



# EarthCube Science Standing Committee Charter

*DRAFT: MAY 5, 2015*

## Preamble

The Science Standing Committee (hereafter Science Committee) maintains a connection between the academic geoscience and technology communities in EarthCube, and ensures that end user geoscientist needs, requirements and aspirations are identified and prioritized.

Changes to this document may be motivated by any Science Committee Member, as defined in §2.1.2. Proposed changes will normally be considered and discussed once every year (defined as June 1 – May 31), at the last meeting before the Science Committee prepares its annual report to the Leadership Council. All changes must be approved by a majority vote of Science Committee members present on the call.

## 1. Mission and Goals of the Science Committee

The mission of the Science Committee is to ensure community science goals are realized through the development of cyberinfrastructure, that will enhance geoscientists ability to characterize and understand complex Earth systems (from sun-Earth interactions to Earth's core, from the ocean surface to the sea bed, and throughout Earth History) by providing enhanced access to data, and new technologies and methods to integrate, analyze and visualize those data.

The goal of the Science Committee is to serve the working geoscience community by:

- **Compiling and expressing** the geoscience community's needs, wishes and requirements for the EarthCube cyberinfrastructure.
- **Ensuring** an explicit connection exists between the community's science goals and technical function, by defining workflows (the series of activities necessary to realize a specific science goal); identifying use cases and developing setup challenges to help evaluate cyberinfrastructure components.
- **Aligning** EarthCube-enabled science with community priorities, to revolutionize the ways geoscientists learn, collaborate and advance knowledge of complex Earth systems.
- **Encouraging, engaging and enabling** future generations of geoscientists.
- **Promoting** open science, through the development and deployment of easy-to-adopt standards, tools and cyberinfrastructure that can be exploited throughout the entire research lifecycle.

## 2. Science Committee Membership, Leadership and Operations

The processes outlined here provide a foundation for Science Committee operations. These processes are flexible and may be adapted as necessary.



## 2.1 Registration

Membership is by registration. Registrants are required to provide their name, organizational affiliation and a current e-mail address, and to reconfirm these details annually (*prior to November 30*), to ensure all Science Committee members remain subscribed to the listserv.

### 2.1.1 Participation

Participation in the Science Committee is based on volunteered effort. EarthCube is intended to benefit all areas of geoscience research, and volunteers from across the geoscience community are encouraged to join the Science Committee. A significant amount of research and cyberinfrastructure also is supported by the National Science Foundation (NSF), through a variety of projects and programs, and volunteers also may join the Science Committee expressly to participate in activities that are beneficial to projects that actively support these programs.

It is expected the varying circumstances and expectations of individual volunteer members will be manifested through different degrees of commitment to and engagement in Science Committee activities. Specific mechanisms exist to accommodate different levels of effort and to encourage members' commitment to key activities (*e.g.*, the Science Committee's co-chair positions, and participation in working groups).

### 2.1.2 Membership

All members of the Science Committee have full voting rights, which includes the right to vote for the Science Committee co-Chairs, and will receive communications and notifications of Science Committee activities via the Science Committee listserv. Membership is evidenced by participation in Science Committee activities (teleconferences, working groups, workshops, *etc.*), as demonstrated by meeting minutes and participant lists, or by annual reregistration. Members who do not participate in Science Committee activities *must* reregister (*prior to November 30*) annually.

## 2.2 Leadership

Two elected co-Chairs have equal and joint responsibility for the Science Committee's operations and functionality. One of the co-Chairs will serve as the Science Committee's representative on EarthCube's Leadership Council. The second co-Chair will chair and develop the agenda for Science Committee meetings, and be responsible for compiling the Science Committee's annual report (including the budget explanatory notes) to the Leadership Council.

### 2.2.1 co-Chair Terms

The Science Committee's Leadership Council representative normally (beginning *June 1*) will serve for two years, with no opportunity for reelection for a consecutive term. The second co-Chair normally (beginning *January 1*) will serve for one year, and may be reelected for one consecutive term. The overlap in the terms served by the respective co-Chairs ensures the preservation of continuity in the Science Committee's operations and functionality. There is no bar to the second co-Chair subsequently standing for election as their Committee or Team's representative on the Leadership Council.



### 2.2.2 Nomination of co-Chairs

Nominations for either co-Chair position may be submitted by any committee member (self-nominations are also accepted) and will close on *December 1*. All nominees are subject to review by EarthCube's Nominations Committee, whose goal is to seek disciplinary breadth, inclusivity and avert conflicts of interest (as described in the EarthCube Charter §3.1.4). The current co-Chairs, in consultation with EarthCube's Nominations Committee, will assure there is at least one acceptable nomination for each incoming leadership position. Candidates for election will provide a short biographical sketch (for posting on the Science Committee web page) that explains their qualifications for and interest in the co-Chair positions, and are encouraged to attend and make themselves known to the Community at the Fall AGU Meeting.

### 2.2.3 Voting

Each co-Chair shall be elected by a majority of Science Committee members. A quorum of 50% of the membership (*as of November 30*) is required for a vote to be valid.

### 2.2.4 Elections

Elections will be held electronically for a two-week period, with voting to be completed and the result announced by *December 31*.

### 2.2.5 Placeholders

In the event a co-Chair becomes, for any reason, unable to perform or discharge the duties of their office, or resigns the position, the Science Committee either will hold a new election or appoint a member of the Science Committee as a *locum tenens* for the remainder of their term of office. In the case of the Science Committee's representative on EarthCube's Leadership Council, the former option is preferred, but not mandated.

## 2.3 Science Committee Operations

Science Committee activities shall be transparent, equitable and inclusive. With due regard being given to all aspects of inclusivity, including, for example: ensuring representation of minorities, early-career scientists, and participation across all geoscience domains.

### 2.3.1 Meetings

The Science Committee will conduct its business by holding a minimum of four quarterly virtual meetings in each calendar year. Responsibility for convening a Science Committee meeting lies with the co-Chairs, who will be receptive to reasonable requests for meetings made by any Science Committee Member. The EarthCube office staff will be responsible for organizing the meeting at the co-Chairs' request. In-person meetings may be convened, as required, either during the annual All Hands Meeting, or during the Fall American Geophysical Union Meeting. Meeting announcements and agendas will be posted on the EarthCube web site and communicated to Science Committee via the listserv, at least three business days in advance. Every meeting will be open to any and all interested parties, and all Science Committee members may vote. Minutes will be taken by the EarthCube office staff, or another assigned party, and will be made available to Science Committee members within two working days of the meeting. Minutes will remain available for comment and change



until the next meeting, when they will be approved by a majority of voting members present. A list of action items also will be maintained by the EarthCube office staff.

### **2.3.2 Decision Making**

The Science Committee's preferred means of decision making is operational consensus. Where consensus cannot be achieved, a vote may be taken on any item that does not fall under the category of Any Other Business on the original agenda, with the decision being rendered according to the wishes of a majority of voters present.

Decisions that affect the Science Committee's *modus operandi*, such as, but not limited to changes to the Science Committee charter, must be approved by a majority vote of Science Committee members. Such votes will be administered by the EarthCube office staff and conducted electronically over a two week period. The result will be announced at the next scheduled Science Committee meeting.

### **2.3.3 Communications**

The Science Committee will utilize communication mechanisms, such as the EarthCube website, the EarthCube Monday Update, email and/or other means it deems appropriate to keep Science Committee members and the broader EarthCube community informed of its activities and operations. All communications expressly are intended to ensure the Science Committee's decisions are fair, equitable, inclusive and transparent. In cases where the Science Committee needs to communicate directly with the scientific community, it may choose to request assistance from or delegate responsibility to either the Engagement and/or Liaison team, or the Leadership Council.

### **2.3.4 Budget**

The Leadership Council will disperse a budget to the Science Committee that is sufficient to permit it to act independently. These funds can be used to support Targeted Awards, Type 2 working groups ([link to Leadership Council document required](#)), and travel by the co-Chairs and other designated individuals (such as the chair of a Science Committee Working Group) to EarthCube workshops and professional meetings at which EarthCube is represented. The budget for a Targeted Award or working group budget cannot exceed \$10,000 in any one financial year, and the cost of individual travel cannot exceed \$2,500 per trip ([link to Leadership Council document required](#)). Amounts in excess of these sums, such as might be required to support a workshop or overseas travel, require Leadership Council approval.

### **2.3.5 Science Committee Members Expenses**

Science Committee membership is voluntary and not subject to compensation for time or meeting expenses, unless those expenses are incurred through participation in a Type 2 Working Group or Science Committee workshop for which a travel budget was approved.

### **2.3.6 Fiduciary Responsibilities**

Fiduciary responsibility potentially is incumbent on any and all individuals who receive internal EarthCube funding, including, but not limited to: co-Chairs of the Science Committee; the Chair(s) of Type 2 working groups; and the members of a Science Committee workshop organizing committee. Such responsibility entails, but is not limited to, ensuring



that EarthCube's internal funds are dispersed only for the purposes and in accordance with the principles outlined in EarthCube's Policy Guidelines ([link to Leadership Council document required](#)), and are fully accounted for.

### **2.3.7 Special Interest and Working Groups**

Proposals for EarthCube Special Interest and Working Groups should be submitted to the EarthCube office on the approved form ([link to Leadership Council document required](#)).

Any EarthCube member can create a Special Interest Group focused on any topic relevant to EarthCube. There is no formal review or approval process.

Working Groups are *ad hoc* organizational units created in response to a pressing issue, opportunity, activity, or deliverable related to moving forward EarthCube goals. Working groups can emerge from the broad EarthCube community, from under the auspices of the Science Committee, or by direction of the Leadership Council. They may bridge more than one component of EarthCube's governance structure, as they serve as important mechanisms to foster collaboration and resolve issues between Committees, and can be initiated by any community member, provided they secure a minimum commitment from at least three participants representing at least three separate institutions. Involvement in a Science Committee working group is voluntary and a working group's composition should give due regard to all aspects of inclusivity, including, for example: ensuring representation of minorities; early-career scientists; and participation across all geoscience domains.

Once, after open discussion and approval by a simple majority of voters present, the Science Committee has made the decision to approve and/or form a working group its existence will be announced to all EarthCube members and there will be an open call for participation. In recommending and rendering a decision, the Science Committee should consider whether the budget is reasonable, the activities can be completed within the specified time frame, and the outcome will advance EarthCube's goals, and fulfill its mission. The provision of support in excess of the amount a Standing Committee or Team may disperse for Type 2 working group activities (\$10,000), such as might be required to cover the cost of a workshop, also requires Leadership Council approval.

The Science Committee has responsibility for tracking its working groups' progress ([link to Leadership Council document required](#)). A final report should be delivered to the Science Committee no less than 30 days after the date the working groups' activities were concluded.

### **2.3.8 Interface with Other EarthCube Governance Structures**

The Science Committee may ask volunteer members to provide a working interface with another EarthCube Standing Committee or Team. To complement the formal channels of communication through the Leadership Council, volunteer members will, on request, report directly to the Science Committee about and/or assist with any Technology and Architecture Committee, or Engagement and Liaison team activity that has relevance to the Science Committee's operations and functionality.



### 3. Review and Budget Processes

An annual report on Science Committee functions and operations during the past year (June – May) and actions planned for the next year, will be delivered Science Committee and forwarded to the Leadership Council no later than one week before the annual All Hands Meeting. On receipt of the report, the Leadership Council will review those activities and may choose (based the work that it is perceived the Science Committee will accomplish during the next year) to make recommendations to the Science Committee on strategic decisions that may, for example, involve, but are not limited to, establishing new and continuing/curtailing existing working group activities. The amount of internal funding dispersed to the Science Committee for the next financial year will be determined on the basis of budget explanatory notes attached to the annual report. These notes should indicate the purpose for which funding is sought and whether or not the funding is directed towards a new or existing activity. Due regard may be given to unforeseen contingencies in an amount that does not exceed 25% of the total amount requested.

