at [www.FSRS.gov](http://www.FSRS.gov) on all sub-awards over \$25,000. See 2 C.F.R. Part 170.

## VII. Agency Contacts

For further information please contact Audrey Trotman (Federal Program Officer) for administrative and technical questions, telephone 301-628-2902, fax 301-713-9465, or e-mail [Audrey.Trotman@noaa.gov](mailto:Audrey.Trotman@noaa.gov). The alternative technical contact is Jacqueline J. Rousseau, telephone 301-628-2905 or e-mail [Jacqueline.J.Rousseau@noaa.gov](mailto:Jacqueline.J.Rousseau@noaa.gov). The Program web site [www.epp.noaa.gov](http://www.epp.noaa.gov) for published Frequently Asked Questions as additional guidance during the preparation of applications.

## VIII. Other Information

### A. Optional Informational Webinars

Two optional informational webinars with the NOAA Educational Partnership Federal Program Office will occur on December 17, 2015 and February 2, 2016 (time 3:00 p.m. Eastern Time). Interested applicants should register by contacting [oed.epp10@noaa.gov](mailto:oed.epp10@noaa.gov) and include in the Subject line of the e-mail: "Register for CSC FFO Webinar - Need Details" and provide the interested party's name, institution, telephone number, and email address. An email response from [oed.epp10@noaa.gov](mailto:oed.epp10@noaa.gov) will be sent with the login information and date for the webinar. Whenever possible, individuals from the same institution should join the webinar from the same computer/phone line. After the events, webinar information will be posted at [www.epp.noaa.gov](http://www.epp.noaa.gov).

### B. Access to Review Information

All applicants shall receive summary comments generated from the technical review. Reviewers will be anonymous to maintain the integrity of the peer review process. Data for the competition will be posted at [www.epp.noaa.gov](http://www.epp.noaa.gov) no later than July 30, 2016.

### C. Confidential Aspects of Applications and Awards

#### Access to Information

NOAA will not release the names of applicants submitting proposals unless ordered by a court or requested to do so by an appropriate NOAA official and administrative protocol (e.g. publication of a ranked list of projects deemed ready and eligible). Applicants can use a NOAA public search feature to find out information about NOAA awards <https://grantsonline.rdc.noaa.gov/flows/publicSearch/begin.do> or go through the Freedom of Information Act (FOIA), 5 U.S.C. § 552, process to request more information about grant competitions. More information about the NOAA FOI process is online at [www.rdc.noaa.gov/~foia/](http://www.rdc.noaa.gov/~foia/).

Department of Commerce regulations implementing the FOIA are found at 15 C.F.R. Part 4, which sets forth rules for DOC to make requested materials, information, and records publicly available under FOIA. Applications submitted in response to this FFO may be subject to requests for release under the Act. In the event that an application contains information or data that the applicant deems to be confidential commercial information which is exempt from disclosure under FOIA, that information should be identified, bracketed, and marked as Privileged, Confidential, Commercial or Financial Information. Based on these markings, the confidentiality of the contents of those pages will be protected to the extent permitted by law.

### D. Definitions

Direct Student Support means CSC funds directly paid for support of CSC-support-eligible post-secondary student in the budget subcategories: tuition; undergraduate student scholarship; graduate student fellowship; travel (to participate in experiential research at NOAA facilities or other CSCs or NOAA programs, present at scientific conferences/meetings, training, professional development); stipend (for laboratory/computer/equipment fees, books, transportation and lodging support when conducting CSC/NOAA research activities – excludes cost of general research materials and supplies routinely used in higher education, or expenses for research facilities, vehicles,

vessels, computer-use costs); and registration (for conferences or workshops or Forum). Annually, a minimum of 50% percent (50%) of the total CSC funding is mandated for direct student support.

Evaluation means the process of systematic determination of significance or value or worth when compared using established criteria against a set of standards or a baseline.

Institutional Award means a grant or cooperative agreement under which funds should be initially awarded based on competition with the intent to maintain a long-term partnership between NOAA and the recipient so that new awards may be made on a noncompetitive basis if the recipient performs satisfactorily and submits the appropriate application document, and if the results of the periodic reviews and the renewal application validate the effectiveness and continued desirability of the use of institutional awards for the program.

Minority means Alaskan Native, American Indian, Asian-American, African-American or Black, Hispanic American, Native Hawaiian, or Pacific Islander.

NOAA EPP/MSI CSC Recipient Network means the award recipient CSC Center Director or designee, EPP/MSI Program Manager, CSC Program Manager, NOAA Technical Monitor, as standing members and shall include as ancillary members, a GMD representative as required, and OEd Data Management Team, as appropriate.

NOAA Experiential Research and Training Opportunity (NERTO) means structure in-residence training opportunity (see [www.epp.noaa.gov](http://www.epp.noaa.gov); <http://go.usa.gov/c2Gpz>).

Outcome means changes that show movement towards achieving ultimate goals that are the intended long-term end state of a program.

Output means quantitative or qualitative immediate results of an action, activity, project or program. An output can be products or services or events, etc.

Structured activities means NOAA mission related activities at national meetings like American Geophysical Union (AGU), American Meteorological Society (AMS), Association for the Sciences of Limnology and Oceanography (ASLO), and/or University Day.

Student research/training experience at NOAA means any post-secondary student conducting NOAA mission-critical STEM, natural resources management and/or policy activities at any NOAA Center, Lab or other NOAA facility for a minimum period of forty (40) consecutive working days, (or may be achieved, in field or campaign settings, when meeting 240 contact hours) with a NOAA mentor.

Student trained means any post-secondary student (supported by CSC or other funding) in a postsecondary degree program that successfully completes (with a grade of B or higher) a minimum of one CSC course to develop knowledge and skills relevant to the NOAA mission-relevant disciplines for the Center award.

Student participation in CSC research means post-secondary student completes experiential NOAA mission-related research for a minimum of 8 weeks.

Underrepresented means demographic groups that have disproportionately less representation in specific workforce careers than in the populace.

Underserved means individuals or groups that have traditionally not had access to programs and activities or experiences, usually for reasons of race/ethnicity, income, language, location, social status, and religion.

U.S. Citizen means to be a citizen of the United States of America as determined by Federal law.