Building Relationships Across Disciplines and Geography – the NOAA Cooperative Institutes Program

Philip L. Hoffman
NOAA Cooperative Institute Program Director
NOAA Research

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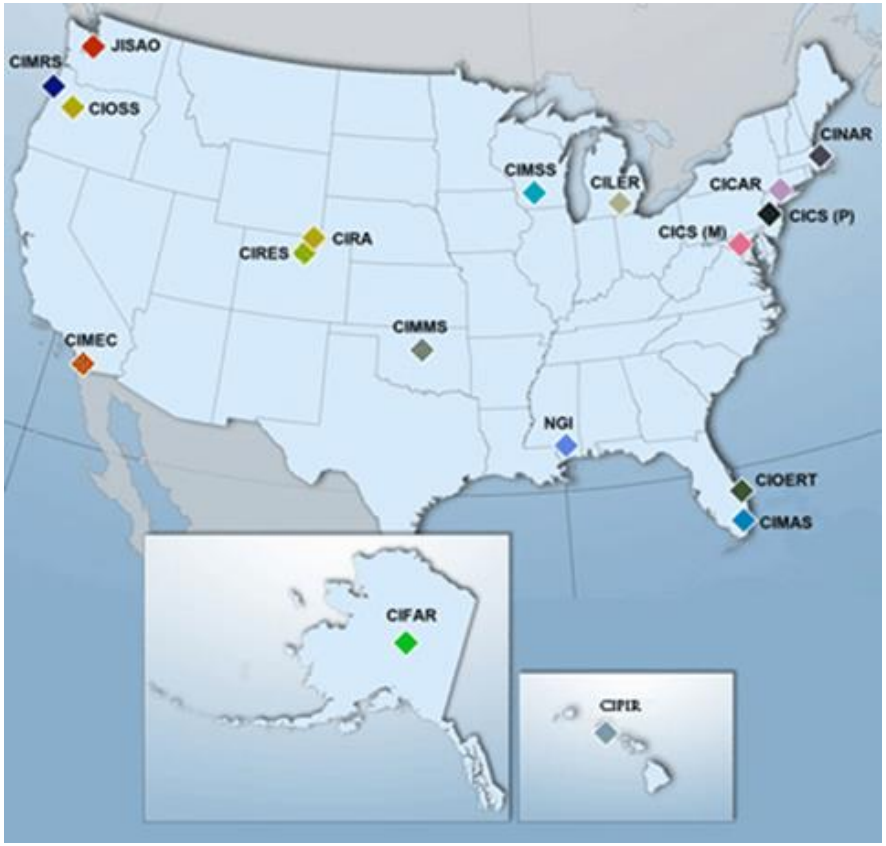
The Key Questions

- What's a CI?
- How did NOAA get into the CI business?
- How do CI's work?
- What does NOAA get from the CI community?

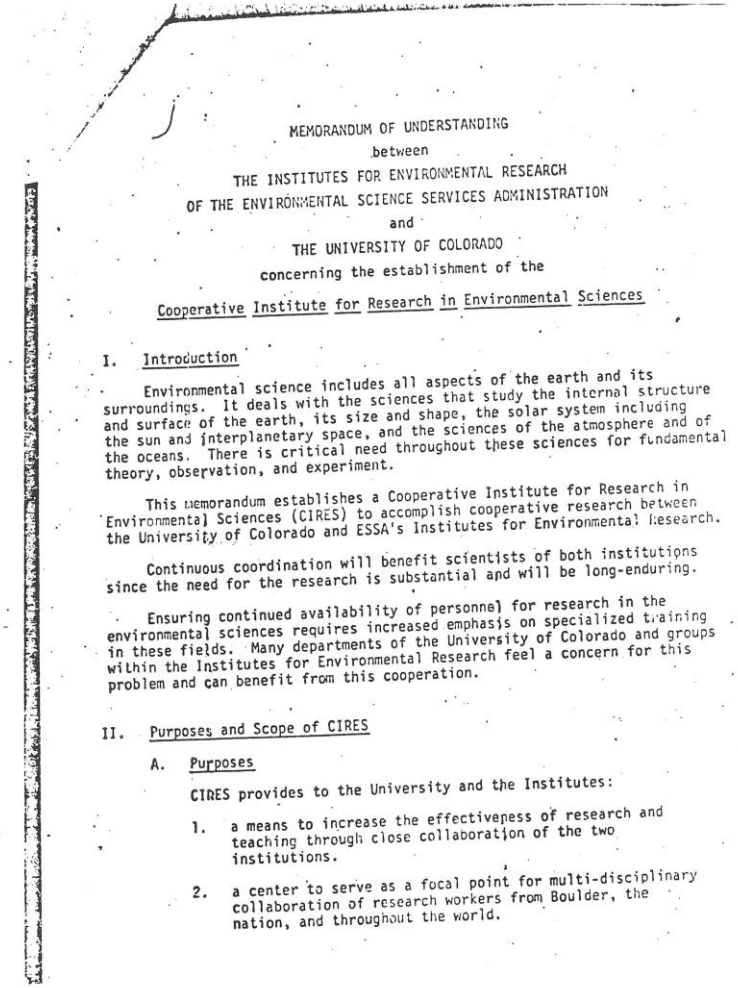


What is a NOAA CI?

- Conduct long-term basic & applied research relevant to all of NOAA's mission goals.
- Educate and train some of NOAA's future workforce.
- Provide NOAA with world-renown expertise.
- Advocates for NOAA Research Portfolio.

How did NOAA get into the CI Business?

- First established by the federal Environmental Sciences Service Administration (ESSA) in 1967.
- Folded into NOAA in 1970
- Minimal growth through early 1990's
- Expanded dramatically through 2010
- Program moved from Boulder to DC in 1996



MEMORANDUM OF UNDERSTANDING
between
THE INSTITUTES FOR ENVIRONMENTAL RESEARCH
OF THE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
and
THE UNIVERSITY OF COLORADO
concerning the establishment of the
Cooperative Institute for Research in Environmental Sciences

I. Introduction

Environmental science includes all aspects of the earth and its surroundings. It deals with the sciences that study the internal structure and surface of the earth, its size and shape, the solar system including the sun and interplanetary space, and the sciences of the atmosphere and of the oceans. There is critical need throughout these sciences for fundamental theory, observation, and experiment.

This memorandum establishes a Cooperative Institute for Research in Environmental Sciences (CIRES) to accomplish cooperative research between the University of Colorado and ESSA's Institutes for Environmental Research.

Continuous coordination will benefit scientists of both institutions since the need for the research is substantial and will be long-enduring.

Ensuring continued availability of personnel for research in the environmental sciences requires increased emphasis on specialized training in these fields. Many departments of the University of Colorado and groups within the Institutes for Environmental Research feel a concern for this problem and can benefit from this cooperation.

II. Purposes and Scope of CIRES

A. Purposes

CIRES provides to the University and the Institutes:

1. a means to increase the effectiveness of research and teaching through close collaboration of the two institutions.

2. a center to serve as a focal point for multi-disciplinary collaboration of research workers from Boulder, the nation, and throughout the world.

The Driver – collaborative research

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Long-term (5 to 10 yr) partnerships with leading science institutions that support NOAA Mission

Purpose of Partnership is to

- Promote:
  - Research
  - Education
  - Training
  - Outreach
- Obtain/Expand Research Capabilities in NOAA-related sciences

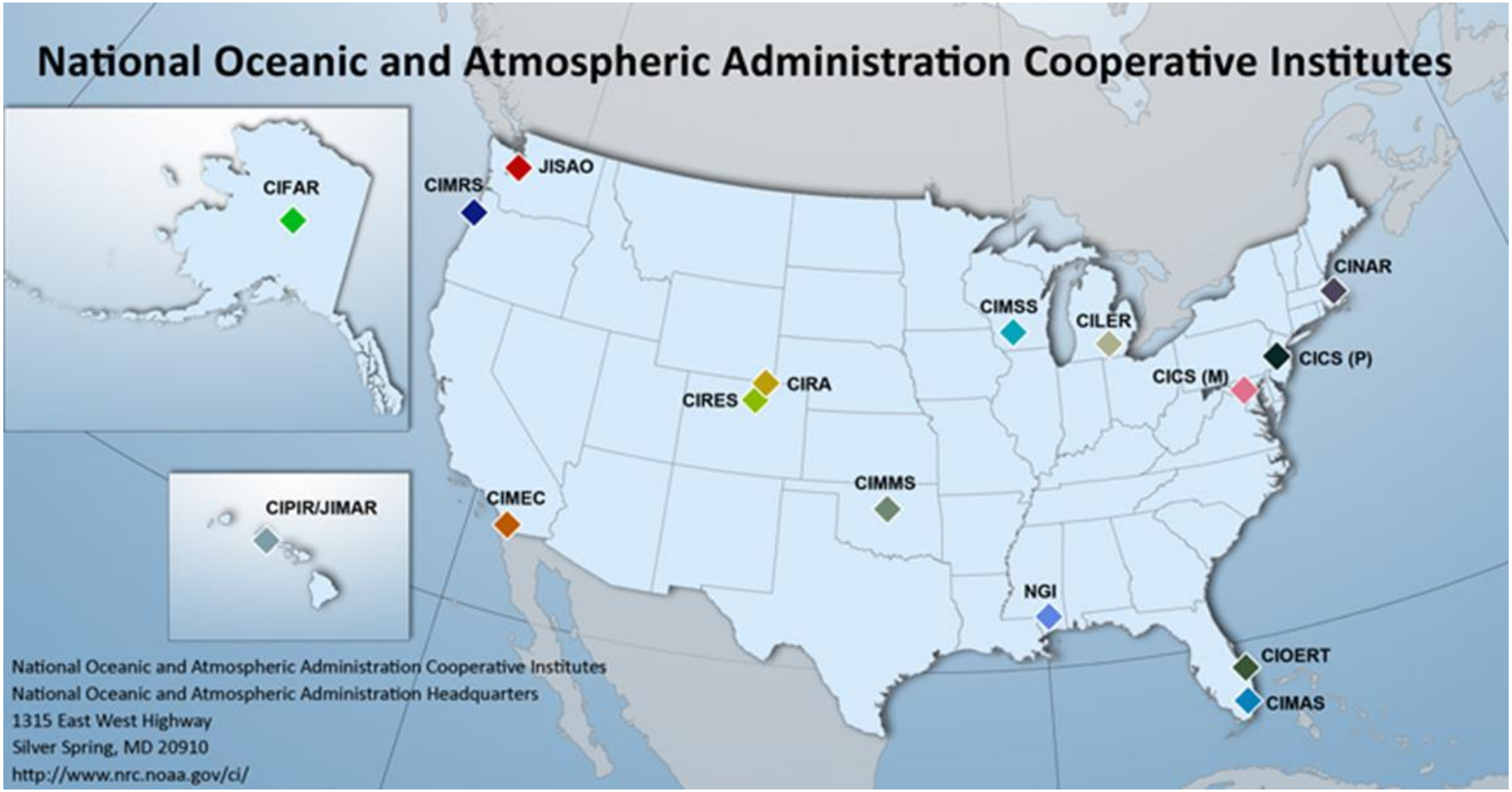
How Do CI's Work?

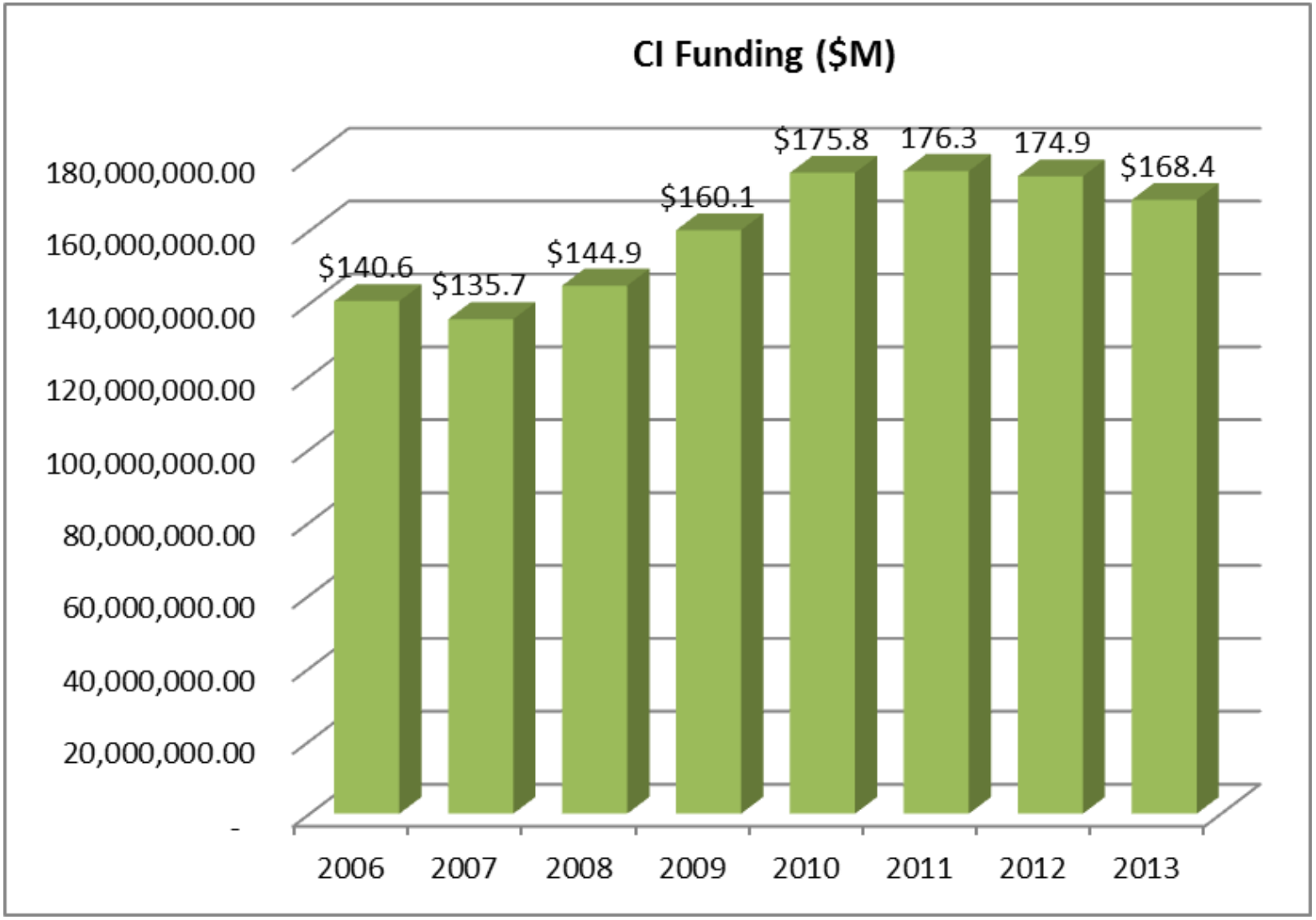
- NOAA's CI policy* requires competition after approval by the NOAA Administrator.
- An agency-wide working group evaluates NOAA's research needs to determine requirements for CI (research themes)
- *Federal Register* notice and announcement is published in grants.gov
- Proposals are evaluated by internal/external reviewers. LO AA makes final selection
- * NB NOAA Changed policy in 2004 based on SAB direction

How are CIs established?

- Financial instrument is a five-year cooperative agreement to conduct research under approved research themes (themes described in competitive announcement) (no $$ here)
- CI's can be renewed for a second 5 years based on SAB Review Recommendations in Fourth year
- Memorandum of Agreement is signed between CI's parent organization and NOAA and later incorporated into award
- Projects funded throughout the life of the cooperative agreement are amended to the initial award ($$$)

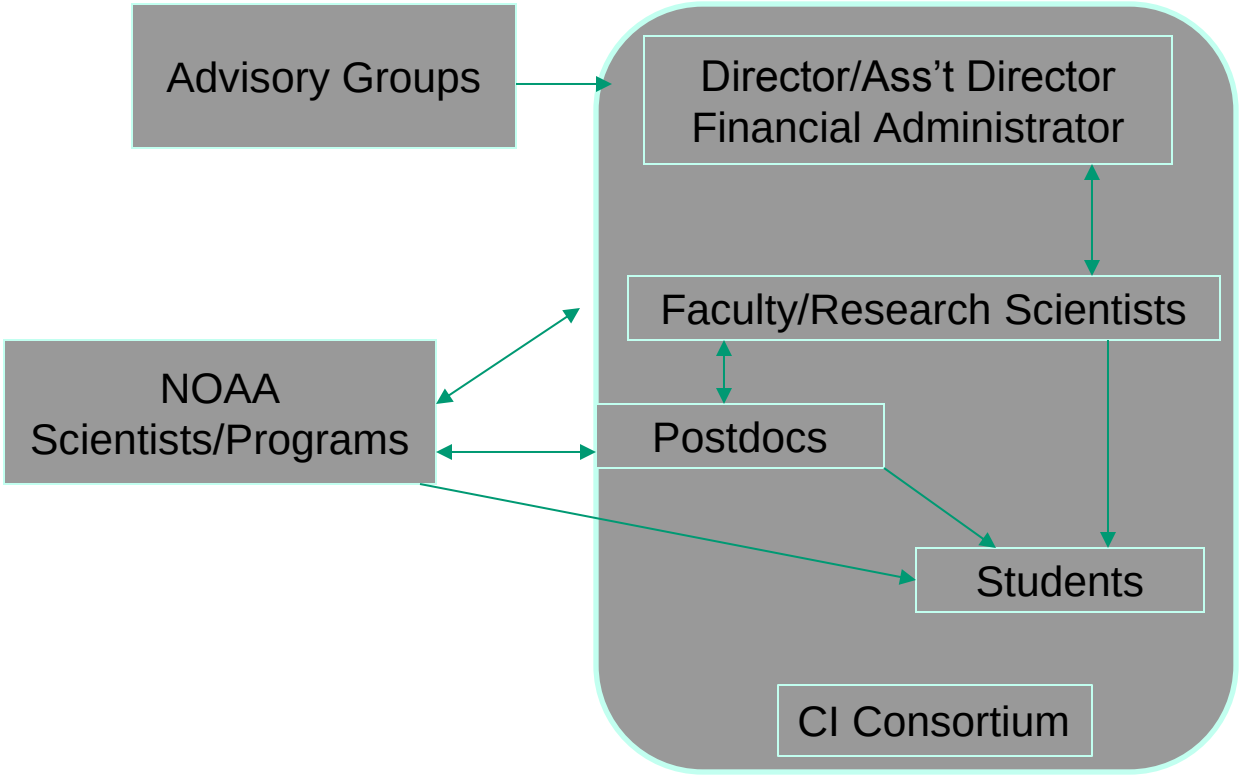
The Results are in:




CI Funding ($M)
180,000,000.00
160,000,000.00
140,000,000.00
120,000,000.00
100,000,000.00
80,000,000.00
60,000,000.00
40,000,000.00
20,000,000.00
-
$140.6
$135.7
$144.9
$160.1
$175.8
176.3
174.9
$168.4
2006
2007
2008
2009
2010
2011
2012
2013

How do CIs operate?

- Receive small amount of annual base funds (Task I) for administrative costs.
- Science funds provided by NOAA programs, Laboratories and offices & sometimes other feds!

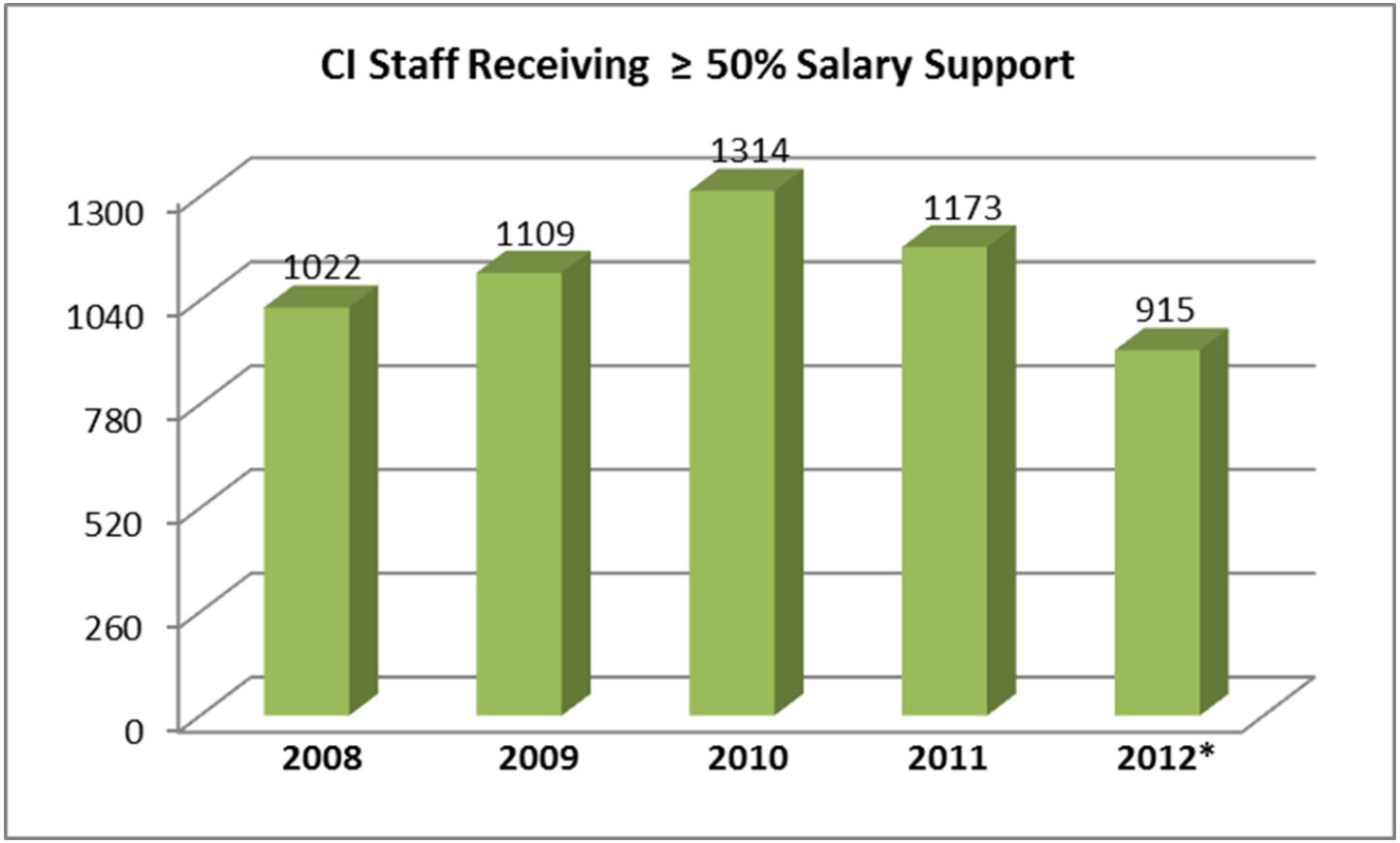


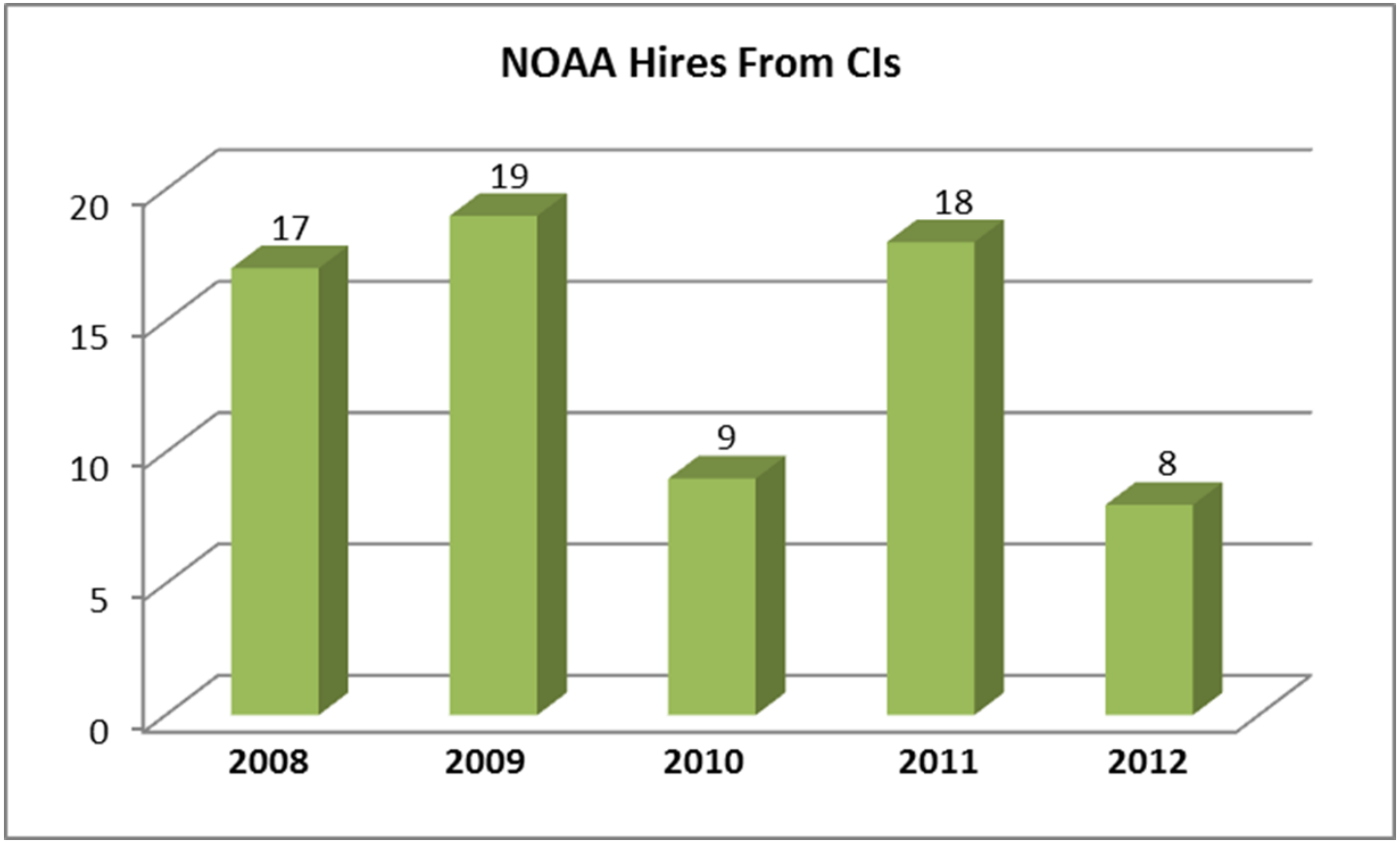
How is CI Performance Reviewed?

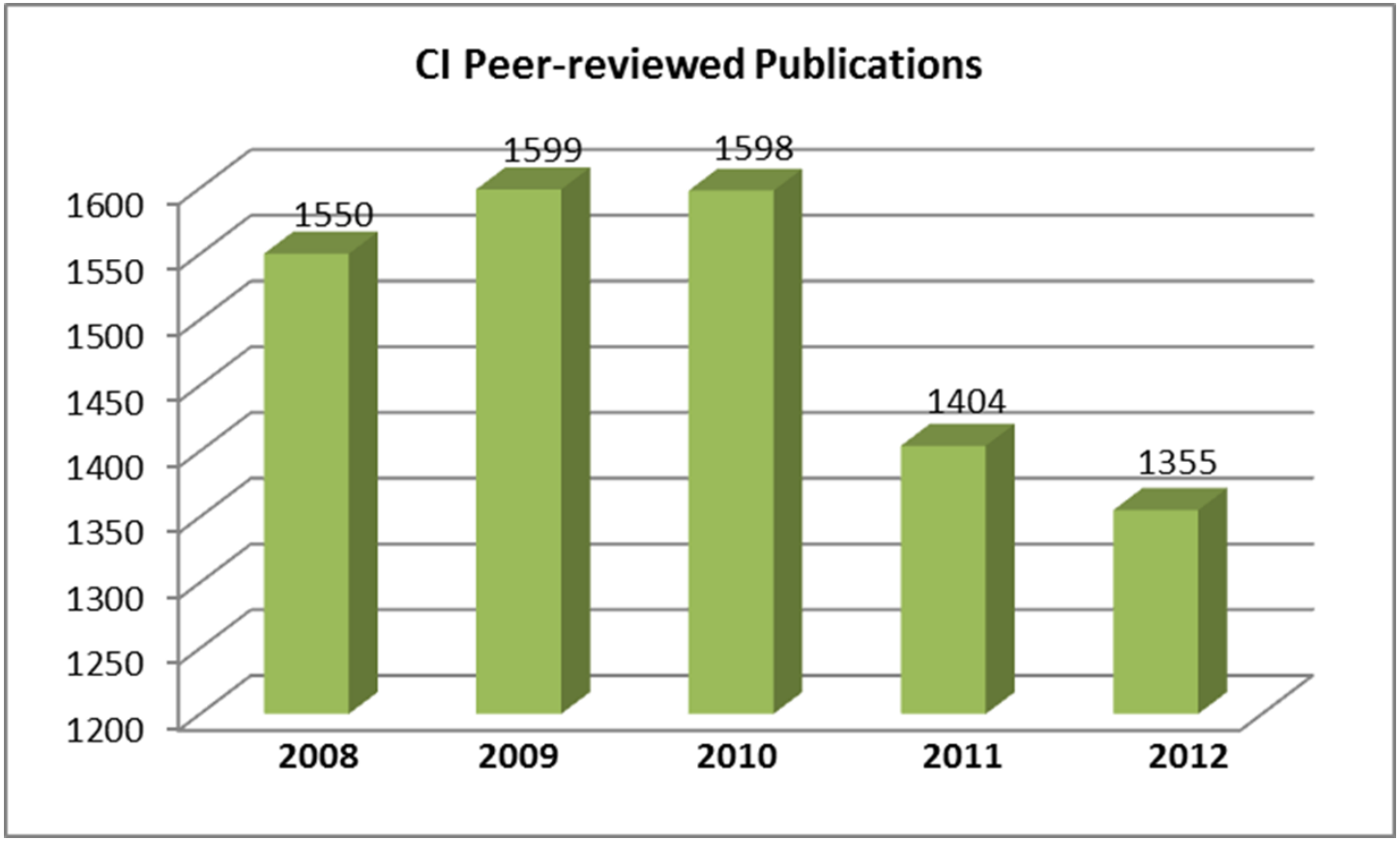
- In their fourth year, an extensive peer review is conducted by NOAA's Science Advisory Board
- Award is renewed up to five additional years based on NOAA's research needs and the outcome of the review
- Performance reports are reviewed by program manager and programs
- Daily interactions

What does NOAA get from the CI Community?

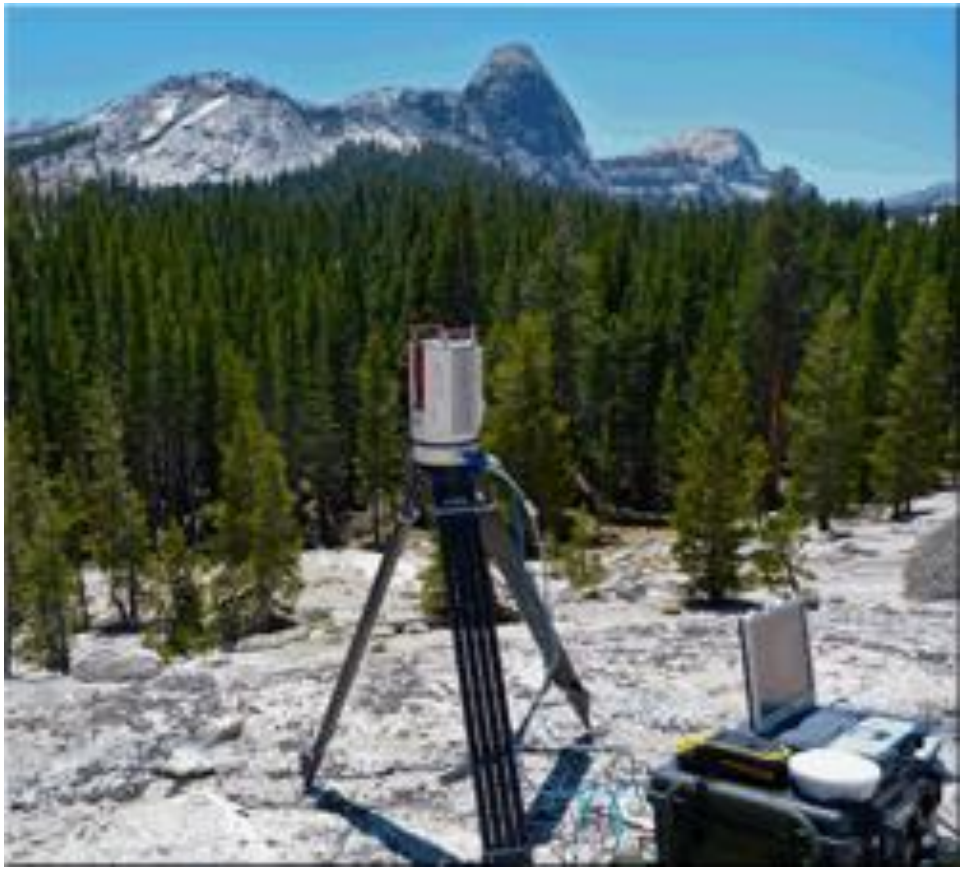
- High Caliber foundational and applied science
- Established Faculty/Research Scientists
  - Post-docs
  - Students
- Access to University/Institute research vessels, high-performance computers, laboratories
- Research coordination with other state and local organizations
- Reduced indirect costs (at some CIs)
- Leveraged funding


CI Staff Receiving ≥ 50% Salary Support
1300
1040
780
520
260
0
1022
1109
1314
1173
915
2008
2009
2010
2011
2012*


NOAA Hires From CIs
20
15
10
5
0
17
19
9
18
8
2008
2009
2010
2011
2012


CI Peer-reviewed Publications
1600
1550
1500
1450
1400
1350
1300
1250
1200
1550
1599
1598
1404
1355
2008
2009
2010
2011
2012

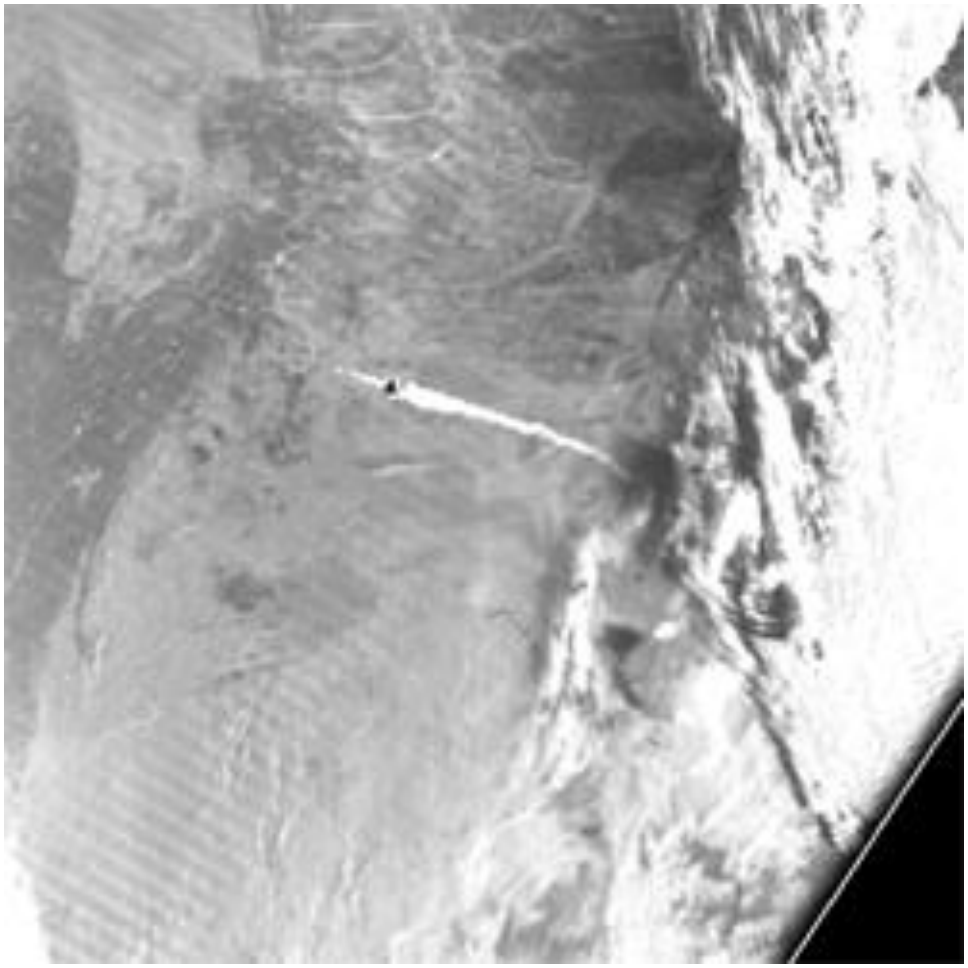
CIRES uses LIDAR in the snow



CIRA Cracks the night weather code

CIOERT – FLO-SEE: Catching the Caribbean Rough Shark

Tracking the Russian Meteor



SAB Advice to NOAA

- Communication
  - Overall, NOAA needs to be more proactive in engaging with CI's regarding long term planning of the CI.
  - 1) Colocation
  - 2) Host additional workshops that encourage face-to-face dialogue among participants (not just scientific presentations)
  - 3) Create a strategy for sharing information on CI expertise and management needs among potential CI participants and NOAA sponsors.
- Funding
- Education & Outreach

End of the Line – Questions?