CREST Outcomes and Outputs (2016-2021)
**Education Outcomes**

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

**Outcomes**
- Increased quantitative and analytical skills
- Increased competence in applying STEM to decision making, policy and management, and,
- 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.**

**Outcomes**
- The number of degrees earned annually in NOAA mission-related disciplines.
- 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.**

**Outcomes**
- 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
- 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 URMs in NOAA mission-relevant fields.**

**Outcomes**
- 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
- Increased number of URM students who select to pursue higher education in NOAA mission fields
Scientific Research Outcomes

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

**Outputs 1**
- Number of research collaborations with NOAA and CSC faculty, staff and students.
- Number of NOAA scientists serving as mentors and advisors for student research.
- Number of intra-institutional collaborative partnerships established and maintained in support of NOAA’s mission.
- Number of uses of NOAA data in research and tool development.
- 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**
- Number of peer reviewed publications, presentations, and tools developed by faculty, staff and students.
- Use of CSC research results and tools by NOAA and other stakeholders.
- Number of instances CSC publications are cited.
- Number of CSC students, staff or faculty recognized nationally for CSC research.
CREST Administration Outcomes

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

**Output**

- 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**

- Number of structured activities to recruit and retain students, particularly from URM communities, in NOAA mission-relevant higher education programs.
- 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**

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

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

**Output**

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