**ESIP Education Committee Budget Proposal September 2014**

The ESIP Education Committee Budget Proposal is composed of four components which are designed to reach out more effectively to educators with ESIP resources while continuing our commitment to deep engagement with educators at ESIP, in addition to supporting the development of a diverse community of ESIP members. The proposal includes two new initiatives which leverage existing networks in the target community ESIP Education is trying to reach, as well as proven approaches to encourage participation through community challenges.

Program Components include:

* Project 1 - Institutional Affiliation with NESTA with Teacher Workshops - $3,700
* Project 2 – ESIP/NESTA Web Seminar Summer Session: Helping Teachers Bring ESIP Member Data into the Classroom - $3850
* Project 3 – ESIP Summer Meeting Teacher Workshop - $7000
* Project 4 – Support for Graduate Student Presentation at SACNAS - $1,000

Total Budget Request - $15550

If the money for a particular project isn't used for the specific purposes identified here, it is re-allocated to the ESIP general fund, not repurposed without being approved by FiCom.

**Project 1 - Institutional Affiliation with NESTA with Teacher Workshops**

**Project Description**

1. Community Need

ESIP Education Committee seeks to continue our efforts to reach out to a larger audience of Earth and space science and environmental science educators than we have previously been able to through in-person ESIP workshops, providing a brighter spotlight on resources made available through the ESIP community. Last year’s budget included support for a suite of activities in conjunction with our institutional affiliation with NESTA at the Silver level (see attached description of Institutional Affiliation options), including offering workshops at four NSTA conferences, monthly postings in NESTA newsletters (available at the Silver level and above), and promotion of ESIP at NESTA events.

As a component of this continuing affiliation, we will collaborate with NESTA on the development of teacher professional development workshop on the use of ESIP data in the context of the Next Generation Science Standards at the three Fall 2015 National Science Teachers Association (NSTA) area conferences and the Spring 2016 national conference (the NESTA-ESIP Data Workshop for Earth and Space Science Educators, or NESTA-ESIP Data Workshop for short). These workshops must be proposed through the NSTA session system in January 2015 for the Fall workshops and April 2015 for the Spring 2016 workshop.

NESTA has a proven approach for offering professional development for educators that is well received, and is well attended by teachers. Through this collaboration, we will be able to offer the workshop at all four conferences, as a component of NESTA’s suite of workshops at the conferences, and provide professional development to between 80 and 200 teachers during the year (attendance at NESTA workshops varies, but typically ranges between 20 and 50 per workshop). This approach dramatically decreases the cost of offering professional development for teachers to ~ $20/teacher because it leverages the same workshop content at multiple venues and also does not require funding for teacher participation (either in travel, materials, or stipends). The workshop will be designed so that local ESIP community members will have the opportunity to participate as a co-presenter on the presentation team, if they are available and interested. Alternatively, the workshop can be presented by NESTA leaders presenting at the workshop.

1. **Strategic Goal**

The activities made possible as a result of this affiliation align with the ESIP Education Committee’s mission “to increase the quality and value of Earth science products and services for the benefit of science and society” as well as promoting and facilitating “the development, dissemination, and use of Earth science educational products, information, and tools to a broad user community using the wealth of Earth science data and knowledge available in the ESIP Federation.”

NESTA is the largest professional society of K-12 Earth and space science educators nationally, and is the target community that ESIP needs to reach to share information about its resources, programs, and opportunities. The project also aligns with ESIP Education Strategic Goal #1 - Elevate the visibility of the ESIP Federation education community’s capabilities to ESIP partners and educators, scientists, and technologists in the broader Earth system science community.

1. **Leverage**

This affiliation will leverage ESIP’s educational resources as well as NESTA’s reach to significantly broaden the opportunity to reach large numbers of teachers through NESTA’s network and publications with ESIP educational resources. Collaboration with NESTA on a data workshop to be offered four times in fall 2015 and spring 2016 will build on NESTA’s network and successful model for professional development, leveraging it to efficiently get ESIP’s message out to teachers.

1. **Collaborators**

ESIP members (including ESIP Education Committee Members) will be able to participate in activities through presentations at workshops (although there is not travel support included to cover their participation), as well as through publications and announcements to the NESTA network.

**Proposed Budget – $3700**

Silver Institutional Affiliation: $2000

Partial support for workshops offered at three fall NSTAs and national NSTA @$400/Fall and $500/national = $1700

Workshop expenses breakdown:

Note that the total costs for offering the NESTA program of four workshops at the NSTA conferences typically comes to:

Travel costs for three NESTA leaders who attend and offer the workshops @$1000/person = $3000

Time of those individuals to develop the workshops and offer them @$50/hr – typically 16 hrs for the lead and 8 hrs for the assisting instructors = 50 x 24 = $1200

Shipping and handling – assembling and shipping materials to and from workshop, handling costs at venue - $50 staff time plus $300 per meeting

Copying costs – materials handed out to teachers at the workshops - ~$100 per workshop (we have really cut this down).

Posters to promote the workshops at the conferences - $50 each x 2 = $100 per conference (this is down, because of NSTA restrictions)

So the total costs of our program at a given NSTA fall conference is about $4750 per conference. At each of these conferences we offer four workshops and a Rock and Mineral Raffle, so the “prorated” cost per workshop would be something like $950. We are asking ESIP to contribute $400 toward these costs – less than ½ of the actual costs of offering the workshop.

Costs at the National meeting are higher overall, because of the higher travel, materials, copying, shipping, and poster expenses and larger number of presenters (typically four), but this is mitigated by the larger number of events (5 workshops, 4 Share-a-Thons, Rock and Mineral Raffle, and Membership Meeting = 11). The prorated cost of workshops at the National, therefore, comes out to about $810, and we are requesting $500 in support from ESIP for offering one of these workshops – slightly more than ½ the true cost of the workshop.

**Budget Justification:** Structure for Institutional Affiliation provided by NESTA (see attachment)

**Project 2 - ESIP/NESTA Web Seminar Summer Session: Helping Teachers Bring ESIP Member Data into the Classroom**

1. **Project description**

This project serves two objectives:

* to develop a series of three web seminars offered for teachers between July and September on a monthly basis with a focus on using data in the Earth and space science classroom, and
* to provide professional development for members of the ESIP community on the needs of K-12 Earth and space science teachers, and how to best address those needs in web seminars.

A team of collaborators will build on expertise in ESIP and in NESTA and work together to provide guidance to and support for the ESIP community member in developing their web seminar presentation and facilitate offering the web seminars during the summer. The team working on each web seminar will include the project lead, an ESIP community member (who will be the “presenter”), a teacher coach (drawn from NESTA leadership), an ESIP Education Committee facilitator, and the NESTA Programmer.

The team will work together to ensure that the web seminars address curriculum needs of Earth and space science educators at the middle and/or high school levels, and will be guided by Next Generation Science Standards performance expectations. Each web seminar will provide both background content as well as activities that can be immediately used in the classroom without extensive training. The web seminars will leverage the developing emphasis in NESTA on web seminars, and will be publicized through ESIP and NESTA’s network, publications, and events. The project lead and a NESTA leader will jointly offer a workshop at the ESIP summer conference that focuses on helping technologists communicate their data to teachers and highlights the activities underway in this effort.

Over the past summer, NESTA has had experience offering a series of well attended web seminars to teachers across the country. Specifically, through a NASA supported project, we offered 9 web seminars through the summer, from 7 to ~8:20 pm Eastern, on Tuesday and Wednesday nights about every three weeks. Pre-registrations were typically 50-60 per web seminar, with between 25 and 35 people participating in each web seminar. Although there was some overlap between these web seminars (in terms of attendance – the topic was on space science and astronomy), there were lots of new participants as well. Overall, we had something between 100 and 200 participants throughout this series. Based on this experience, we expect to be able to reach ~25 teachers per web seminar, or a total of about 75 participants over the series of three web seminars, at a prorated cost of ~$50/participant.

1. **Project plan, budget, and timeline**
   1. **Project Plan**
      1. Survey teachers to identify their primary needs and concerns regarding use of Earth science data in the classroom and NGSS
      2. Develop detailed schedule of web seminars and presenters
      3. Develop presentation template
      4. Promote web seminar series through NESTA, ESIP, and other list-serves
      5. Offer web seminars on a monthly schedule through September
   2. **Timeline:** 
      1. May - Survey teachers for data related topics for K-12 classroom, develop schedule, organize sequence of presentations, develop template
      2. June – Develop first presentations and publicize; meet periodically with team in conference calls to iterate on presentations
      3. July - Education workshop on NESTA communication method
      4. July - September - Develop and deliver three presentations (one per month) with embedded surveys to assess their interests, satisfaction, needs, and suggestions
   3. **Budget**
      1. $100 Honoraria for ESIP community member presenter x 3 web seminars
      2. $100 Honoraria for Teacher Coach to work with presenters (NESTA leaders) x 3 web seminars
      3. $100 Honorariums for ESIP Education Committee Facilitator x 3 web seminars
      4. $800 Project lead (16 hrs @ $50/hr to plan and implement the web seminars)
      5. $250 NESTA Programmer for certification template development and production of certificates for web seminar participants
      6. $1900 Travel support and registration for NESTA Leader to ESIP summer conference

Total requested - $3850

1. **Names and descriptions of roles for team members**  
   1. **Project lead** - Roberta Johnson - will lead development of needs and concerns survey and its implementation, develop schedule of web seminars, presenters, presentation template, and work with coaches and presenters to iterate on presentations. She will work to promote the web seminars through NESTA, ESIP, and other list-serves.
   2. **ESIP Community Member Presenters** - Our first presenter has been identified as Robert Downs. We will work to identify two additional presenters that are looking for this opportunity to develop effective web seminar presentations for the K-12 audience.
   3. **Teacher Coaches** - for presenters will be drawn from NESTA leadership with extensive experience in professional development for K-12 teachers. They will work with the project lead and the presenters to provide recommendations on how presentations can be optimized for the K-12 audience in a web seminar format, and will also help facilitate the web seminars, working with the project lead and NESTA programming staff.
   4. **ESIP Education Committee Facilitators -** whose role is to help inform the group of ESIP goals, relationships, activities, and what's been done in the past
   5. **Programmer** - Dr. Julia Genyuk - NESTA programmer and web seminar support, will provide support for production of participant certificates.
2. **Any special skills or intended outcomes that the proposer can bring to the task**
   1. **Skills:** Members of the Education Committee have significant experience in the K-12 classroom and are expert boundary spanners between the ESIP community and K-12 educators. NESTA is a leading provider of Earth and space science professional development for teachers and has recently launced a new series of web seminars using GoToWebinar on space science and astronomy (including using authentic data in astronomy). The project lead, who is also the executive director of NESTA, has offered hundreds of professional development workshops for teachers in multiple formats, including in-person, online courses, and web seminars.  
        
      This project will build on lessons learned and NESTA’s community of teachers will work to bridge the divide between the expertise that the ESIP community brings around Earth science data and information and the needs that teachers have to use those resources in the classroom.
   2. **Outcomes:** Three webinars will be developed, offered, and posted for further access using Earth Science data for the classroom, including associated lesson plans for classroom implementation. The project will result in a growing community of teachers interested in ESIP members data and tools. The project will also provide a forum for ESIP members to share their data and tools with users, and develop expertise in sharing their resources effectively with teachers. They will also have a recorded webinar that they can share on their own website and they will be able to link to all of the lessons that were created based on the webinar
3. **The ultimate benefit that your solution brings to the ESIP community**
   1. ESIP has seen death by PowerPoint in a number of ways. This project will provide a professional development opportunity to ESIP community members on how to repurpose content they already have in ways that can be consumed by K-12 educators in ways that are relevant to the teacher, including the elements they need to effectively transition the experience into the classroom. Key aspects of our approach are inclusion of relevant hands-on activities that can be explained and demonstrated in the webinar, as well as demonstration of online data resources that are closely connected with the hands-on activity, in a clearly presented scientific context relevant to teacher curriculum needs.
   2. The K-12 educators will get useful resources for their science classrooms and will be able to engage their students with real, Earth science data. The project will further develop the collaboration between NESTA and ESIP, building on the strengths of each, and providing opportunities to learn from each other. Finally, the project will provide additional opportunities to broaden ESIP’s access to K-12 teachers, further developing opportunities for enhanced Earth system science literacy.

**Proposed Budget: $3850**

**Project 3 - Holding an ESIP Teacher Workshop at the 2015 ESIP Summer Meeting**

Project Description

A. Community Need

ESIP Members need opportunities to connect directly with science teachers to increase the use and usability of Earth science data. ESIP Teacher Workshops enable unique in-person connections with G6-12 educators at the teacher-track sessions designed to facilitate the use of Earth Science data in classrooms as well as the ESIP poster session, plenaries, conference lunches and breaks.

B. Strategic Goal

An ESIP Teacher Workshop fits the ESIP Education Committee’s mission of “dissemination, and use of Earth science educational products, information, and tools to a broad user community using the wealth of Earth science data and knowledge available in the ESIP Federation.”

C. Leverage

This effort leverages ESIP’s wealth of educational resources and connect ESIP’s main funders, NOAA and NASA, with science teachers and science classrooms.

D. Collaborators

ESIP members will be able to present at the workshop and share their resources with science teachers in southern California.

**Proposed Budget - $7000**

Budget Justification:

The budget covers nominal teacher stipends and basic support for ESIP members to organize the workshop as well as cover travel and conference registration. Note that NOAA has already funded teacher registrations for a workshop at the 2015 summer meeting, so this support is supplementary to that support from NOAA.

Budget details  
2000 ($80 time and travel educator stipends for 25 teachers)

3000 (lead instructor stipend to cover organizational efforts, travel and conference registration)   
2000 (assistant instructor stipend to cover travel and conference registration)

**Project 4 – ESIP Graduate Student Scholarship**

Provide one ESIP geosciences award to SACNAS graduate student

Project Description:

A) Community Need. Hispanic, Chicano and Native American scientists are underrepresented in geosciences in general and the ESIP Federation in particular. SACNAS is devoted to advancing Hispanics, Chicanos and Native Americans in Science.

B) Strategic Goals. Sponsoring a SACNAS graduate student award supports the Federation strategic goal, “To develop collaborative relationships with other organizations involved in Earth science related educational activities.” (ESIP Federation Bylaw V, Section 6)

C) Leverage. ESIP Teacher workshops leverage the efforts of any and all ESIP Federation partners in their efforts to promote and increase diversity within their organizations and partnerships.

**2. Proposed Budget: $1000**

3. Budget Justification:

Approximately 1,500 undergrad & grad students attend the SACNAS annual conference. With sponsor support, SACNAS recognizes exemplary graduate student oral presenters for the quality of their research & presentation skills. Award sponsors make these honors possible. The majority of the awards are given in the Biological and medical sciences. Providing an award in the goeosciences category encourages student research in the geosciences, and provides the ESIP Federation another avenue to recruit high-quality graduate students for the student fellowship program.