



# Update from NOAA's Climate & Global Change Postdoctoral Program

A Presentation to the  
NOAA Science Advisory Board

Wayne Higgins, PhD  
Director

Climate Program Office  
Office of Oceanic and Atmospheric Programs

UCAR  
COMMUNITY  
PROGRAMS

 CPAESS  
Cooperative Programs for the  
Advancement of Earth Science Systems



July 23, 2020

# NOAA Climate & Global Change Postdoctoral Program

## Purpose

**To provide an update to the Science Advisory Board on:**

- NOAA's Climate and Global Change Postdoctoral Program.
- Recent Program activities and updates motivated by the Climate Working Group's Review of the Program.
- NOAA's Response to the Climate Working Group's Review of the Program.

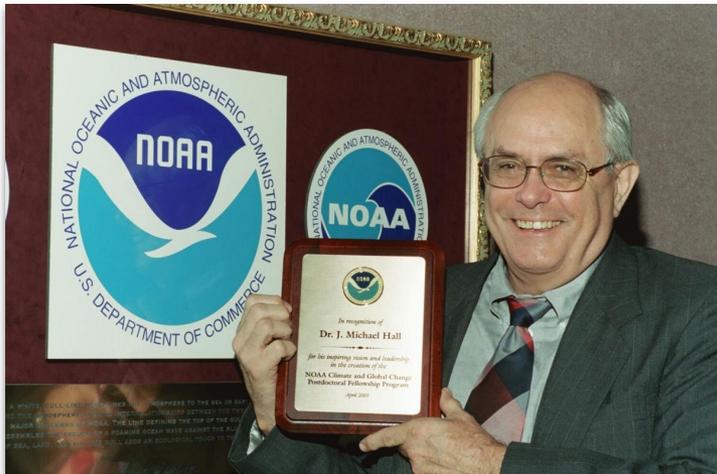
## Desired Outcome

- This briefing is to provide the SAB with an **informational update**; no action is currently required by the SAB.

# NOAA Climate & Global Change Postdoctoral Program

C&GC

Since 1991, the NOAA Climate & Global Change Postdoctoral Program has been growing the next generation of climate experts. Imagine the future....



**Michael Hall**  
Former Director of the NOAA  
Climate Program Office  
Founded the C&GC Postdoc  
Program in 1990



**William D'Andrea**  
Class 18



**Seeta Sistla**  
Class 23

## Climate Working Group Review

**Objectives:** Examine and evaluate the NOAA Climate and Global Change Postdoctoral Program needs, the history and current program model, the value of the program, and the best ways to proceed given the possibility of several different budget scenarios

**Outcomes:** Convened under the auspices of the SAB's Climate Working Group, the Panel prepared a report, including recommendations on the quality, relevance, and performance of the NOAA Climate and Global Change Postdoctoral Program

**Theme:** Climate and global change research ensures that we are a weather-, water-, and extreme events-ready nation

# NOAA Climate & Global Change Postdoctoral Program

2019 CWG

## Climate Working Group Review

### Key Findings:

- 1) Excellent Program
- 2) Serving the nation and society
- 3) Fostering the development of the next generation of leaders
- 4) Building the nimble and interdisciplinary community

### Key Recommendations:

- 1) Funding at least ten postdoctoral Fellows per cohort
- 2) Improving Fellow Interaction with NOAA
- 3) Enhancing diversity and inclusion
- 4) Incorporating ongoing and well-maintained metrics
- 5) A note about alternative funding

NOAA Climate & Global Change Postdoctoral Program

**Report from the Program Review Chair**

Following presentations on the state of the program, the program status, and the program impacts, the Review Panel Members for the NOAA Climate and Global Change Postdoctoral Fellowship Program Review met in closed session to discuss their findings.

The Review Panel Members found:

- 1. Excellent program.** This excellent Program promotes NOAA's mission and prestige both nationally and internationally, as demonstrated by Fellow and Alumni scientific achievements, citations, innovations, prestigious appointments, and leadership roles.
- 2. Serving the nation and society.** In service to the nation and society, the Program supports improving and expanding prediction within the earth system; combining observation and modeling; developing new tools and techniques and identifying and quantifying new interactions in weather, water and climate; and enabling nationwide communication of resilience and adaptation strategies.
- 3. Fostering and developing the next generation.** The Program fosters and develops the next generation of earth system and climate science leaders by supporting independent scientists and emerging leaders who build the new and transformational tools, technologies, understanding, and innovations.
- 4. Building the nimble and interdisciplinary community.** The Program builds the nimble and interdisciplinary community required to address emerging issues in weather, water, and climate.

Consistent with these findings, the Review Panel Members recommend:

- 1. Funding at least ten postdoctoral fellows per cohort.** The Program is compromised by any cohort with fewer than ten (10) postdoctoral Fellows. The Program selects for excellence across a broad range of disciplines that are essential to addressing emergent and inherently interdisciplinary areas of national need and opportunity, much like an index fund. Addressing the urgent diversity of topics and approaches (more than ten relevant, distinct, and essential disciplines) is only possible with a broader group of postdoctoral Fellows. In addition, at least ten fellows per year would allow for the development of a diversely-trained cohort of leaders to address the nation's urgent emerging needs in climate and global change science.
- 2. Improving Fellow interaction with NOAA.** Improving fellow interaction with NOAA supports research coherence now and builds networks of contacts and knowledge for later. Fellow interaction with NOAA might include attending a lab review; visiting or giving a talk at NOAA headquarters; or joining NOAA scientists at the AGU [American Geophysical Union] lunch or at the Biannual Summer Institute.
- 3. Enhancing diversity and inclusion.** Improving diversity and inclusion relative to the Fellows themselves and the host institutions is critical to advancing the field. Enhanced diversity and inclusion might be achieved by enhancing the language on the website and

# NOAA Climate & Global Change Postdoctoral Program

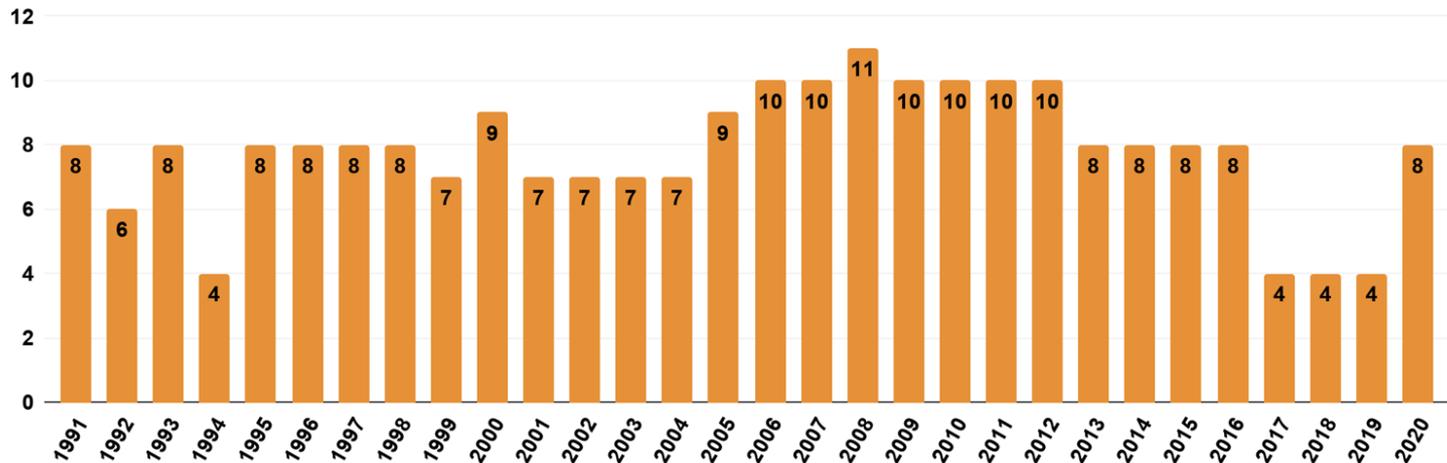
## UPDATES

### Review Panel Recommendation #1:

Restore the number of postdocs back to 8-10 per year

#### NOAA Update:

- NOAA is supporting 8 Fellows in FY2020.
- Beyond FY2020, 8-10 Fellows is a good target, contingent upon budget.



Total Number of C&GC Fellows: 238  
Average Number of Fellows Per Year: 8

# NOAA Climate & Global Change Postdoctoral Program

2020 CLASS



**Becki Beadling**  
Oceanography  
NOAA GFDL



**Andrea Jenney**  
Atmospheric Dynamics  
University of California, Irvine



**Xiaomeng Jin**  
Atmospheric Chemistry  
University of California, Berkeley



**Isabel McCoy**  
Atmospheric Dynamics  
University of Miami, RSMAS



**Sebastian Milinski**  
Climate Sensitivity  
NCAR Climate & Global  
Dynamics Division



**Uday Kunwar Thapa**  
Hydrological Cycling  
University of California,  
Santa Barbara



**Nina Whitney**  
Coupled Ocean/Atmosphere  
Woods Hole Oceanographic  
Institute



**Madeleine Youngs**  
Atmospheric Dynamics  
New York University

# NOAA Climate & Global Change Postdoctoral Program

## UPDATES

### Review Panel Recommendation #2:

Increase interactions between NOAA and the

Program

#### NOAA Update:

- Communicate NOAA priorities, gaps, and opportunities to the application solicitation process and focus discussions in the Summer Institutes.
- Require proposals to describe specific NOAA interactions.
- Provide opportunities for Fellows to visit NOAA, use NOAA's data/models for their research, or otherwise connect with NOAA.
- Communicate accomplishments to NOAA leadership and the community
  - Write “hot items” about Fellow publications.
  - Include Fellow seminars in the OneNOAA science seminars.
  - Summarize program information on the UCAR website.

# NOAA Climate & Global Change Postdoctoral Program

2019 INSTITUTE

## 2019 Summer Institute in Steamboat Springs, CO

Theme: Climate science in the age of realized climate change.

### 2019 Highlights:

- 12 current and recent former Fellows attended.
- Initiated a pilot to advance “Fellow-NOAA” interactions.
- NOAA Staff attended the institute, gave scientific presentations, and facilitated discussions.
- Developed plans to further expose Fellows to the work at NOAA.

The 2021 Summer Institute is being planned now.

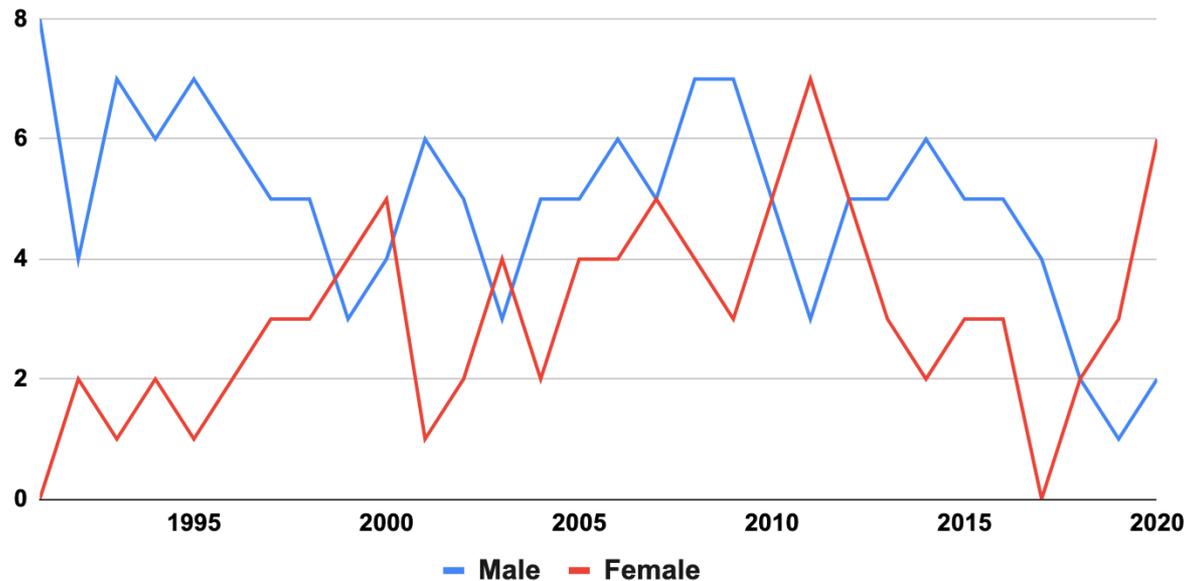
# NOAA Climate & Global Change Postdoctoral Program

## UPDATES

### Review Panel Recommendation #3: Enhance diversity and inclusion (D&I)

#### NOAA Update:

- Added D&I Training to C&GC Steering Committee meetings.
- Added a rule to consider D&I for selection of Fellows.



Total Percentage:  
Male: 64%  
Female: 36%

Average Per Year:  
Male: 5  
Female: 3

# NOAA Climate & Global Change Postdoctoral Program

## UPDATES

### Review Panel Recommendation #4: Incorporate ongoing and well-maintained metrics

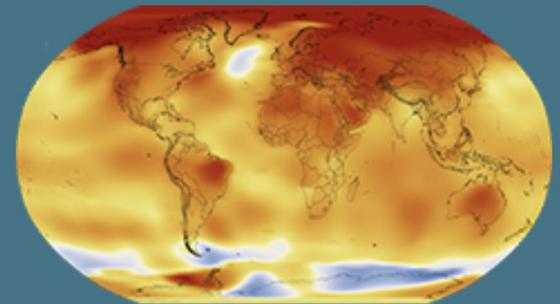
#### NOAA Update:

- Based upon the recommendation of the NOAA Climate and Global Change Program Review Panel, CPAESS has continued to collect and maintain metrics.
- The metrics are kept and maintained at UCAR.
- Metrics are updated on an annual basis to align with the NOAA Climate and Global Change Fellowship application process.



**NOAA Climate &  
Global Change  
Postdoctoral  
Program**

[See Current Awardees &  
Alumni Database](#)



# NOAA Climate & Global Change Postdoctoral Program

C&GC

## By the Numbers

- 238 postdoctoral fellowships.
- 978 publications have resulted from the C&GC Postdoctoral Program with an average of 4.4 publications per Fellow.
- C&GC Fellows have been hosted at 60 different U.S. institutions.
- C&GC Alumni now work at 134 different institutions worldwide.
- 2 MacArthur Fellowship “Genius Grant” awardees.



*James Girton, Class 11*

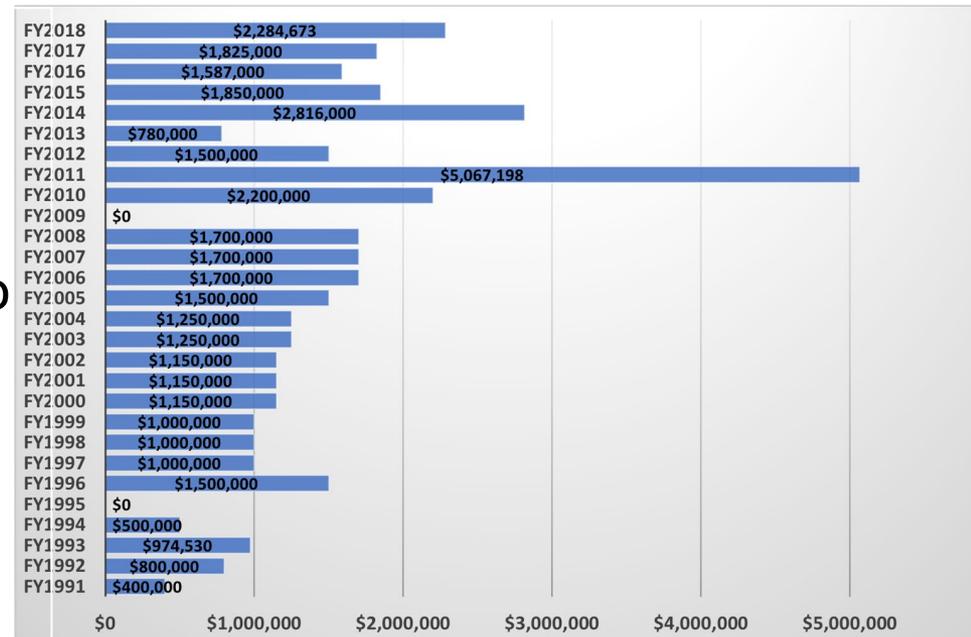
# NOAA Climate & Global Change Postdoctoral Program

## UPDATES

### Review Panel Recommendation #5: Note about alternative funding models

#### NOAA Update:

- Funding increases in recent appropriations funded 8 Fellows in 2020, with plans to maintain support.
- Increasing Program visibility and relevance within all of NOAA.



Annual C&GC Program Funding



# QUESTIONS?

Wayne Higgins | [wayne.higgins@noaa.gov](mailto:wayne.higgins@noaa.gov)