



National Association of Geoscience Teachers

2018 Annual Report

Prepared for the 2018 Annual Meeting

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Annual Report of the NAGT President Janis D. Treworgy, September 2011

I. NAGT Professional Outreach

One of the foci of this year for the Executive Committee has been to get the word out about NAGT to other geoscience and STEM societies – to continue and increase collaboration with other societies in order to promote our mission:

“...to foster improvement in the teaching of the earth sciences at all levels of formal and informal instruction, to emphasize the cultural significance of the earth sciences and to disseminate knowledge in this field to the general public.”

- As President, I wrote an article for AIPG’s magazine *The Professional Geologist* about NAGT – our mission, our activities, and how we can serve them.
- For the past three years I have attended the GSA Leadership Meeting representing NAGT. This year focused on Education as one of three major topics so I was able to expound several times on what NAGT does and how we can work with GSA and their associated societies, who were in attendance, on geoscience education efforts. It was informative to know that in a room of about 30 geoscientists who were passionate about geoscience education no one was currently an NAGT member! We have work to do.
- Cathy Manduca and several other NAGT members participated in the American Geological Institute’s (AGI) first Earth System Science (ESS) Education Summit in Houston, Texas, on February 8-11, 2010. There were forty-two representatives of AGI member societies and key partners discussed and addressed key issues facing the K-12 geoscience education community. Cathy took a lead role in several of the post-meeting action item tasks.

The Big Ideas from that summit were: Participants substantively agreed:

1. The geoscience community must speak with a common voice.
 2. The geoscience community needs a public relations campaign for ESS education.
 3. ESS education needs to be inclusive.
 4. Teacher professional development for ESS must be organized nationwide.
 5. There needs to be a state-level network to deal with crises in ESS education.
 6. A nationwide campaign is needed to encourage institutions of higher learning to accept ESS high school courses as laboratory science courses.
 7. The geoscience community must be politically savvy in ensuring ESS inclusion in national and state standards.
 8. The geoscience community needs to work with guidance counselors and parents to raise the profile of ESS in schools for subject literacy and as a career option.
 9. An AP Earth Science Exam can legitimize ESS in schools.
 10. Look to the International Earth Science Olympiad as a public relations opportunity for ESS education and a chance to engage students at all levels in solving local geoscience problems.
- NAGT representatives gave input to the “Conceptual Framework for New K-12 Science Education Standards” released in July of this year by the U.S. National Academy of Sciences.

- The PKAL project is a unique opportunity for NAGT to work with other STEM societies and to contribute ideas and resources about what we already do – connect the geosciences that we teach to the topic of sustainability. Vice President Beth Wright and I attended the first working meeting of the project, “Mobilizing Disciplinary Societies on Behalf of our Students...and Our Planet,” which is a collaboration of Project Kaleidoscope, Mobilizing STEM Education for a Sustainable Future, and the Disciplinary Associations network for Sustainability (DANS). The goals of the project are to (1) increase student learning in undergraduate STEM courses and (2) better prepare UG students for the real-world 21st century “Big Questions” that relate to real-world issues such as energy, air and water quality, and climate change. We have several NAGT officers/members who will continue to be involved in this project.
- John McDaris, Cathy Manduca, and I wrote an article for AGU’s EOS magazine to help build collaboration between NAGT and AGU. The focus was on how NAGT, through its expertise in geoscience education, can help AGU members by disseminating results of their research both to the students and the public. “AGU and NAGT members are already engaged in this work:
 - Ensuring that educational materials reflect current scientific understanding
 - Developing programs that engage students, teachers, and citizens in research
 - Creating visualizations, models and data sets that are used in teaching at all levels and more.”
- Beth Wright is coordinating a geoscience education workshop at AGU’s fall annual meeting that is sponsored by NAGT. She is working with Pranoti Asher, AGU’s new Manager of Education & Public Outreach.
- Cathy and I will be attending AGI’s Leadership Forum in Washington DC on Monday, September 19, 2011, followed by the fourth annual Congressional Visits Day. The forum is an opportunity for AGI’s member societies to discuss shared concerns of the geosciences community and develop ideas or plans to help our societies. In the call letter, AGI said that “Federal science agencies are asking geoscientists to explain the impact of their research, and policymakers are demanding an estimate of the value of research so they can determine how much federal support to provide.” A suggested topic for the forum therefore is a discussion of the value and importance of the geosciences.

II. Restructuring NAGT Meetings

- One of the primary strengths of NAGT as an organization is the combination of the work by the Sections (at the regional level) and Divisions and that at the national level by the overarching organization. The annual Council meeting at GSA has been the primary mechanism for fostering communication and interaction among and between these entities. The Executive Committee is trying a new meeting strategy over the next few years that takes advantage of the new capabilities for virtual meetings. We have been trying this over the last year with regular virtual Executive Committee meetings. These have provided more continuity in our work and alleviated the challenges associated with individuals missing a particular meeting.
- We have proposed three Council meetings annually -- two virtual and one face-to-face at GSA. In particular, we would like to move the annual Council meeting with the sharing of activities to virtual meetings. This will open up time at the face-to-face meeting at GSA to work together on a project or issue of importance to both the Sections/Divisions and the overarching

organization. This year the focus of that work is on *increasing membership*. As you know, our membership has dropped continually and we are now below 1500 members. We would like to work with our Sections/Divisions to reverse this trend.

- We no longer hold a face-to-face Executive Committee meeting on the Saturday before GSA. This allows our committee members to be free to participate in the GSA workshops and field trips, both as leaders and participants.
- New NAGT Meetings Schedule (Appendix A)

III. NAGT Organization: Divisions, Membership Categories, Logos, Section Names, By-Laws, Executive Director

- **Divisions.** This year we have added Divisions to NAGT's organization. Divisions will focus on a professional interest within the geosciences. Members may join divisions for an extra annual fee. Our first division is the **Geo2YC Division**, organized to provide two-year community college faculty with a professional organization that can serve as a peer organization that focuses on their needs for professional development, curriculum development, networking, and general support.
- **Membership Categories.** A new membership category with a discounted rate has been set up for **adjunct faculty** in recognition of their desire for support but fewer resources.
- **Logo.** A modified logo has been designed that serves NAGT and each of its sections and divisions. This logo retains our recognizable logo that is quickly identified as the NAGT "brand" while giving the sections and divisions their own logo that readily identifies them as part of NAGT. Guidelines for use of the logo have also been established. Input on the logo was sought from all the section/division presidents.
- **Section names** were standardized in cases where two different names had been used (e.g. Far West and Far Western).
- **Bylaws** were revised and cleaned up for:
 - Divisions
 - Adjunct professor membership rate
 - Alignment with current practices
- **Executive Director.** The position of a paid Executive Director has greatly increased the working capacity and professionalism of NAGT over the past few years. Since the rest of us are volunteers, in order to further NAGT's effectiveness with respect to its mission, it would be beneficial to increase the percent time that the Executive Director works for NAGT. We increased the Director's time for the 2012 FY to 11.5%, up from 8%. We are fortunate that Cathy Manduca is so efficient (and generous) with the time she puts in to her NAGT work. The Executive Committee is performing a formal review of the Executive Director's performance as her contract expires next year. There is mutual desire to renew it for another five years.

IV. NAGT Publications

- ***Journal of Geoscience Education (JGE)***. This year JGE was published on-line for the first time, making it more accessible to members, especially international members. Julie Libarkin shepherded this transition. As her term as editor ends, we have selected her replacement, Kristen St. John, who has been the Editor for Curriculum & Instruction of JGE. We thank Julie for her dedication in making this transition that was accompanied by raising the standard on the type of articles to be published in JGE. We are delighted to have Kristen as our next editor. She will work closely with Julie this year to make the transition as smooth as possible.
- ***JGE Publisher and Membership Management***. AIP informed us in June that they will no longer be providing vendor services after this year, so they will terminate both our publishing contract and our membership management contract. Cathy and Kristen have worked hard to find a company that will do this. **Allen Press** is looking like the best option for us. We are in the data collecting stage yet, but hope to move into the process of negotiating contracts soon.
- ***In The Trenches (ITT)***. This year we debuted our first issues of the new quarterly magazine *In The Trenches* with David Steer as its Editor. David conceived the idea for this magazine in response to a need to continue having an outlet for articles, curricular ideas, and activities focusing on current hot topics, such as climate change and teaching in the field, that can be easily implemented into the classroom.

V. President's Other Activities

- As the in-coming president, I spoke about our vision for the next year at the National Association of Geoscience Teachers (NAGT) and GSA Geoscience Education Division Awards Luncheon, October 9, 2011.
- I worked with Cathy on all the meeting agendas and ran the Executive Committee and Council meetings throughout the year.
- I hosted our mid-year meeting at the Principia College Guest House over the weekend of April 15th-17th, 2011.
- I wrote an e-letter to ex-members updating them on the Executive Committee's activities and encouraging them to rejoin NAGT. (Appendix B)
- I wrote a mid-year report to members updating them on the Executive Committee's activities. This was published in the July issue of *In The Trenches*. (Appendix C) (<http://nagt.org/nagt/publications/trenches/articles/my-treworgy2011.html>)
- I wrote an e-letter to the NAGT Council and Section Officers informing them of the new meeting schedule and inviting them to the upcoming fall Council meetings (virtual and face-to-face). (Appendix D)
- I wrote a letter to the members thanking our outgoing editorial team, Julie Libarkin and Joe Elkins, and welcoming Kristen St. John as our new editor. This will be published in the October issue of *In The Trenches*. (Appendix E)
- I wrote an e-letter to the NAGT Section Officers seeking their input on the then proposed logo.
- I served as the NAGT liaison to GSA and attended their annual Leadership Meeting for GSA Associated Societies.
- I served as liaison to the NAGT Central Section.
- I wrote a few letters of support for research grants requesting NAGT sponsorship.

Appendix A

NEW NAGT MEETINGS SCHEDULE – June 2011

September Executive Committee (virtual) (2 hrs.)

Invite new officers

- I. Standing items:
 - A. Financial report
 - B. Amend budget as needed
 - C. Announce new officers; terms begin at the end of the GSA meeting
 - D. Presidents' report – accomplishments & goals
 - E. Committee appointments (liaisons to sections, divisions, & societies)

September Council Meeting (virtual) (1 hr.)

Written annual report

- I. Standing items:
 - A. Prepare for Council mtg. at GSA
 - B. Sections/Divisions report on plans for the year
 - C. Executive Committee reports on projects/plans for the year
 - D. Compile roster of potential volunteers for projects & NAGT leadership

Council Meeting (at GSA) (2 hrs.)

Meeting followed by NAGT Annual Business Meeting and Luncheon

Purpose: working together on strategic projects

- A. **2011 Topic:** Membership growth strategies
 1. Share most successful membership practice
 2. Brainstorm new ideas w/ synergies of the whole Council to support all of our goals and our various constituencies
- B. Develop list of possible topics for future joint meetings
- C. Reflect on the process

January/February Executive Committee Meeting (virtual) (2 hrs.)

- I. Standing items:
 - A. Financial report on prior year's closing
 - B. Moving business forward
 1. Committee progress to date, next steps, as needed

Spring Mid-Year Executive Committee Meeting (2 days)

Written reports by Ex Comm & comm. chairs

- I. Standing items:
 - A. Financial report
 - B. Set dues
 - C. Propose and approve budget for next fiscal year beginning 9/1
 - D. Assign non-liaison committee memberships for year beginning at the end of GSA
 - E. Announce Executive Committee nominations
 - F. Reports
 1. JGE & ITT editors
 2. Executive Director

April Council Meeting (virtual) (1 hr.)

- I. Standing items:
 - A. Report on Executive Committee mtg.
 - B. Section/Division reports
 - C. Move joint projects forward
 - D. Plan next steps

June Executive Committee Meeting (virtual) (2 hrs.)

- I. Standing items:
 - A. Approve final budget for following fiscal year
 - B. Announce all award recipients, except OEST

Appendix B

National Association of Geoscience Teachers

From the President, Mid-Year Report – May 2011

I am writing you, a former member of NAGT, to update you on what we have been doing this year, and to encourage you to renew your support of geoscience education through membership in this vital organization. We are an active society that is experiencing a continued decline in membership at a time when there is a growing demand for the geoscience community to present a unified front in the development of geoscience literacy among students, science teachers (K-16), and decision-makers at all levels. We need your voice in the chorus. This is a time when geoscientists should be pooling our resources where we can make a difference. I think that NAGT can make and is making that difference and here are some reasons.

NAGT, JGE, and ITT. NAGT is the largest and most active society in the world that is focused on geoscience education. For nearly 60 years we have published our own peer-reviewed journal, the *Journal of Geoscience Education* (JGE) that covers geoscience education research and curriculum ideas. As of this year JGE is now primarily available on-line and is therefore more accessible to members, including our growing international membership. Replacing JGE in your mailbox is the new four-color magazine, *In The Trenches* (ITT), that includes articles and curricular ideas and activities focusing on current hot topics, such as climate change and teaching in the field. We thank Dr. Julie Libarkin for shepherding the JGE through this transition as its editor and Dr. David Steer for conceiving and editing ITT. We are pleased to announce that Dr. Kristen St. John will succeed Julie as editor of JGE beginning in January.

Geo2YC Division and Adjunct Faculty. The Executive Committee has proposed adding to NAGT's structure Divisions that focus on a professional interest within geoscience education. This proposed change to the Bylaws, which awaits a 60-day member notification period, was triggered by the desire of a group of 2-year college (2YC) faculty to become a subset of an existing society. Their desire is to develop a peer organization that focuses on their needs for professional development, curriculum development, networking, and general support. The Geo2YC group will be our first Division. Along with this, we have added a membership category for adjunct faculty, who commonly teach at one or more community colleges with little support or benefits; they will have a reduced rate. Why are we reaching out to our 2YC colleagues? As you may be aware, they teach the geosciences to a large and diverse audience. They not only contribute to the earth-science literacy of the general public, they also teach many pre-service K-12 teachers.

Financial Report. NAGT is currently in a stable position financially. Thanks to the long time generosity of many NAGT members, NAGT Endowed Funds now produce significant income. Endowed Funds supporting field camp scholarships provide over \$7,000 annually and the NAGT Endowment provides \$20,000 towards annual operating expenses. Membership is a significant source of revenue and so to ensure that NAGT continues to provide excellent programming and services as well as remain a strong advocate for high-quality geoscience education, we are considering ways to increase library subscriptions and develop new revenue streams including (1) the addition of a book review page to our website on which publishers could advertise and (2) publication of a new lab manual and/or special volume. One way NAGT intends to develop new programs and income streams and support the work of

our many volunteers is to increase the number of hours provided by our part-time (11.5%) Executive Director.

NAGT-Sponsored Programs. Our active programs benefit the geosciences broadly and members specifically. One of our most effective programs is **On the Cutting Edge – Professional Development for Geoscience Faculty**, which provides workshops for faculty on pedagogy and content. It has transformed the way the geosciences are taught, primarily at the undergraduate level, by individual faculty members as well as whole departments. NAGT also has an active **Distinguished Speakers Program** that sends experienced and innovative geoscience educators to colleges and universities that solicit speakers for talks and/or workshops for faculty on current directions in geoscience education. We are putting this program on hold for a year as we restructure it. We welcome your input. What type of speaker program would help you the most?

Other NAGT-sponsored programs include Climate Literacy and Energy Awareness Network (CLEAN) Pathway, Teach the Earth: A SERC Portal for Geoscience Faculty, USGS/NAGT Cooperative Field Training Program, Geoscience Teachers in Parks, and more. Check out our website to see the full range: http://nagt.org/nagt/programs/sponsored_prog.html. We also give Field Camp scholarships to students every year. This year there were 18 recipients selected out of a pool of 75 applicants.

National Activities. NAGT Executive Committee members as well as others of you in the field are participating in focus meetings and programs with other societies at a national level. Several members participated in AGI's Earth Systems Science Education Summit last year in Houston to address key issues facing K-12 geoscience education. The meeting resulted in five chaired working groups that are currently engaged in activities to support more earth science K-12 education, more professional development for K-12 teachers, and stronger advocacy for geoscience education. They also reviewed the draft version of the new national science education standards and provide feedback.

NAGT is one of 11 STEM societies working with Project Kaleidoscope (PKAL), Mobilizing STEM Education for a Sustainable Future, and the Disciplinary Associations Network for Sustainability (DANS) to better prepare students for the real-world issues related to energy, water, air quality, and climate change in the STEM disciplines. The focus of this project is to develop in our STEM courses the concept of sustainability by giving students opportunities to consider choices that can help solve societal problems.

I think it is apparent that NAGT is making a difference in building geoscience literacy through geoscience education. We need your support through your membership in NAGT as well as your volunteerism if you so desire. Consider also encouraging your colleagues and your students to join NAGT if they care about geoscience education. Show them our website (www.nagt.org) for some additional talking points.

We welcome you ideas and your support. Please re-join NAGT to help continue and foster these vital programs.

Respectfully submitted,



Janis D. Treworgy, President

Appendix C

President's Mid-Year Report – May 2011

The Executive Committee of NAGT met in April, midway through our fiscal year, to review the financial status of NAGT, set and approve next year's budget, and review our various projects. The short summary is that we are an active society that is experiencing a continued decline in membership at a time when there is a growing demand for the geoscience community to present a unified front in the development of geoscience literacy among students, science teachers (K-16), and decision-makers at all levels. This is a time when geoscientists should be pooling our resources where we can make a difference. I think that NAGT can make and is making that difference. Your membership in NAGT helps pool resources. We ask for your help in spreading the word about NAGT. Here are some reasons you can share to encourage others to join.

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Financial Report. Thanks to the long time generosity of many NAGT members, NAGT Endowed Funds now produce significant income. Endowed Funds supporting field camp scholarships provide over \$7,000 annually and the NAGT Endowment provides \$20,000 towards annual operating expenses. To ensure that NAGT continues to provide excellent programming and services as well as remain a strong advocate for high-quality geoscience education, we are considering ways to increase membership. We are also considering ways to increase library subscriptions and develop new revenue streams including the addition of a book review page to our website on which publishers could advertise and publication of a new lab manual and/or special paper. One way NAGT can develop new programs and income streams and support the work of our many volunteers is by increasing the number of hours provided by our part-time (11.5%) Executive Director.

Distinguished Speakers Program. NAGT has an active Distinguished Speakers Program that sends experienced and innovative geoscience educators to colleges and universities that solicit speakers for talks and/or workshops for faculty on current directions in geoscience education. We are putting this program on hold for a year as we restructure it. We welcome your input. What would help you the most?

On The Cutting Edge. One of our most effective NAGT-sponsored programs is On The Cutting Edge – Professional Development for Geoscience Faculty. This program, which provides workshops for faculty on pedagogy and content, has transformed the way the geosciences are taught, primarily at the undergraduate level, by individual faculty members as well as whole departments. Currently supported by NSF, the program has 2 more years of full funding and 2 years of reduced funding at the 50% level. NAGT would like to be involved in sustaining the program into the future as so many of us have benefited from it.

Other NAGT-sponsored programs include Climate Literacy and Energy Awareness Network (CLEAN) Pathway, Teach the Earth: A SERC Portal for Geoscience Faculty, USGS/NAGT Cooperative Field Training Program, Geoscience Teachers in Parks, and more. Check out our website to see the full range: http://nagt.org/nagt/programs/sponsored_prog.html. We also give Field Camp scholarships to students every year. This year there were 18 recipients selected out of a pool of 75 applicants.

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I think it is apparent that NAGT is making a difference in building geoscience literacy through geoscience education. That's why you are a member. We need your support in drawing more geoscientists into our membership to support the vital role that NAGT is playing. Consider encouraging your colleagues and your students to join NAGT if they care about geoscience education. Show them our website (www.nagt.org) for some additional talking points.

We welcome you ideas and your continued support.

Respectfully submitted,



Janis D. Treworgy, President

Appendix D

From: nagtofficers-bounces@serc.carleton.edu [mailto:nagtofficers-bounces@serc.carleton.edu] **On**
Behalf Of Janis Treworgy
Sent: Friday, July 08, 2011 6:38 PM
To: 'NAGTsections@serc.carleton.edu'; 'nagtofficers@serc.carleton.edu'
Subject: [Nagtofficers] New NAGT Meetings Schedule

Dear NAGT Council Members,

One of the primary strengths of NAGT as an organization is the combination of the work by the Sections (at the regional level) and Divisions and that at the national level by the overarching organization. The annual Council meeting at GSA has been the primary mechanism for fostering communication and interaction among and between these entities. The Executive Committee would like to try a new meeting strategy over the next few years that takes advantage of the new capabilities for virtual meetings. We have been trying this over the last year with regular virtual Executive Committee meetings. These have provided more continuity in our work and alleviated the challenges associated with individuals missing a particular meeting.

We propose three Council meetings annually -- two virtual and one face-to-face at GSA. In particular, we would like to move the annual Council meeting with the sharing of activities to virtual meetings. This will open up time at the face-to-face meeting at GSA to work together on a project or issue of importance to both the Sections/Divisions and the overarching organization. This year we propose that the focus of that work be *increasing membership*. As you know, our membership has dropped continually and we are now below 1500 members. We would like to work with you to reverse this trend.

We would like to try this schedule for the three meetings:

- **The face-to-face meeting** will be a two-hour meeting **at GSA** in the morning of the day we have our NAGT luncheon; this is currently on **Sunday**, and the Council meeting will be **from 8am-10am**, with the luncheon at 11:30am-1pm. At this meeting we would work together on some strategic project to support NAGT and its mission. This year the date is **October 9th**.
- The other two meetings will be one-hour virtual meetings, currently by teleconference, in September and April. They are to follow up on and move forward joint projects, as well as to plan for the face-to-face meeting.
- **Annual Reports** will be due to Cathy Manduca (cmanduca@carleton.edu) by early September – this year's deadline is **September 15th**.
- Our September virtual meeting will be a teleconference on **Wednesday, September 28th, from 1pm – 2pm CDT**. Cathy will send instructions on how to connect.

Here are the agendas for the meetings:

September Council Meeting (virtual) (1 hr.)

Written annual report

Standing items:

- A. Prepare for Council meeting at GSA
- B. Sections/Divisions report on plans for the year
- C. Executive Committee reports on projects/plans for the year

- D. Compile roster of potential volunteers for projects & NAGT leadership

Council Meeting (at GSA) (2 hrs.)

Meeting followed by NAGT Annual Business Meeting and Luncheon

Purpose: working together on strategic projects

- A. **2011 Topic:** Membership growth strategies
 - 1. Share most successful membership practice
 - 2. Brainstorm new ideas w/ synergies of the whole Council to support all of our goals and our various constituencies
- B. Develop list of possible topics for future joint meetings
- C. Reflect on the process

April Council Meeting (virtual) (1 hr.)

Standing items:

- A. Report on Executive Committee mtg.
- B. Section/Division reports
- C. Move joint projects forward
- D. Plan next steps

We hope that each Section/Division will be able to be represented at each of the three council meetings. While your President is the official representative, we encourage you to send a *pro tem* representative if the President cannot attend. This will help all of us remain connected as we work through the year to keep Geoscience Education strong. We look forward to engaging more with all of you in the upcoming NAGT year.

Sincerely,

Janis D. Treworgy
President, National Association of Geoscience Teachers (NAGT)

Appendix E

Changing of the Guard

The NAGT Executive Committee would like to thank Dr. Julie Libarkin (Michigan State University) and Dr. Joe Elkins (University of Northern Colorado) for their three years of service to the Journal of Geoscience Education. Julie has served as Editor-in-Chief and Joe as Editor for Technology. During their term they have moved the journal from a print-only journal to an on-line journal with a print option. This change has included moving to an efficient on-line submission system as well. After one year the articles are freely available.

Also Julie and her staff of associate editors have shifted the submission guidelines to more academically rigorous and research-oriented articles in geoscience education or curriculum and instruction. In doing this they have encouraged authors to reference the literature, describe activities so that others can replicate them, and include statistical analysis of data. Less scholarly articles that promote successful teaching through sharing of teaching strategies and activities are now being published in a new quarterly magazine, *In the Trenches*.

These changes have brought the journal to a new and higher level. They have also required a lot of extra work for the editors as they put new processes into place and worked through the inevitable kinks along the way. We extend a big “thank you” to both Julie and Joe for their leadership in these transitions and their hard work in bringing them to fruition.

We are happy to announce that replacing Julie as Editor-in-Chief is Dr. Kristen St. John of James Madison University. Kristen has served as Associate Editor under Julie’s predecessor, Carl Drummond, and Editor for Curriculum and Instruction under Julie and so has worked fairly closely with her during the journal’s transition. We are fortunate to have someone with her experience stepping in at this key time for the journal. Kristen comes with new ideas for increasing the range of articles in the journal, desiring to include articles on “hot” areas in geoscience education and emerging themes in the geosciences, with one of the goals being to help geoscience educators keep up with advances and trends in the many subfields that impact our teaching.

Kristen also wants to work with the Editorial Board to build a community of reviewers who know each other well. Like all editors, she would like to reduce the turn-around-time for manuscripts from submission to publication.

We are thrilled to have Kristen coming on at this time with her past experience with JGE, her vision for the journal, and with the skills necessary to shepherd it forward as it matures in its new form.

Janis D. Treworgy
President, NAGT

Vice President's Report for 2010-11: Beth Wright

MEETINGS:

❖ GSA Annual Meeting, Denver, CO October 30-November 1, 2010

- Attended NAGT Council and Executive Committee Meetings
- Attended NAGT/GED Awards Luncheon
- Attended GED Management Board and Division Business meetings
- Attended lunchtime discussion on Women in Academic Leadership
- Attended Geoscience Educators Reception
- Attended and served at President's Student Breakfast
- Staffed NAGT exhibit booth
- Chaired discipline session: Learning and Cognition in the Geosciences

❖ PKAL Conference: Mobilizing Discipline Societies, Washington, D.C. 2011

- Represented NAGT in this conference on teaching for a sustainable future, May 2011
- Co-Chair, task force on Finding a Common Language
- Attended task force virtual meetings August 18 and September 29

❖ NAGT Executive Committee and Council Meetings

- Attended mid-year meeting at Principia College, April 15-17
- Attended June virtual meeting of Executive Committee

OTHER ACTIVITIES:

❖ Joint Technical Program Committee, 2011

- Attended JTPC breakfast, November 2011
- Proposed a new rotation of JTPC service to NAGT and GED, using apprenticeship model requested by GSA. Adopted by NAGT, under consideration by GED
- Arranged NAGT sponsorships for over 45 GSA topical sessions and workshops, January 2011
- Reviewed 196 abstracts and organized them into 10 geoscience education oral sessions and 4 poster sessions for annual meeting, July-August 2011

❖ **AGU Workshop**

- Proposed a NAGT-sponsored geoscience education workshop for 2011 AGU. Worked with Aida Awad and Pranoti Asher to schedule and define workshop, Reinforcing Quantitative Skills in Geoscience Classes

❖ **AGI**

- Participated in AGI/NAGT virtual meeting concerning issues of diversity and AGI plans for education clearing house role. Represented NAGT's established resources.

NAGT report

Buhr, 092211

Report:

High School Earth Science Instruction Position Statement

The draft Position Statement on High School Earth Science Instruction was posted after our last meeting.

We received 12 comments from members through the discussion board (last comment on July 26) and mailed to the Executive Director. All were positive. The Executive Director sent data from the AGI that has bearing on the opening statement about college admissions acceptance of Earth science courses. Suggestions for improvement ranged, and nearly all were incorporated.

Comments that were incorporated included are described in order of incidence (high to low):

- Change lower case “earth” to “Earth” as a proper noun.
- Replace the word “quantitative” with “empirical”.
- Add a bullet about the importance of teacher preparation.
- Improve the opening sentence, which seemed awkward to one reader.

Some suggestions were deemed out of scope for this statement, including recommendations about the importance of geoscience professionals becoming engaged in classrooms, and about the importance of geoscience professionals engaging with decision-makers. Another comment that was not incorporated was about the multiple motivations for entering the field, including intellectual stimulation and relevance to society. These could be considered for inclusion in some fashion if the Executive Committee thinks they are of sufficient merit at this stage.

The position statement with changes is attached at the end of this document. For comparison, see the draft position statement at <http://nagt.org/nagt/policy/high-school.html> .

Project Kaleidoscope

Project Kaleidoscope is leading a project designed to integrate sustainability into higher education courses, and to disseminate the work that is done through a coalition of professional societies. I am lead of the Resources Working Group. Thus far we have had one teleconference meeting and have provided input on the entry point, core sustainability concepts, dissemination possibilities and other connections afforded by each of our professional organizations. I have attached my answers to the questions below. Next steps are to establish the action items, timeline and responsibilities of each committee member and to communicate that back to our professional societies.

Publications

At our last meeting we talked of new publications from NAGT. Mike and Aida and I have not talked further about this. We talked of several possibilities at the last meeting. The one that I put forward was about a book on K12 Climate Education strategies geared towards classroom teachers. During our last meeting I spoke briefly with Cathy about the possibility of this being an NAGT book. I did speak briefly with the Executive Director of NSTA, Francis Eberle about the possibility of such a book being a joint NSTA/NAGT project. He said that other books on topics such as evolution were good sellers and he thought there would be a good market. He referred me to their author liaison. I have not followed this up or the other possibilities that arose at our last meeting, so this items requires more discussion to define the best directions.

Appendix 1: Position Statement with comments incorporated:

NAGT Position Proposal: High School Earth Science Instruction

The core mission of the **National Association of Geoscience Teachers (NAGT)** is *“to foster improvement in the teaching of the Earth sciences at all levels of formal and informal instruction, to emphasize the cultural significance of the Earth sciences and to disseminate knowledge in this field to the general public.”*

The constant presence of climate, energy and natural disaster stories in the media testify to the interest of the US population in these topics, and to the increasing need for citizens to have a basic understanding of the Earth systems. Yet, most Americans' formal education in this vital science ends by the eighth grade. Virtually all of the issues facing human society surrounding sustainability have roots in the Earth sciences. This suggests that a population literate in the geosciences (that is, able to understand and communicate fundamental concepts and make informed and responsible decisions) is essential.

Although the geosciences are of vital national and public interest, and job growth in the geosciences outpaces supply, most U.S. learners end their formal Earth science learning in middle school. College admissions acceptance of high school Earth science courses as a “laboratory-based course” varies (American Geological Institute, 2011), which leads to a lack of perceived value. Less than a quarter of high school students receive instruction in Earth science in high school (compare to Biology at 91-94%) and only about 1% identify physical science or interdisciplinary science (such as geophysics) as their intended major (Gonzales, 2011). Students from racial and ethnic minority groups are not attracted into geosciences degree programs in proportion to their numbers in the population. The number of geosciences jobs is rising while the geosciences workforce nears retirement age and the number of conferred degrees is steady.

The NAGT supports robust Earth science instruction in high school and rigorous training of Earth science K-12 teachers. To that end, NAGT holds the following positions:

- Instruction should be inquiry-based, rigorous and empirical, and should prepare students as decision-makers in society.
- Completion of a rigorous geosciences course should be required by state departments of education at the high school level.
- An Advanced Placement Earth Science course that is rigorous, empirical, inquiry-based and relevant should be established in the geosciences.
- College Boards of Admissions and Requirements should admit demonstrably rigorous Earth science courses as fulfilling “laboratory-based course” admissions requirements.
- Teacher certification programs should include significant preparation in Earth sciences.
- High school guidance counselors must be made aware of geosciences as a viable career option for a wide range of students, and should be aware of colleges and programs for which high school geosciences courses fulfill admission requirements.

Works Cited

American Geological Institute. (2011, May 20). *Geoscience Currents #44*. Retrieved September 22, 2011, from <http://www.agiweb.org/workforce/Currents/Currents-044-CollegeAdmissions.pdf>

Gonzales, L. and Keane, C. (2011). *Status of the Geoscience Work Force 2011*. Alexandria, VA: American Geological Institute.

Appendix 2: PKAL request for answers to questions about entry point, concepts and dissemination mechanisms

1. Given the list of sustainability topics/concepts with which we are starting, where are the entry points from the perspective of your discipline?

Entry points for geoscience education overlap with those of environmental science. From the list above, the entry points include:

- Carbon neutrality: relates to idea of sources and sinks
- Ecological footprint (or carbon footprint for climate): again relates to sources and sinks on an individual basis, and to limits on natural resources relative to those who need them.
- Tragedy of the commons-related to limits
- Renewable resource-related to natural cycles, recharge rates, the sun as the main source of energy.

- Risk assessment-related to tipping points, human interactions with the environment (example building codes in earthquake zones)
- Shifting baseline-example-every decade there is a new “climate normal” to make a new 30 year baseline; humans shift to provide more ecosystem services previously provided by natural systems.
- Sustainability-idea of cycles, limits, humans interaction with the environment

The big entry point is within systems thinking. Earth systems big ideas include:

Earth Science Big Ideas:

- The Earth is a System of Systems
- The Flow of Energy Drives the Cycling of Matter
- Life, Including Human Life, Influences and is Influenced by the Environment.
- Physical and chemical principles are unchanging and drive both gradual and rapid changes in the Earth system.
- To Understand (Deep) Time and the Scale of Space, Models and Maps are Necessary

Taken from: Duggan-Haas, D. (2010) SYNTHESIZING EARTH SYSTEM ESSENTIAL PRINCIPLES: WHAT EVERY CITIZEN NEEDS TO KNOW. North American Association for Environmental Education Annual Meeting, Buffalo, New York.

These are a compilation of overlapping ideas within geoscience literacy frameworks including Ocean, Climate, Atmosphere and Earth (mostly geology) literacy.

The other topics in the list (triple bottom line, life cycle analysis) fall more within social aspects such as economic. Many faculty do include integration of these topics with geoscience courses but I don't think they are as core to the field as the others. I do think they are important for the purpose of teaching students how to incorporate other values and considerations into decisions and not only the science.

2. Which contexts, topics and concepts are naturally aligned with the goals of sustainability education?

Systems focused courses, climate change, water resources, food and energy systems with big geoscience foci. I tend to see sustainability education everywhere. I am quite sure ASHE has done an analysis of where sustainability is taught. I have data from our CLEAN project about within which courses undergraduate faculty are teaching climate and energy topics.

3. What is your society already doing that could be engaged for this effort: resource collections, established metadata and cataloguing tags, dissemination mechanisms?

CLEAN collection is a NAGT partner project, SERC has resources, established metadata and cataloguing tags for geoscience but I'm not sure about sustainability (have an email out to ask), Cutting Edge workshops, and guides to SERC collection. SERC has a big reach into the geoscience faculty. The CLEAN collection focuses on climate and energy focused grades 6 through undergrad.

4. What do your disciplinary faculty find compelling when it comes to adopting new material (Industry needs, student motivators, interesting research questions)?

I am not sure but I think relevance to students (local issues) and student research opportunities. I know faculty need resources for quantitative skills, especially at the remedial level.

5. In what other projects or communities are you involved that are relevant to this effort?
The CLEAN project, American Geophysical Union, K12 teacher networks, Climate Literacy Network. Formerly with city sustainability advisory board

NAGT Past-President's Report
Mike Taber
September 2011

Much of my activities have been consumed by chairing two committees: JGE Editor in Chief Search Committee and the Nominations Committee.

The JGE Editor-in-Chief Search Committee recommending Kristen St. John to be our next editor in chief. The NAGT board approved Kristen's application by unanimous vote.

Background on the search:

- The search committee officially advertised on Feb 2, 2011
- The advertisement was sent via NAGT news and posted on the NAGT website
- One "non-targeted" query resulted from the wide-spread advertisement. After a brief communication, the person declined to apply, thinking she wasn't yet ready, career-wise, to take on the editorial leadership.
- Seventeen additional colleagues, familiar with NAGT and JGE, were nominated by NAGT members and members of ExComm, including Kristen. Mike contacted all seventeen potential candidates. Three, including Kristen, were interested in having a dialog with Mike regarding the Editor in Chief position. Two of the three decided to decline apply, but would be interested in the future (all for good reasons).
- Kristen submitted an application for the position.

The committee met via telcom to discuss Kristen's application. Mike also followed up with one of Kristen's references, whom was very supportive of Kristen. We were unanimous in approving her application. We did decide to engage Kristen in a conversation Cathy Manduca. We felt Kristen might have AIP questions pertinent to the position.

Mike also sent a copy of the application to Cathy Manduca for her commentary. We are delighted that the Executive Director agrees with our recommendation.

I also chaired the Nomination Committee, who was charged with identifying nominees for 2nd VP and two counselors-at-large positions, which will be vacated by Aida Awad and Bob Blodgett. I am pleased to announce that the nomination committee selected Aida Awad to be our nominee for 2nd VP. In addition, Tamara Ledley, Senior Scientist at TERC, and Karl Wirth, Professor of Geology at Macalester College are our nominees for the two Counselor-at-Large positions.

Over the summer, I chaired the Executive Director review committee. We will announce our recommendations at the September virtual meeting.

Executive Director's Office Report

September Annual Meeting 2011

Cathy Manduca

Since the spring meeting, in addition to the regular day-to-day work involved in the administration of the NAGT, the efforts of the Office of the Executive Director have focused on

- Participated in a review of the Executive Director's office. The letter describing accomplishments and plans for the office is appended to this report.
- Transfer of membership services and *Journal of Geoscience Education* publishing and distribution responsibility from AIP to Allen Press
- Selecting and contracting a new editor for the *Journal of Geoscience Education*
- Implementing a membership drive for lapsed members showcasing *In The Trenches*
- Supported establishment of the 2YC Division including development of logo, new website, by-laws, and election.
- Researching, archiving and saving to disk undocumented photos from past NAGT events
- Revising the OEST submission process

We also

- Participated in the AGI Leadership Forum (presentation on the value of geoscience and geoscience departments) and Congressional Visits Day
- Organized Saturday workshop series for GSA and advertised to area 2 Year Colleges
- Hosted a webinar following the release of the NRC Conceptual Frameworks for New Science Education Standards
- Supported participation in the PKAL Mobilizing Disciplinary Societies project.
- Put an agreement in place with *In The Trenches* editor David Steer
- Researched advertising rates for *In The Trenches* advertising and implemented *In The Trenches* advertising website page
- Reached an indexing agreement with the Education Resources Information Center for the *Journal of Geoscience Education*
- Researched the *Journal of Geoscience Education* EBESCO agreement, declined the contract and terminated our contract with ProQUEST
- Setting automatic approvals with the Copyright Clearing House for *Journal of Geoscience Education* reprints
- Obtained an NAGT credit card to streamline purchasing and bill paying
- Researched the feasibility of a new lighter exhibition booth that would lower future shipping costs
- Moved forward with cancelling Distinguished Speakers Program for this year
- Arranged for new, more user-friendly membership reports from AIP

In addition, we applied for, and were granted, a U.S. Post Office non-profit mailing permit for *In The Trenches* and other bulk mailing activities, we obtained a separate ISSN for the online version of the *Journal of Geoscience Education*, and we have arranged for a book signing by Naomi Oreskes at the NAGT booth during GSA.

Recurring Activities:

- Supporting program implementation for Distinguished Speakers, Field Camp Scholarships, OEST, USGS Internships, and Awards.
- Completing the election of new officers, updating new and former officer pages and updating officer e-mail lists
- Organizing activities at GSA including booth, education reception, annual report and officers meetings
- Preparation for, and organization and execution of, virtual and spring officers meetings
- Membership renewal notices
- Acknowledgement letters for donations
- Bookkeeping, bill paying, budgeting for new year, management of finances, and interactions with accountant regarding books and taxes
- Management of community advertisements and announcements and JGE page charges
- Publication of e-News, ITT virtual supplement, and other communication with members.
- Addressing requests for JGE back issues and other questions regarding JGE (subscriptions, printing)
- Section support regarding insurance issues and meeting logistics and registration payments, as well as annual section fund dispersals

FY '11 Activities

- Election: The election for the slate of 2011-2012 NAGT officers was held in May 2011.
 - This election, like previous elections, was managed by AIP. All members that have submitted an email address to the AIP database were invited to cast an online ballot. Members without an email address were sent a paper ballot. Members were given a link to a page on the NAGT website where they could view photos and bios of the candidates. A total of 217 members cast a ballot. The election results were posted on the NAGT website.
- Membership Management / AIP services:
 - Membership renewal requests for calendar year 2012 were sent out in mid-September. The table below compares membership numbers between the previous year-ends and August 31, 2011 (we do not have reliable membership statistics for years preceding 2006).

Membership Type	Members number as of 2/31/2007	Members number as of 8/31/2008	Members number as of 8/31/2009	Members number as of 8/31/2010	Members number as of 8/31/2011
Regular	1243	1122	1015	921	814
K-12 Teacher	122	180	193	195	168
Student	122	131	124	129	94
Life Member	17	17	17	16	16
Retired	124	130	122	116	109
Total	1618	1580	1476	1377	1201

- JGE subscription Statistics:
 - There are a total of 444 subscriptions to the Journal of Geoscience Education as of August 2011. This represents a decline of 6.1% as compared to 473 in August 2010. The renewal rate, comparing August 2011 to December 2010 subscription data, is 93.7%; up from 92.7% for the same period last year.
 - Promotion/Advertising
 - Developed a new NAGT Membership brochure using 8.5 x 11 format and membership insert to reduce printing costs.
 - NAGT Booth
 - During FY '11 NAGT set up a display booth at the following events
 - GSA: Denver, CO; October 31-November 3, 2010
 - AGU: San Francisco, CA; December 13-17, 2010
 - GSA SE Section: Wilmington, NC; March 23-25, 2011
- For the year ahead we plan to set up the booth at GSA in Minneapolis and AGU.

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Dr. Janis Treworgy
President, National Association of Geoscience Teachers

August 9, 2011

Dear Janis,

You asked that I prepare a list of what I regard as my major achievements during my term as NAGT Executive Director which began in September 2007. When I began my term, I had four major goals

1. Provide a supportive administrative structure that organizes and manages the work of the officers while attending to routine tasks. The goal was to liberate NAGT leadership to more effectively address the four elements of NAGT's mission.
2. Facilitate communication and collaboration among the sections and between the sections and national organization to capitalize on synergies between local, regional and national efforts
3. Increase the value of sponsored programs to the society and enhance their ability to meet our shared goals for geoscience education.
4. Maintain long term relationships with other professional societies, providing a stable point of contact, identifying opportunities and supporting organization of effective and timely responses.

During the last four years NAGT has made progress in all four areas which I summarize below. However, I would note that this is not all my doing. Most of this work is only possible because of strong support from the Ex Comm and hard work particularly on the part of the Presidents and Treasurer. For this I am very grateful.

Reflecting on major accomplishments and their relationship to these goals. I think we have accomplished the first one by

- Putting in place a calendar of activities that are regularly executed by office staff in support of management of the society and its programs. The transition of these tasks from Bill Bruihler to Jon Lee and Linda Goozen laid the foundation for a smooth transition of these tasks in the future. This includes preparation for meetings, management of the booth, the annual

- reception and luncheon, section payments, recurring announcements for awards, obtaining mailing permits, renewing not-for-profit status, sending thank you notes for donations, archiving documents and more. The calendar is summarized on this page: http://nagt.org/nagt/private/nagt_yearly.html
- Conducting an audit of NAGT accounts and accounting procedures, modifying financial procedures in response to the audit, establishing a new reporting format, and regularizing interactions with the treasurer and accountant.
 - Contracting for professional publishing of JGE and In the Trenches. We are currently executing a move from AIP to a new vendor for both publishing and member services.
 - Establishing a regular meeting schedule for the Ex Comm that capitalizes on virtual technologies
 - Creating a set of publicity documents that are cost effective, professional looking and easily updated and describe membership and primary programs. This has also allowed NAGT to develop an ongoing relationship with a designer who can assist with promotional materials and publications.

A measure of the success of this effort to reduce the management burden on the officers is the flourishing of activities led by NAGT officers like the position statements, PKAL collaboration, In the Trenches, publication projects and 2YC Division.

To meet goal two, we have regularized the release of enews, set up newsfeeds on the NAGT website for section news, supported section websites, and established the new Council meeting schedule. Janis's attention to regular reporting of Ex Comm activities to the sections and committee chairs is also strengthening our ability to work with sections, and I hope that the work on membership and the Iphone Field Trip App will build a strong base of collaboration with and among the sections. This is still an area where there is more to be accomplished. We will know we are successful when the sections and the Ex Comm regularly ask each other for help.

To meet goal three, we have regularized reporting and the application process for sponsored projects, developed a routine for making sure that the sponsored projects site is up to date, and experimented with ways to promote these projects at the booth. The most successful model is the Distinguished Speaker Program which was initiated with NSF funding and became a sustained NAGT Program. We are now working much more closely with Cutting Edge as it makes this transition. We still have work to do in this area defining the value proposition for NAGT, for geoscience education, and for the projects. Our original goal was to increase visibility for NAGT. A much stronger role is emerging for our work with sponsored projects.

I am very pleased with the progress we are making on goal four. We now have a stable, productive interaction with AGI based on collaborations on teacher preparation and geoscience education policy. We have regular meetings to discuss publication projects, and work together harmoniously on Living with Earth. Further

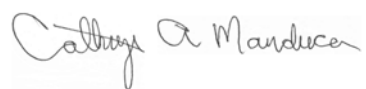
they asked us to join in approaching NSF for funding of the teacher prep work. We have a blossoming relationship with AGU. Pranoti has asked for an article for EOS about NAGT and has gone the extra mile in publicizing our activities to the AGU Education Interest Group. She is working productively with Heather Macdonald and the Building Strong Geoscience Departments project to bolster the AGU Heads and Chairs workshop/list serv. Similarly, we are obtaining increased visibility at GSA. This I attribute primarily to Janis, Beth and Geoff Feiss. Not least important, we were very successful in getting feedback on the Frameworks document for the National Academies. They have repeatedly contacted us when they are looking for geoscience education input or want to get information out to the geoscience education community. Finally, the PKAL project gives us a new opportunity to work with professional societies outside the geosciences. These opportunities will be enhanced through our role in InTeGRATE.

As I look to the future, I would keep the goals from the last four years and add two more:

- 1) developing a robust sustainable funding model that will fully support both our current efforts and an expansion to support increased programming, increased collaboration with geoscience professional societies, and increased work bringing our expertise to work on STEM education more broadly. When I became executive director, only one of NAGT's programs was directly managed by the office (Distinguished Speakers). The office now plays a substantial role in managing OEST and in collecting page charges for JGE. I would not be surprised if the next transition of the USGS Internship program required new support from the office. On reflection, I interpret this to be a generational change in the resources available to faculty. John Wagner made extensive use of an administrative assistant that is not commonly available in the current academic system. Thus, I think we need to assume that supporting programs in the future will require that NAGT be able to provide actual staff support. This will require an increase in resources. At the same time, it is clear that we need to on the one hand stabilize revenue from memberships and subscriptions, and on the other hand consider new revenue streams particularly in the face of changing markets for text books and journals.
- 2) Expanding the NAGT 'workforce' – that is those engaged in working on NAGT activities – well beyond the current officers. The first step in this is to better integrate the current committee chairs into the workings of the society. The second is to develop a new model that engages the membership broadly in working on projects. We will need to consider the value proposition, the communication and management strategies, and the ways in which this work interacts with sponsored projects and their sustainability.

You can find a more detailed review of the activities of the Executive Directors office in the twice yearly reports.

Sincerely,

A handwritten signature in black ink that reads "Cathryn A. Manduca". The signature is written in a cursive style and is placed on a light-colored rectangular background.

Dr. Cathryn A. Manduca
NAGT Executive Director

Gene Pearson
Secretary/treasurer

During the 2010-11 budget year I was involved in the following activities

- Participated in, compiled and posted minutes for the October 30, 2010 Annual Council Meeting; and October 30, 2010 Executive Committee meetings in Denver, Colorado; the January 24, 2011 Executive Committee Teleconference; the April 16-17, 2011 Executive Committee mid-year meeting in Elsha, Illinois; and the June 17, 2011 Executive Committee Teleconference.
- Worked with the Executive Director and the Executive Director's staff on matters pertaining to budget, endowment and the recently completed audit.
- Served as a member of the Executive Director Evaluation Committee

JOURNAL OF GEOSCIENCE EDUCATION SEPT 2011 REPORT

Prepared by: J. Libarkin
Last modified: Sept. 20, 2011

GENERAL STATUS

JGE's Editorial Board consists of all Editors, Executive Associate Editors, and Associate Editors (AEs). All critical decisions related to content and Editorial Board functions are made collaboratively.

SCI: JGE modified its name in 1995 by changing the word "Geological" to "Geoscience". This resulted a discontinuation of JGE as a journal in the Science Citation Index. Thomson Reuters requires review of at least three on-time consecutive issues for inclusion in this index (as well as the equivalent Social Science Citation Index). Issues must be ON TIME in order for Thomson Reuters to consider JGE for review and consideration.

The latest correspondence from Thomson Reuters follows:

From: <nancy.thornton@thomsonreuters.com>
Date: July 8, 2011 11:02:58 AM EDT
To: <libarkin@msu.edu>
Subject: RE: Journal Evaluation Status Request-Journal of Geoscience Education

Dear Dr. Libarkin,

Thank you for the information. The evaluation of the Journal of Geoscience Education is continuing. We monitor a journal's performance through several issues (sometimes volumes) and in consequence an evaluation may take some time. We appreciate your patience.

Sincerely,

Nancy Thornton
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MANUSCRIPTS

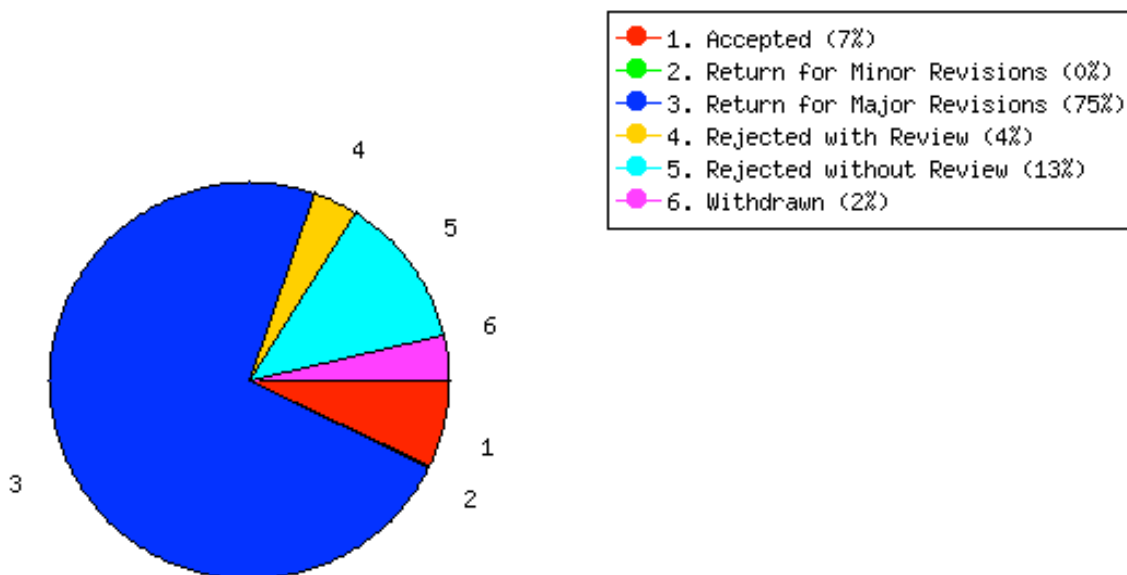
In 2011, the mean time from submission to first decision was 12.6 weeks. We are still working towards identifying Associate Editors who will bring this rate to below 10 weeks.

Submission rates are consistent with prior years. JGE processed 107 manuscripts from Sept. 2010 through Sept. 2011. 58 manuscripts were new submissions; 49 were resubmissions. 4 manuscripts were accepted without revision, 41 were rejected with encouragement to resubmit (“major revisions”), and 9 were rejected. 21 manuscripts were accepted with required revision, 38 were accepted after one or more revisions, and 1 was withdrawn (submission incompatible with JGE).

We have seen a decrease in the submission of purely descriptive pieces, in alignment with our encouragement that authors submit manuscripts pertaining to teaching and learning ideas to In The Trenches. This has been coupled with an increase in Curriculum & Instruction and Research papers in better alignment with JGE guidelines.

Decisions on Original Submissions

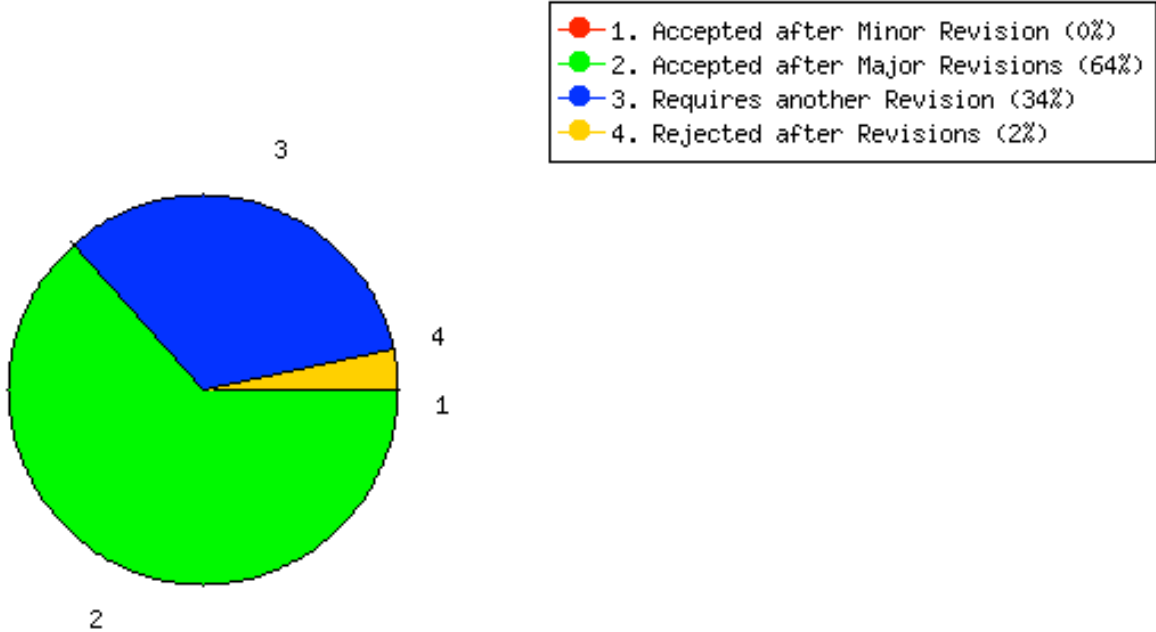
JGE Decision Tracking: Sep 2010 - Sep 2011 (Original Submissions Only)



Note that Original Submissions saw a 7% acceptance rate at first decision. 75% of manuscripts were returned to authors for major revisions; these are manuscripts that were rejected but encouraged for revision and resubmission. Manuscripts rejected without external review (13%) were reviewed by the Editor-in-Chief, one of the Editor for C&I or the Editor for Research, and often an Associate Editor. These manuscripts were deemed too deficient to warrant reject/resubmit status.

Decisions on Revised Submissions:

JGE Decision Tracking: Sep 2010 - Sep 2011 (Revisions Only)



Note that 64% of resubmitted manuscripts were accepted upon 2nd revision. 34% required additional revision. The manuscript rejected after revision was identified as an attempt by the authors to publish a paper already published in EOS.

Internationalization:

In addition to the U.S., JGE has received manuscripts in the past year manuscripts from Argentina, China, Colombia, New Zealand, Nigeria, Portugal and Spain.

Over the period Jan. 1, 2009 through Sept. 23, 2011, JGE received manuscripts from Argentina, Australia, Brazil, Canada, China, Colombia, Ghana, India, Israel, New Zealand, Nigeria, Portugal, Saudi Arabia, South Africa, Spain, Sweden, Taiwan, Thailand, Trinidad And Tobago, Tunisia, and United Kingdom.

JGE is producing a special issue on Globalization and Geoscience Education (Associate Editor : Chun-Yen Chang; Special Guest Associate Editor: Sharon Locke). This issue should be complete and ready for publication in a 2012 regular issue.

JGE ONLINE

JGE has been a fully functional online journal since Feb. 2011. The current publisher chosen by NAGT, AIP, has decided to no longer publish non-AIP journals. AIP has continued to be a difficult organization to work with. Kristen St. John has undertaken the lead on identifying a new publisher who will work with her as 2012-2014 Editor-in-Chief.

Reflection:

My overall perspective after undertaking the JGE Editorship for three years is positive. I believe the Editorial Team has made great strides in raising the quality of the manuscripts published in JGE. This is due in large part to the standards set by the previous Editor, Carl Drummond, explicit guidelines developed for JGE submissions, the addition of more Associate Editors to the Editorial team, the use of sub-Editors for Curriculum & Instruction and Research papers, and the diversification of the reviewer pool. My interactions with colleagues in other communities have indicated to me that JGE now plays a greater role in scholarly discourse about disciplinary science education. I am also pleased that Thomson Reuters is continuing its review of the Journal for reintroduction to the citation index.

I encourage NAGT to ensure that Dr. St. John's time as Editor-in-Chief is fruitful for both her and JGE. Most importantly, JGE's autonomy as an academic publication must be maintained. I also strongly encourage NAGT to recognize that Dr. St. John is undertaking a difficult and time-consuming job as a volunteer. This warrants NAGT's gratitude towards Dr. St. John and respect for her time.

Sincerely,

Julie Libarkin
Editor-in-Chief, Journal of Geoscience Education
Dec. 31, 2009-2011

This year saw publication and distribution of the first volume of the new quarterly NAGT news magazine *In the Trenches*. This quarterly publication provides a venue for improving geosciences education by describing best practices in teaching, teaching tips, resource descriptions and other material suitable for geosciences teachers at all levels. University, two-year faculty and K-12 teachers are solicited to provide material for this printed publication that also has an associated website. David Steer, The University of Akron, was the lead editor, Dexter Perkins, University of North Dakota, was the associate editor position and Nancy Ashmore participated as the managing editor.

Each issue centers around one or two main articles with several related columns and additional content as needed. The January Issue focused on teaching climate change and included one major article describing a field-based climate change course taught in Alaska. That issue also included columns about the importance of teaching climate change and using climate data in the classroom. Other contributions focused on classroom technology and teaching tips. The April issue focused almost entirely on teaching in the field with five feature articles and columns and a book review. The July issue used one's sense of place as a central teaching theme. That issue included two major features and one related column along with a technology article. This issue was also used as a place to disseminate news of interest from the mid-year meeting. The October issue focused on teaching seismology. It included two longer articles and one related column along with several articles carried over from previous issues. This issue was also used to publish the 2011 NAGT award winner biographies and photographs.

Content for future issues, while tentative, will focus on themes of broad interest to the geosciences education community. Issues are being planned that will discuss topics related teaching students to think, teaching quantitative skills, the importance of the affective domain in teaching and using hands-on activities in the lab and classroom to enhance teaching and learning. The editorial staff welcomes submissions and ideas for future content.

Annual report for NAGT Fall 2011 - Aida A. Awad

- ❖ JGE Assistant Editor – managed three manuscripts
- ❖ PKAL
 - attended virtual meetings for the project team charged with implementing interdisciplinary, problem-based professional development workshops
 - spearheading submission of case study recommendations within Exec Comm
- ❖ AGU
 - worked with Elizabeth Wright on AGU Workshop proposal
 - Reinforcing Quantitative Skills in Geoscience Classes
- ❖ NAGT Logo – worked with Exec Comm team on logo guidelines & design for sections and divisions

- ❖ National Geoinformatics Community workshop - September 2010 – Denver, CO
- ❖ T&L / NSBA presentation – October 2010 presentation on Geospatial Literacy in K-12 classrooms
- ❖ Northwestern University Climate Change Symposium – October 2010
 - Wrote grade 9-12 curriculum modules for OSEP for symposium
- ❖ GSA Annual Meeting, Denver, October 30-November 1, 2010
 - Attended Executive Committee Meetings
 - Attended NAGT / GSA Education Division Luncheon and Awards
 - Volunteered in NAGT booth
 - Attended GSA Education Committee Business Meeting
- ❖ Attended Oakton College 4th Annual Conference on STEM Education
- ❖ IETC presentation – November 2010 – presentation on Geospatial Literacy in K-12 classrooms
- ❖ NEBHE STEM PBL Project – participant on co-op team with Oakton College focusing on sustainable solar power solutions
- ❖ IAGI (IL Association of Geoscience Instructors) – 4th annual meeting February, 2011 – presented on the benefits of NAGT membership and the 2YC movement
- ❖ ICE – IL Computing Educators – February 2011 – presenting full day workshop for K-12 teachers on using Google Apps for Education in K-12 classrooms to support student learning, including Google Earth
- ❖ March 2011 – EarthScope workshop on New Madrid Seismic Zone – Memphis, TN – shared NAGT information with informal educators
- ❖ Served as the committee chair for the GSA position statement on “The Importance of Teaching Earth Science” – publication date expected after GSA
- ❖ April 2011 – Niles District 219 Technology in Education Conference – presented talk on Google Apps Success in STEM Classrooms
- ❖ April 2011 - Attended mid-year NAGT meeting at Principia College
- ❖ May 2011 – Co-organizer / presenter at Oakton Community College “Girls STEM Rock” event
- ❖ June 2011 & August 2011 – Week long workshop instructor – Google Apps in the Collaborative Classroom
- ❖ Publication in press: Follett Professional Development - Geospatial Inquiry: The Basics of Geospatial Technology in Education

Councilor's Report

Robert H. Blodgett

- **GSA Annual Meeting 2010 (Denver, Colorado)**
 - Attended the NAGT Executive Committee and Council meetings
 - Attended the NAGT/GSA Education Division luncheon
 - Volunteered at the NAGT exhibit booth
 - Attended the NSF-sponsored workshop “Funding Opportunities for Two-Year College Faculty: Possibilities, Challenges and Successes”
- **NAGT Executive Committee 2011 Meetings**
 - Attended the mid-year meeting at Principia College in Elsah, Illinois
 - Participated in the June telephone meeting
- **2-Year College Division (Geo2YC) Initiative**
 - Served as chair of a 13-member NAGT ad hoc committee tasked to organize Geo2YC, a 2-year college division within NAGT
 - Scheduled and chaired nine meetings (one face-to-face and eight teleconference) of the Geo2YC Division Organizational Committee
 - Drafted the Geo2YC Division proposal for the NAGT Executive Committee
 - Served on an ad hoc committee tasked to propose revisions to the NAGT constitution and bylaws to provide for international sections and a two-year college division within NAGT
 - Served on an ad hoc committee tasked to design and standardize logos for NAGT sections and divisions
- **Other Activities**
 - Awarded a 3-year collaborative National Science Foundation Transforming Undergraduate Education in Science, Technology, Engineering and Mathematics (TUES) Program Grant with Eric Baer, Heather Macdonald, and Janet Hodder entitled “Supporting and Advancing Geoscience Education at Two-year Colleges through Workshops and Web Resources”

Councilor/Liaison Report

2011 Fall Executive Committee meeting

Andy Buddington

September 10, 2011

The following are activities I have worked on as Councilor-at-Large and as Liaison (Pacific Northwest Section) for the second half of 2011:

- served on the Field Camp Scholarship Committee
- served as chair on the James H. Shea Award Committee
- served on the Distinguished Speakers Committee
- served as Councilor-at-Large
- served as Liaison to the Pacific Northwest Section
- submitted Liaison Report to Pacific Northwest Section Officers and the Spring 2011 Newsletter
- submitted "*The State of My State Survey*" to the Spring 2011 PacNW Newsletter
- communications with Washington State OEST recipient regarding possible attendance at the annual section meeting
- volunteered to serve on the Geoscience Teachers in the Parks Committee; communication with Ian MacGregor regarding possible future funding sources
- attended the mid-term Executive Committee meeting at Principia College, April 2011
- attending the 2011 GSA annual meeting
- co-chair for the NAGT sponsored technical session "*Extreme Climate and Weather Events; Past, Present, and Future*" at the 2011 annual meeting of GSA, Minneapolis, MN
- helped coordinate the Naomi Oreskes book signing at GSA 2011
- volunteer at the NAGT booth (2010 Denver & 2011 Minneapolis)
- began planning for hosting the 2012 Pacific Northwest Section conference in Spokane, Washington to be hosted by Spokane Community College in June 2012

Councilor-at-Large Annual Report for NAGT 2010-2011

Karen Kortz

Meetings

- GSA Annual Meeting, Denver, October 30-November 1, 2010
 - Attended executive committee meeting
 - Attended NAGT/GSA Ed Div luncheon and awards
 - Led NAGT/GSA Ed Div-sponsored workshop entitled “An Introduction to Using Active Learning to Reduce Student Misconceptions about Plate Tectonics”
- NAGT Executive Committee 2010-2011 Meetings
 - Attended the NAGT Executive Committee meeting in Elsah, Illinois
 - Participated in quarterly Executive committee teleconferences

Activities

- New England section liaison – I contacted the leadership of NENAGT with updates from the national level and asked them to share comments or concerns
- In The Trenches
 - submitted ideas and suggestions for articles and authors to the editor
 - submitted a short article for the first edition
- Journal of Geoscience Education
 - coauthor on a paper submitted to JGE
 - served as reviewer on a couple papers submitted to JGE
- Co-lead the week-long On the Cutting Edge Workshop for Early Career Faculty in the Geosciences (2011)
- Led a half-day workshop entitled “Lecture Tutorial Interactive Teaching in Geology” held at the Community College of Rhode Island, sponsored by NENAGT
- Nominated K. Saul from Ferri Middle School, Johnston RI for the 2011 Outstanding Earth Science Teacher (OEST) Award from the New England section of the National Association of Geoscience Teachers
- Past President of New England NAGT
- Applied and accepted to co-lead a NAGT and GSA Ed Div sponsored workshop entitled “Common Misconceptions About Plate Tectonics, Earth's Interior, and the Rock Cycle, and Active Learning Approaches to Correct Them” at the GSA annual meeting in 2011
- Proposed and will co-chair a NAGT sponsored session at the NE GSA meeting, titled “Inquiry-Based Activities: Examples and Effectiveness”
- Proposed and will lead a NAGT sponsored workshop at the NE GSA meeting, titled “Misconceptions in Introductory Geology Courses and Ways to Reduce Them with Active Learning Techniques”
- Proposed and will co-lead (with Christine Witkowski, a fellow NE NAGT member) a field trip at the NE GSA meeting, titled “In the Footsteps of Dinosaurs: A Guided Tour of Dinosaur State Park for K–16 Educators”
- Aiding in the coordination of NENAGT efforts at the NE GSA meeting, such as organizing the NAGT-sponsored luncheon and field trip

Councilor's Report for 2010-2011: Jeff Ryan

Educational service activities:

- Service as Geoscience Councilor, Council on Undergraduate Research
 - o Facilitator for CUR Institute: "Institutionalizing Undergraduate Research," February 2011, Stetson University
 - o Facilitator for CUR Institute, "Proposal Writing Institute", July 2011, Vassar College
 - o CUR Consultant/External Reviewer, Furman University Environmental Sciences Department (July 2010)
 - o CUR Consultant/External Reviewer, Northern Arizona University, Undergraduate Research program, Sept. 2010
 - o Co-Convener, Cutting Edge/CUR "Soiree" workshop on undergraduate research as an educational best practice in the geosciences (to be held 10/28/11)
- UNAVCO Education and Outreach Advisory Committee, Jan 2011- (Current)
- Integrated Earth Data Applications (IEDA) geoinformatics facility Policy Committee, March 2011- (Current)

Grant-supported Educational Scholarship:

- **NSF-CCLI: "Preparing Undergraduates for Research: Examining the use of Remote Instrumentation in Earth and Planetary Science Classrooms" (ended 11/10)**

Presentations

Ryan, J.G. (2010) Integrating microbeam instrumentation into the classroom to teach mineralogy and petrology: outcomes. Presented at the 2010 Goldschmidt Conference, Knoxville, TN.

Ryan, J.G. (2010) Engaging geoscience majors in research and enticing undergraduates into geoscience degree programs by integrating real rock analysis experiences into geoscience courses: successes and challenges. 2010 GSA Annual Meeting, Denver, CO.

Ryan, J.G. (2011) Facilitating student education and professional development through intensive in-classroom investigations using remotely operable microbeam instrumentation. Presented at the 2011 European Geological Union General Assembly.

- **NSF-NSDL: Planning the Future of Geo-CyberEducation (ended 3/11)**

Presentations:

Ryan, J.G. (2010) Planning for the Future of Geo-Cybereducation: outcomes of the workshop, challenges, and future directions. 2010 AGU Fall Meeting, San Francisco.

Other activities:

Invited presenter: *National Geoinformatics Community Workshops for Interoperability and Education*, Golden, CO, 9/10

Invited presenter: *Google Earth: Visualizing the Future of Geoscience Research and Education*, GSA Penrose Conference, Mountain View, CA 1/11

- **NSF-NOYCE: USF Robert Noyce Scholarship Program. (funded 7/10)**
Scholarship program for STEM graduates seeking to obtain a Master of Arts in Teaching, to serve as teachers in high needs school systems in central FL.

- **NSF-CCEP: Coastal Areas Climate Change Education (CACCE) Partnership [funded 9/10; supplemental support 8/11]**

Presentations:

Ryan, J.G., Feldman, A., Muller-Karger, F., Gilbes-Santaella, F., Stone, D., Plank, L., Trotz, M. and Millan-Otoya, J (2011) Coastal Areas Climate Change Education Partnership (CACCE). Presented at the 2011 ASLO Aquatic Sciences Meeting, San Juan, PR

Other Activities:

- CLEAN Pathway Resource Review event, Boulder, CO 8/11
- Presenter, *Foro Cambio e Climaticos*, Mayaguez, PR, 2/11
- Panel Discussant, *Downtown Debriefing: Resiliency and Climate Change*, Tampa Downtown Partnership breakfast informational series, 5/11
- Exhibitor and Gold Sponsor, Annual Meeting of the American Planning Association, Florida Chapter, 9/11
- Primary funded partners:* USF, Univ. Puerto Rico at Mayaguez, Univ. Virgin Islands, the Florida Aquarium, Hillsborough County School System.
Cooperating Partners: Florida Center for Environmental Studies/FAU, Southwest Florida Regional Planning Council, American Planning Association, Florida Chapter; ICLEI, Department of Urban Planning, Florida State University; Sea Grant Puerto Rico, COSEE Florida, Eckerd College, + a range of smaller environmental/ocean science organizations in Florida and the Caribbean.

Project goals are to create a network of institutions and organizations to develop a comprehensive, regionally and/or topically focused educational plan on climate change. Our topic/region: coastal areas of Florida and the Caribbean.

- **NSF-TUES: Faculty Development to Support High Impact Activities That Transform Undergraduate Geoscience Education (funded 8/11)**
NAGT sponsored workshop series seeking to aid geoscience faculty in the development of successful NSF-TUES and related educational proposals. First events: funded lunchtime informational sessions at the GSA Annual Meeting and AGU Fall Meeting.

NAGT Activities:

- Served on Ad Hoc committee for the selection of the new Editor-in-Chief of the Journal of Geoscience Education

- Obtained NAGT sponsorship of new NSF-funded workshop series (see above)
- Attended Mid-Year Meeting virtually (due to illness....)

Other activities:

Participant, Associate Editor, and Presenter: Teaching Mineralogy, Petrology and Geochemistry in the 21st Century, On the Cutting Edge culminating workshop for “hard rock” geology

September 2011

Annual Report of the Eastern Section, National Association of Geoscience Teachers.

The eastern section is pleased to report that we continue to be an active, participating section within NAGT. Our section maintains the tradition of scheduling the section conference / meeting for late spring, usually during the month of May. The spring 2011 section conference was held in Johnstown Pennsylvania during the weekend of May 19-22. Eastern section meetings typically consist of a four-day schedule of events; and conference participants can elect to attend the entire weekend, or selected events. Activities include poster sessions, presentations, workshops, field trips, awards, recognition dinner banquet, and the section business meeting. The section conference usually includes a Thursday early registration and arrival with a social gathering, field trip or evening session guest speaker. Friday includes morning poster sessions, workshops, and presentations till midday. Friday afternoon will typically offer a group field trip to a point of local interest. Saturday has been reserved for the traditional eastern section geological field trip(s) and excursions. Participants are transported by either rental vans or school bus. The section awards and recognition banquet is held on Saturday evening, with awards given to section OEST winners, as well as other section award recipients recognized for their contributions to the section and Geoscience education. The eastern section conducts the section business during a Sunday morning breakfast meeting, with section conference activities ending before noon. Typical attendance at a section meeting averages forty members, which represents approximately twenty-three percent of our active membership of one hundred seventy five section members. Our meetings are open to both members and non-members, and efforts to recruit attendees from local schools and colleges often results in an average additional five conference attendees. The average fees established for eastern section conferences average one hundred twenty dollars, with fees slightly higher for non-NAGT members. Discounts are made available for spouses to attend, and OEST awardees from the previous year can attend the conference for free.

Whenever possible, the eastern section relies heavily on local schools and universities to provide a host site for the conference. The spring 2011 Johnstown conference was hosted by the University of Pittsburgh at Johnstown. Our 2011 meeting provided us with the unique opportunity to include many of our university students currently majoring in geology and earth-space sciences to participate along with our NAGT members. Coinciding with the section meeting was the universities first summer session of courses. Students within the geology program were currently taking the departments “Geologic Field Methods” course, and we combined our conference Saturday field trip along with our students field work for that day. The students had the opportunity to work and interact with NAGT members throughout the entire day. This provided an ideal situation for interaction between students and a wide assortment of veteran Geoscience educators.

The eastern section continues to recognize excellence in Geoscience education. Much emphasis is placed on recruiting nominations for, and recognizing Outstanding Earth Science Teachers from each state within our section. OEST winners are encouraged to attend the section meeting and then continue their active affiliation with NAGT.

The eastern section also awards our own field camp scholarship to a student planning to attend a summer geological field camp experience. The section “James O’Connor Memorial Field Camp” award is in the amount of five hundred dollars each year, given to one selected applicant.

The eastern section also awards its “Distinguished Service Award” to a member of the section. The distinguished service award is given to a member of the eastern section (still actively teaching or retired) who has, over the years, contributed to the growth and activities of the eastern section.

Outstanding teaching at the college level is recognized by the section in the awarding of the “John Moss” award. The John Moss award is reserved for instructors and professors who, at the college level, model outstanding teaching in the geosciences.

The section “Digman” award is designed to recognize an individual who works to bring Geoscience to the general public. We look for individuals who are not teachers; but work in a capacity that educates the general public in areas of the geosciences. Museum directors, curators and assistants, state survey employees, mine and quarry public relations people would all qualify for this award.

The eastern section publishes its newsletter The Bulletin four times each year. This new letter keeps members informed of activities within the section and encourages any member to submit an article to be published. Traditionally, The Bulletin has been hard-copy mailed to every member of the section. Beginning with the winter 2011-2012 edition The Bulletin will now be sent electronically to every member; unless they specifically request a mailed hard copy.

As with many other organizations, the eastern section tends to rely on a core group of dedicated members to maintain the section activities and business. Our spring conference is the one opportunity each year when members of the section can gather to exchange their knowledge of Geoscience education. We strive to continue the recognition of individuals for their contributions to Geoscience education, and our annual section conference places a high priority on that part of our mission.

Respectfully submitted,
Stephen R. Lindberg
President, Eastern Section
Geology Dept., University of Pittsburgh at Johnstown
Science Dept., Westmont Hilltop School District, Johnstown Pennsylvania.

**National Association of Geoscience Teachers
Far Western Section
2011 Annual Report**

Report Submitted by Lynn Fielding

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Far Western Section Conferences

Fall 2010 Field Conference

Held on October 8, 9, and 10, 2010

Hosted by California State University Fresno in Fresno, California

Paul Troop spearheaded the Fall 2010 Far Western Section of the National Association of Geoscience Teachers Conference at California State University Fresno in Fresno, California. On Saturday morning, full day field trips departed from the campus to explore the local area geology. The Saturday evening banquet was held at the University Center on campus. Dinner was followed by a lecture on local area geology and the Far Western Section Business Meeting. In addition to guidebooks, rock and mineral specimens were available for sale on Saturday evening. After a continental breakfast on Sunday morning, half day field trips departed from California State University Fresno.

Spring 2011 Field Conference

Held on March 25, 26, and 27, 2011

Hosted by California Institute of Technology (Caltech) in Pasadena, California

The Spring 2011 Far Western Section of the National Association of Geoscience Teachers Conference was a great success. There were 117 participants which were represented by 83 geoscientists, 11 Pacific Coast College student helpers, and 23 volunteers who led field trips, organized workshops, conducted tours, and helped with the evening presentations.

Participants checked in Friday evening while snacking on Mexican hors d'oeuvres. Many then took a tour of the Caltech Seismo Lab led by Margaret Vinci. In light of the recent March 11, 2011 earthquake and tsunami in Japan, Caltech Professor Tom Heaton kindly offered to squeeze in an additional presentation on this event. His presentation was followed by Caltech Professor Jennifer Jackson's presentation entitled Good Vibrations Inside the Earth.

Saturday there were two full day field trips and two half day field trips. Caltech Professor Mike Lamb and graduate student Jeff Prancevic led a group up the arroyo behind the Jet Propulsion Laboratory (JPL) to explore erosion and sedimentation in the wake of the recent fire and subsequent heavy rains. Occidental College Professor Don Prothero led a group to Devils' Punchbowl and Red Rock Canyon. Pacific Coast College Professor Bruce Carter led a group to see San Gabriel Anorthosite and the San Andreas Fault. University of Alaska at Fairbanks Professor Elisabeth Nadin and Mt. San Antonio College Professor Rebecca Walker led a group to Vasquez Rocks.

Also on Saturday, three workshops were held. Caltech Professors Ken Farley, John Eiler, and Brian Wernicke led a workshop entitled Low-T thermometry and thermochronometry and applications and included dating the formation of the Grand Canyon, Caltech Professor Joann Stock led a workshop on Earthquake magnitude, energy, and focal mechanisms sometimes referred to as beach balls, and Caltech Professor Tom Heaton led a workshop on Operations of Community Seismometer Network entitled "How your laptop can help scientists better understand earthquakes".

After a full day of workshops and field trips, participants were revived Saturday evening with a Mexican dinner in Caltech's Winnett Lounge. Caltech Professor Jess Adkins then gave an engaging and entertaining presentation entitled Journey to the bottom of the sea: how deep-sea corals calcify and why we care.

Sunday morning, after a nourishing omelet bar breakfast, two more workshops were held. University of California at Santa Barbara Professor Emeritus Tanya Atwater led Plate Tectonic Rotation of the Transverse Ranges: what happened, how we know it happened, and how it created Southern California's unique geography, climate, ocean currents and biological richness. University of Alaska at Fairbanks Professor Elisabeth Nadin and Caltech grad student Belle Philibosian led Historical earthquakes and uplift and subsidence of Sumatra from coral growth rings. In addition, since two workshops had filled up and had waiting lists, their leaders, Professors Stock and Atwater, graciously repeated their workshops on Sunday.

Finally, thanks are extended to all the volunteers, as well as Heather Steele who arranged logistics and meals, and Lisa Christiansen who created the field guide.

Report completed by Laurie Kovalenko, Tectonics Observatory, Caltech, and Jeff Grover, Questa College.

Future Far Western Section Conferences

Fall 2011

The Far Western Section Fall 2011 Conference will be hosted by Copper Mountain College on November 11, 12, and 13, 2011. Information on local area motels and restaurants will be provided. Bruce Bridenbecker is the conference organizer and trips are planned in and around the Joshua Tree Area. Registration will open on Friday evening and a reception and campus tour are planned. The Far Western Section Business Meeting will be held on Friday evening as well. On Saturday morning, full day trips will depart from Copper Mountain College with Dee Trent and Bruce Bridenbecker as trip leaders. Arrangements are being made for dinner on Saturday evening at a local restaurant. On Sunday morning, half day trips will also depart from Copper Mountain College.

Spring 2012

In the spring of 2012, El Camino College, in Torrance California will host the Far Western Section Conference on March 2, 3, and 4, 2012 at the Desert Studies Center in Zzyzx, California. This conference is being organized by Lynn Fielding with the full support of the Earth Science Department at El Camino College. Field trips will focus on various aspects of the Mojave Desert and are currently being planned. Zzyzx (which is pronounced zy – zicks with emphasis on the “zy”), California has a colorful history of its own and once was a resort which featured mineral springs and mud baths, and was renowned as a health resort. Some of these facilities are partially preserved and make for wonderful photographic opportunities with the background of Soda Dry Lake. Today, the California State University system has established a consortium which administers the Desert Studies Center, facilitates research in a variety of disciplines, and aids the preservation of the endangered Mohave tui chub.

Baker, California is located 11 miles to the north east from the Desert Studies Center and has a variety of motels, restaurants, gas stations, and other facilities, some of which are quite unique. “Home of the World's Tallest Thermometer” is Baker's claim to fame and the height of the thermometer at 134 feet or 41 meters was selected when the community recorded the highest temperature ever recorded in the United States (in Death Valley) at 134 degrees Fahrenheit in 1913. However, it is also a gateway to Death Valley and other scenic areas of the Mohave Desert. Many travelers come to know Baker as they fill their gas tanks during their excursions to and from Las Vegas, Nevada to Los Angeles, California. Baker, California is approximately 177 miles or 285 kilometers north east of Los Angeles, California. Las Vegas, Nevada is located about 88 miles or 142 kilometers to the north east of Baker, California.

The Desert Studies Center has a meeting room, an area for social gatherings and poster sessions, audio visual capabilities with wireless internet, dormitory facilities (advanced registration required and individuals bring their own bedding or sleeping bag), shower facilities, a chef who will prepare the hot breakfasts, dinners and packaged lunches, a store which features items related to Zzyzx, wonderful star gazing opportunities (clear skies permitting), and a wonderful view of Soda Dry Lake, the California Fan Palms and the Chub Pond. All of the field trips will leave from the Desert Studies Center.

In addition to the field trips, workshops, the banquet, and the NAGT Far Western Section business meeting, student posters are strongly encouraged. It is hoped that each school with faculty in attendance will have at least one student poster. The best posters will receive special recognition. Please plan to attend!

Please contact Lynn Fielding at lfielding@elcamino.edu with any questions about the spring 2012 NAGT Meeting.

Additional Far Western Section Activities

Scholarships

Each year, the Far Western Section awards scholarships to deserving geoscience students. This year the Far Western Section provided a \$500.00 scholarship to J. Henessey.

Publications

Sales of Guidebooks that are produced for each conference continue to provide the financial support for the scholarships awarded by the section. A list of publications available for purchase is posted on the section web site at <http://nagt-fws.org>.

Membership

The Far Western Section of the National Association of Geoscience Teachers presently has 191 members.

Far Western Section Financial Report

Balance on Hand as of October 2010	\$9,888.13
Income	
Refund Fall 2010 Conference	1,439.87
Membership (175 members)	437.50
Publication Sales	1,684.10
Interest	<u>8.52</u>
	\$3,569.99
Expenses	
California Sales Tax	114.00
Reprint Field Guide	165.69
Website	65.69
Scholarship (J. Henessey)	500.00
Advance (Fall 2011 conference)	1,000.00
Fall 2010 Expenses	1,624.50
Postage for Publications	<u>101.36</u>
	\$3,571.24
Balance on Hand as of August 28, 2011	\$9,886.88

Amount of CD \$28,756.01

The Far Western Section is in good financial shape due to holdings in a CD. However, publication sales have declined mainly due to decreased library budgets and a decrease in membership from 243 in 2010 to a present membership of 191.

The Far Western Section looks forward to the year ahead and the upcoming field conferences that are currently being planned.

Respectfully Submitted,

Lynn Fielding
Far West Section President
September 15, 2011

New England Section NAGT Annual Report 2011

Filed by Karen Kortz

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resigned*

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* After minimal participation, the president resigned during her term. To fill the leadership vacuum created, the past president (Karen Kortz) will serve as acting president until our annual meeting in December when the 1st Vice President will take over, as usual. Karen Kortz will continue to serve as past president for another term.

Report on Activities in the Past Year

Annual Meeting 2010: Our annual meeting was held at the Weston Observatory in Boston College. We toured the observatory, and heard a talk by about earthquakes in New England by keynote speaker Dr. Alan Kafka, who runs the Boston College Educational Seismology Project (BC-ESP).

Teaching Workshop: We sponsored a day-long workshop presented by Karen M. Kortz and Jessica J. Smay at the Community College of Rhode Island entitled “Lecture Tutorials: Interactive Teaching in Geology.” The workshop was attended by approximately 25 educators, from K-12 schools, community colleges, and colleges/universities.

Outstanding Earth Science Teacher Award: Karen Saul is the New England Section’s Outstanding Earth Science Teacher Award (OESTA) winner for 2011. Karen teaches earth science at Ferri Middle School, Johnston, Rhode Island. The award will be presented at either our upcoming Annual meeting in December or our luncheon at the Northeastern section of the Geological Society of America meeting.

Activities Planned for the Upcoming Year

We are currently planning a big presence at the Northeastern section of the Geological Society of America meeting in March 2012. As sapphire-level meeting sponsors, we will host an NAGT booth where we plan to actively recruit new members. In addition, we are hosting a division luncheon, sponsoring two sessions (Inquiry-Based Activities: Examples and Effectiveness; and Technology Integration in K–16 Geoscience Education), supporting and leading a field trip (In the Footsteps of Dinosaurs: A Guided Tour of Dinosaur State Park for K–16 Educators), and sponsoring a workshop (Misconceptions in Introductory Geology Courses and Ways to Reduce Them with Active Learning Techniques). We have reached out to the Eastern Section of NAGT with whom we will cosponsor the field trip and luncheon. In addition, we are planning our annual meeting and field trip at Amherst College’s Museum of Natural History in December 2011. The meeting will feature a talk about Connecticut Valley trace fossils and the Triassic-Jurassic extinction by Patrick Getty, a PhD candidate at the University of Connecticut.

Financial Report

Treasurer Julia Daly reports that the New England Section remains financial viable with a total of \$3679.30 in the bank. The treasurer’s report with the balance and activities is given below.

Non-Profit Business Now account

Starting balance (9/2010): \$53.96

Interest rate: 0.100 %

Interest accrued: \$ 0.04

Ending balance (9/2011): \$106.12

One-to-One Business Savings account

Starting balance (9/2010): \$4960.94

Interest rate: 0.2000 %

Interest accrued: \$ 7.09

Ending balance (9/2011): \$3573.18

Total funds available: \$3679.30

North Central Section Annual Report 2011

Submitted by Suki Smaglik

Officers:

President

Suzanne M. (Suki) Smaglik, Central Wyoming College, Riverton, WY
ssmaglik@cwcc.edu

Secretary/Treasurer

Katherine (Kata) McCarville, Ph.D., Upper Iowa University, Fayette, IA
mccarvillek@uiu.edu

Past-Year Activities:

We made another attempt at having a regional sectional meeting this past year, in Lander, WY, which was cancelled again, due to lack of registration. This is our third try at a section meeting. We continue our section website. Solicitations for nomination for the OEST award were made and two were going to be placed but they never ended up coming to the section.

Planned Activities:

Maybe a trip to the Tetons or Yellowstone will appeal to some of our members. We are looking for someone to lead this effort.

Treasurer's Report:

submitted by Kata McCarville

The NAGT North Central Region is solvent, and has available funds totaling nearly \$3000 at this time.

Pacific Northwest Section of NAGT 2010-11 Annual Report (Ron Metzger)

A. 2010-11 Section Officers

a. Executive Office

President

Ron Metzger - Southwestern Oregon Community College, 1988 Newmark Avenue, Coos Bay, OR 97420-2912, rmetzger@socc.edu

Vice-President

Cassandra Strickland – Columbia Basin College, 2600 N 20th Avenue, Pasco, WA 99301, CStrickland@columbiabasin.edu

Secretary-Treasurer

Robert Christman - Department of Geology, Western Washington University, Bellingham, WA 98225, Bob.Christman@wwu.edu

Past President

Ralph Dawes - Wenatchee Valley College, 1300 Fifth Street, Wenatchee, WA 98801, rdawes@wvc.edu

b. Communications

Newsletter Editor

Cassandra Strickland – Columbia Basin College, 2600 N 20th Avenue, Pasco, WA 99301, CStrickland@columbiabasin.edu

Website Coordinator

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British Columbia

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Tark Hamilton, Camosun College, Victoria, B.C., thamilton@cmosun.bc.ca

d. Awards

OEST Awards Coordinator

Deron Carter, Linn-Benton Community College, 6500 Pacific Blvd. SW, Albany, Oregon 97321, (541) 917-4745, carterd@linnbenton.edu

B. Reports

a. Annual Business Meeting

The annual business meeting of the Pacific Northwest Section NAGT was held on June 25th during the Pacific Northwest Section annual meeting at Malheur Field Station in southeastern Oregon.

OEST winners were announced. Nominations for next year should be submitted to Deron Carter, the OEST awards coordinator, (541) 917-4745, carterd@linnbenton.edu.

Treasurer's report from Bob Christman was submitted electronically to Metzger and presented at the meeting.

b. 2011 OEST Awards

- Section Winner:
 - Frank Hladky, Coquille High School, Coquille School District #8, Coquille, Oregon.
- State Winners:
 - Alaska: Kathleen Galau, Thunder Mountain High School, Juneau School District, Juneau.
 - Oregon: Frank Hladky, Coquille High School, Coquille School District #8, Coquille.
 - Washington: Dorinda Belcher, North Pines Middle School, Central Valley School District, Spokane.

C. Annual Activities/Functions

a. Events Sponsored by Pacific Northwest Section NAGT 2010-11

PNW NAGT Annual Meeting, June 22-26, 2011, Malheur Field Station, southeastern Oregon, hosted by Portland State University/Michael Cummings. Attended by approximately 20 participants.

- Day 1: (6/22) Landscape evolution and hydrologic response to the eruption of Mount Mazama. Begins in Chemult, Oregon, concludes at Malheur Field Station.
- Day 2: (6/23) Geology of the High Lava Plains transition with the Basin-and-Range Province to the south and the Blue Mountain Province to the north.
- Day 3: (6/24) Geology and hydrogeology of Steens Mountain and the Alvord Desert.
- Day 4: (6/25) Technical sessions at Malheur Field Station.
- Day 5 (6/26) Stops en route.

b. Planned 2011-12 Activities

- Annual PNW NAGT meeting at Spokane Community College, Washington, tentatively scheduled for June 23-27, 2012. Leader-Andrew Buddington, Spokane CC.

D. Pacific Northwest Section Treasurer's Report (Robert Christman)
Financial Report, Pacific Northwest NAGT Section
 Savings account with Whatcom Educational Credit Union
 Submitted by Bob Christman, June 10, 2011 for presentation at sectional meeting

Financial Report. NAGT Pacific Northwest Section
 Savings Account with Whatcom Education Credit Union
 Submitted by Bob Christman, June 10, 2011

Previous report, Sept 15, 2010

Savings	6819.87
Kahle fund	<u>2100.00</u>
	8919.87

Current report, June 10, 2011

Savings	6975.79
Kahle fund	<u>1825.00</u>
	8800.79

Detail

Income

Interest	33.42
Rebate	<u>232.50</u>
	265.92

Expenses

WSTA *	110.00
Kahle	<u>275.00</u>
	385.00

Summary

Begin	8919.87
Income +	265.92
Expenses -	<u>385.00</u>
Current	8800.79

*Non-profit exhibit booth at WSTA conference, Poulsbo, March 18-20

Southeastern Section Annual Report for 2010-2011

By Randy Bechtel

Southeastern Section Officers

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'Presidential' thanks

I would like welcome incoming Vice-President for his second tour of duty, David Kopaska-Merkel. I would also like to thank all of the current officers, Nan Huebner and Michael Gibson for assistance and advice managing SEGSA, OEST awards and the new NAGT by-laws.

Southeastern OEST winners for 2011

- ◆ *South Carolina and SE Regional Winner* Valerie Willis
- ◆ *Georgia* Ann Collins
- ◆ *Louisiana* Barry Guillot
- ◆ *North Carolina* Tim Martin

Southeastern newsletter

Thanks to Bill Witherspoon for his effort to pull this newsletter together and to all whom submitted articles, we still need all states to participate but it still looks great. Here is the link to the newsletter <http://facstaff.gpc.edu/~pgore/nagt/se-home.html>

Past Activities

Southeastern GSA 2011 in Wilmington, NC. SENAGT-sponsored a topical sessions being held March 25 is the education session entitled: "*Building a Foundation in Geoscience*"

Education: Gathering Educators with Professionals to Create a Geoscience Literate Public. "Several award winning earth science teachers presented at this session to facilitate communication with geoscience professionals in government, industry and academia regarding:

- A. What teachers need to teach earth science (for specific grade level(s))
- B. How to best assist new teachers and non-geology teachers who have to teach geology/earth science in the K-12 classroom.

There were many discussions and much enthusiasm during the Geoscience Education Session and at the annual business meeting.

Future Activities

Southeastern GSA March 31-April 2, 2012 in Asheville, N.C. *Shaping Continents, Shaping Landscapes, Shaping Policy*. SENAGT is sponsoring at least one topical session a continuation of the Geoscience Education session from the previous SEGSA and possibly a poster session on outstanding field trips sites for educators.

National GSA in Charlotte, N.C. November 4-7, 2012. *Geosciences: Investing in the Future*. Randy Bechtel is a co-chair on the K-12 Education Committee. The proposal deadline for sessions, field trips, short course, etc for this meeting will be due December 1, 2011. More information will be forthcoming soon.

Financial report Sept 1, 2010 - Sept 1, 2011

Thanks to Pam Gore for keeping track of the financials:

Income

- 9/21/2010 Deposit NAGT dues payment \$282.50
113 members x \$2.50
- Interest payments for the year \$0.76
- 4/26/2011 Deposit from UNC Wilmington for teachers \$200.00

Total income \$483.26

Expenses

- 10/3/2010 Photocopying 5 copies of the newsletter to send to people who do not have email \$5.35
 - 2/27/2011 Exhibit Booth for SE-GSA, Quality Business Services, Denver Colorado \$80.00
 - 4/25/2011 Shipping NAGT booth materials, Randy Bechtel \$47.16
- Payments to teachers (from deposit from UNC Wilmington)
- 4/26/2011 Mark Case, NC Teacher \$40.00
 - 4/26/2011 Cliff Hudson, NC Teacher \$40.00
 - 4/26/2011 Sam Fuerst, NC Teacher \$40.00
 - 4/26/2011 Josh Roberts, NC Teacher \$40.00
 - 4/26/2011 Mike LeBaron, NC Teacher \$40.00

Total expenses \$332.51

Total amount in bank account as of September 1, 2011 = \$4549.22

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NAGT Southwest Section report 2010-2011

Greetings fellow NAGT members,

I'm pleased to announce that this past year witnessed a relatively peaceful transition of power within the NAGT Southwest Section. Unfortunately, this transition is not quite complete, at least with respect to the transfer of information between administrative leaders. Thus, my report to you will be rather brief. (you're welcome)

1. Money: It is my understanding that NAGT-SW is in good financial standing (*i.e.*, we do not have a deficit).

2. Awards: At our annual Spring Meeting, NAGT-SW had the great honor of giving Ms Laura Lukes the 2010 Outstanding Earth Science Teacher Award. We have already been collecting nominations for the 2011 award.

3. Fieldtrips: NAGT-SW held its annual spring field conference in May this year. Expectations were high following the massively successful March 2010 gathering, which partially coincided with the NAGT Executive Committee business meeting in Salt Lake City, and included fieldtrips in both northern Utah (SLC area) and southern Utah (Capitol Reef area). For 2011, we headed to colorful Colorado, and of course we were not disappointed. We stayed in Durango, and enjoyed the fine accommodations at Fort Lewis College. Much was learned on field excursions in that area as well as on the way up to Silverton. We had a total of 9 participants, and Dr. Rob Blair was excellent as our local guide and geology expert. In addition, Laura Lukes gave a superb presentation regarding the possibilities of incorporating geology field content in web-based learning activities. We're looking forward to next year's trip to New Mexico, and we have already begun to make plans.

So, NAGT-SW is regaining some vigor, and I believe we're generating more interest within the region. I'm happy to report that I sense increasing excitement and enthusiasm in our community.

Sincerely yours,

Dan

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Geo2YC became the first professional interest division of NAGT on July 23, 2011. The division was conceived at a NAGT-sponsored two-year college (2YC) workshop in Annandale, Virginia in June, 2010. Workshop attendees formed the nucleus of the following ad hoc Geo2YC Organizational Committee:

John Bartley, Muskegon Community College
Allison Beauregard, Northwest Florida State College
Robert Blodgett, Austin Community College
Pamela Gore, Georgia Perimeter College
Richard Gottfried, Frederick Community College
Frank Granshaw, Portland Community College
Jacquelyn Hams, Los Angeles Valley College

Garry Hayes, Modesto Junior College
Debbie Krumm, Trinidad State Junior College
Lynsey LeMay, Thomas Nelson Community College
Suki Smaglik, Central Wyoming College
David Voorhees, Waubonsee Community College
Ben Wolfe, Metropolitan Community College-Kansas City

This committee, established by the NAGT Executive Committee in November, 2010, has met nine times to lay the groundwork for the division. Creation of Geo2YC required changes in the NAGT bylaws to allow for the formation of NAGT divisions based on professional interest. These changes were approved by the NAGT Executive Committee in April and took effect on July 23, 2011.

The mission of the Geo2YC Division is to:

- serve as a forum for exchanging information about 2YC geoscience programs
- create a professional network for geoscience education at two-year colleges and other institutions with shared interests
- sponsor NAGT 2YC activities and make recommendations to the NAGT Council
- support and coordinate research on 2YC geoscience education
- advocate for 2YC geoscience education within NAGT and other organizations

Geo2YC welcomes all NAGT members, including four-year college and university faculty with similar interests and concerns.

In completing its activities, the organizational committee has drafted the Division bylaws and solicited nominations for officers. Membership signup, election of officers, and adoption of the bylaws are scheduled for September, 2011. Newly elected officers will assume their positions at the 2011 NAGT Annual Meeting in Minneapolis. Division members are being recruited through the 635 subscribers to the Geo2YC list serve, at the Geological Society of America (GSA) Welcome Reception for 2-year Geoscience Faculty in Minneapolis, and at an event at the American Geophysical Union (AGU) meeting in San Francisco. The organizational committee has nominated Jackie Hams as Division GSA liaison and Katryn Wiese as the AGU liaison.

Robert H. Blodgett
Councilor-at-Large
Chair, Geo2YC Division Organizational Committee

OEST COMMITTEE ANNUAL REPORT

September, 2011

Constitutionally, the OEST Committee consists of the 10 OEST section coordinators, the National Chair, and two at-large members. All sections have functioning OEST coordinators, but no at-large members have been appointed to the Committee by the Executive Committee. The lack of at-large members has not been a problem, but the Executive Committee may choose to eliminate this requirement, or make appointments.

Classic Awards, in Sacramento California, has provided plaques in a timely fashion and at lower cost to NAGT than earlier providers. Plaque orders have been completed in two weeks, from the time I receive the order to delivery at the desired location. Plaque orders are often made much later than OEST winner selection. This can be confusing, at times. Some plaques have been given a year after winner selection. The plaque awarding process is not well done in some sections. To create maximum impact and notoriety for the winner, NAGT has always encouraged that the plaque be given in a public venue. Places like a school assembly, State teacher meetings, or NAGT section meetings are examples of good settings to make the award. Some winners have simply been mailed their plaque. I have encouraged the OEST section coordinators to make sure winners are recognized in a setting that will honor them, and bring attention to NAGT.

The biggest challenge has been to contact and receive winners from the North Central, and Midcontinent sections. These sections seem to have no functioning OEST program. I will continue to strive to get awards from all the sections.

This is the first year that the deadline for selecting state and section winners has been uniformly established. I wrote all OEST coordinators and section officers, in early 2011, to advise them of the June 1 deadline. This change, mandated by the Executive Committee, has been very positive. Most sections have proceeded with the selection process earlier than in past years. The result has been that I and National have most section information earlier. Having the information at the

beginning of summer, means that notifications and publications can be done for fall.

One ongoing problem is the timing of the awards. Since awards are given at different times in different sections, it is important that award recipients are aware that the award benefits begin in January of the following year. For example, an OEST awardee notified by a NAGT section in Aug. 2011, will not receive benefits (money, free memberships, books etc.) from the program sponsors until Jan. of 2012.

There have been major changes in the administration of the award. The web pages for the program were all revamped, as was the OEST award manual. All nominations can now be submitted online, though several sections still rely on paper forms. I am responsible for communicating with the sections, through their OEST coordinators. I encourage them to promote and follow through on the OEST award program. I receive the names and addresses of winners, and provide the winner's plaque. Sections request the plaques when they are ready to make the award. National is responsible for making sure the acknowledgement and award benefits are distributed.

I want to especially thank Linda Goozen and John McDaris in our National Office for their help in redesigning virtually every form and getting them online. Linda has been my constant aid in the process of contacting and recording the winners. And, of course, our Executive Director, Cathy Manduca, has been a wise leader throughout. We have 6 section winners this year. The Texas section had an awardee for the first time in many years, but the Far West section and Central sections, joined North Central and Midcontinent in not naming a winner. There were 12 state winners, down from 19 last year, in this year's class of excellent instructors.

I believe I made a mistake in deciding not to attend GSA this year. So much of what we do in the sections is dependent on the personal relationships we build. This is true of any organization, but especially true in volunteer organizations. I

regret not coming to meet with the section officers and will plan on coming next year, even at my own cost.

Respectfully Submitted,



Greg Wheeler, National OEST Chair.

LIST OF OEST WINNERS FOR 2011

SECTION WINNERS

Central = none

Southeastern = Valerie Willis

Eastern = Rosemarie Sanders

Southwest = Bonnie Dodge

Far West Section = none

Texas = Michael R. Brunt

Midcontinent = none

New England = Karen A. Saul

North Central = none

Pacific Northwest = Frank Hladky

STATE WINNERS

Alaska = Kathleen Galau

Oregon = Frank Hladky

Georgia = Ann Lenderman

South Carolina = Valerie Willis

Louisiana = Barry Guillot

Maryland = Jeana Essery

New Jersey = Billy Goodman

New York = Susan Sharp

North Carolina = Tim Martin

Washington = Dorinda Belcher

West Virginia = Michelle Turner

Virginia = Virginia P. Greenlaw

OESTA COMMITTEE - NAGT 2011 SECTION COORDINATORS

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1st Member-at-large –Vacant

2nd Member-at-large -Vacant

Annual Report from Bob Christman, Sept. 17, 2011

Dorothy Stout NAGT Professional Development Grants

Ten (10) applications were received. Most were from Community Colleges teachers; none were from K-12 educators or college students. Four awards of \$750 were made.

NAGT Outstanding Teacher Assistants Awards

Twelve (12) recommendations were received. All were given a one-year NAGT membership to begin on Jan 2012.

Archives

Awaiting a reply to my last to my request to archives about whether certain materials were wanted. I would like to complete the transactions.

Mailing Back Issues of NAGT

The number of requests has decreased recently. The number mailings have not been recorded. The reimbursements to the WWU mail room on June 2010 was for \$388 and for \$412 on January 2011. Assuming an average of \$10 per package, this represents about 80 mailings. The request for reimbursement for mailings since Feb. 1 2011 has not been made yet.

Back Issues in Storage at the Geology Department

This accumulation of issues at WWU needs to be distributed or go to recycling. Except for the earliest years, as many as five copies of each issue (five issues of each volume) have been kept. It has been decided to send one complete set to Cathy Manduca. Archives has a complete set. I would appreciate suggestions about what to do with all these extra issues.



ANNUAL REPORT 2011: NAGT – USGS COOPERATIVE SUMMER FIELD TRAINING PROGRAM

The 2011 Field Season for the NAGT-USGS Cooperative Summer Field Training Program marked the 46th year of what is now one of the longest running science internship programs in the nation. More than 2000 students have participated in this program since it was first conceived in 1965 by William “Bill” Pecora, then the newly appointed Director of the US Geological Survey. Many of these students have gone on to become well-known leaders, influential professors and outstanding contributors to the knowledge base of geoscience. (More information about the history, operation of this program, and this year’s interns can be found at: <http://education.usgs.gov/docs/NAGT2011updatedJune.pdf>)

This year, a record number of 105 students were nominated by field camp directors, and 68 of those students completed an application for the program. After receiving 56 proposals from USGS scientists, and after the proposal review panel met and matched students to projects, a total of 47 students were placed with USGS science projects. Since breathing new life back into this historic program in 2003, we have now gone from 8 placements in 2002, to numbers that are consistent with the historical average for this program.

Summary of information and tasks completed in 2011:

- Using data published in past issues of the Journal of Geoscience Education, we were able, for the first time, to create an authenticated list of names of interns participating in the NAGT-USGS Internship Program. Information obtained from JGE allowed the listing to be brought back to 1989. This listing will be posted on the program’s website both at the USGS and NAGT. In order to further extend the listing, this site will also have a section that will solicit information about the names of interns who participated in the program prior to 1989.
- The annual letter to Field Camp Directors was modified to request that field camp directors include a brief description of the attributes of the particular nominees selected. This greatly helps the USGS Placement Panel in their efforts to place a student with a project best suited to their abilities while also helping USGS mentor scientists in preparing to conduct their interviews with students.
- This year a small but unexpected number of students (7) withdrew from the program after initially accepting their position with a project. We ran an analysis of potential factors for each of these students in an attempt to determine possible reasons for such withdrawals. Factors examined included the student’s GPA, their interests listed in their cover letter, whether or not they planned on attending graduate school, as well as several other variables, such as age and home institution. Although no significant correlation could be established with any particular measure, we did find that one common reason cited for withdrawing among this group was that they had just acquired (after acceptance) a full-time, permanent position. While we read that so many recent graduates are seeking employment, and that internships are, unquestionably, the principal pathway into securing a position, with this select group at least – most of whom have, heretofore, went on to graduate school – a number are first opting for employment. It is our sense that this occurrence is linked to the current economic and job situation, and to certain aspects of the “is higher education worth it” discussion that is playing out in various sectors of the media. Although one can understand why a student would not want to let a full-time employment position slip by, it does raise program operational issues as much time and effort is invested in getting each of these students on-board.
- As information available on geology field camps often tends to be inaccurate or out of date, we spent considerable time developing a comprehensive listing of geology field camps nationwide, including contact names and websites where possible. The procedure followed was first harvesting information from the various listings available (NAGT/USGS’s Field Camp listing, several internet site listings, e.g., Geology.com., as well as individual academic dept. listings). That listing was then reconciled against listings identified in the AGI Directory of Geoscience Departments as well as every college or university identified as having a geology or

earth science program in the Nat'l Center for Educ. Statistics (IPEDS) data base. Operationally, any 4 yr. or above degree granting institution having a department with the word geology, geoscience, or earth science anywhere in its title was selected, and then that department's website was examined to determine whether or not they offer their own specific field camp course. A given field course title, field course #, and designated credit hrs. > 6 was the given criteria for being selected. With this procedure and selection criteria we were able to identify 137 departments as having an active field camp program (present academic year 2111). Website links were identified for each program, as well as specific contact information for the respective field camp instructors. This listing, now available on the USGS Education website and, on soon to be on NAGT's website, brings field camp information up-to-date, and assists in our collective ability to more fully assist with the many field camp and NAGT/USGS internship inquiries received.

- As in recent years, program evaluations were sent to both scientists and interns. USGS takes the lead in sending evaluations to the scientists and NAGT takes the lead in sending evaluations to interns. These evaluations, as well as copies of information referenced in the bulleted items above, and detailed, multi-year comparative program information, will be provided in packets to those attending our Annual NAGT & USGS Internship Meeting.

9/1/2011

Robert W. Ridky
National Education Coordinator
U.S. Geological Survey

Penny Morton
NAGT Internship Representative
University of Minnesota, Duluth

2011 NAGT-USGS Internship Placements

Intern Name/University	Project Title	Researcher/Location
Anna Ahlstrom BS Geology Texas A&M University	Runoff Response after Fourmile Canyon Fire	John Moody Boulder, CO
Tyler Brown BS Geology & Geophysics University of Wyoming	Seismic monitoring of Cascade Range volcanoes	Seth Moran Vancouver, WA
Caitlin Casar BS Geology East Carolina University	Characterizing deep-sea invertebrate communities associated with shipwrecks and natural reefs found in the Gulf of Mexico	Amanda Demopoulos Gainesville, FL
Scott Ceciliani BS Geology Oregon State University	Surface-water and Ground-water Networks	Gerard Butch Troy, NY
Sam Coleman BS geology Northern Arizona University	Monitoring to Predict Escherichia coli Concentrations at Presque Isle Beaches	Curtis Schreffler Erie, PA
Bart Cubrich BS Geology University of Nebraska	Northern Appalachian Bedrock Mapping Project	Greg Walsh Montpelier, VT
Nicholas Dosch BS Geological Engineering University of Wisconsin	Nutrient Loads to Long Island Sound from Rivers and Groundwater	John Mullaney East Hartford, CT
Neil Fenning BS Geophysical Sciences Western Washington University	Earthquake Hazards in the Central and Eastern USA: Field and Office Activities	John Mooney Menlo Park, CA
Krista Garrett Senior, Geology Whitman College	Benthic Nutrient Flux from Water-Storage Wetlands Adjacent to Upper Klamath Lake, Oregon	James Kuwabara Menlo Park, CA

Harrison Gray BS Earth Science University of California	Luminescence Dating	Shannon Mahon Denver, CO
Brandon Guttery BS Geology University of Oklahoma	Melt or Fluid Inclusion Analysis in Resource Investigations	Albert Hofstra Denver, CO
Lauren Harrison BS Geology University of Wyoming	The toxicity of Te, In, Ga, and Li species as measured by <i>in vivo</i> test kits	Andrea Foster Menlo Park, CA
Isabel Hong BA Geology Whitman College	Physical Properties of the WAIS Divide Ice Core, West Antarctica	Joan Fitzpatrick Denver, CO
Charles Horowitz BS Geology University of Pittsburgh	Geophysical Methods for Examining Flow Processes in the Unsaturated Zone	John Nimmo Menlo Park, CA
Miquela Ingalls BS Geological Sciences University of North Carolina	Fine-scaled Monitoring of Hydrologic and Thermal Regimes of High-elevation Streams within Greater Yellowstone Ecosystem and the Implications to Instream Biota	Robert Al-Chokhachy Jackson, WY
Robert Spencer Kellum BS Environmental Science Eastern Michigan University	Assessing Foodweb Resources for Juvenile Salmonids Utilizing the Lower Columbia River	Jennifer Morace Portland, OR
Tyler Kent BS Geology Western Washington University	Geodetic monitoring of Cascade Range Volcanoes and Yellowstone	Michael Lisowski Vancouver, WA
Scott Kenyon BS Geology California State University	Mercury Study of the Santee River Basin and Coastal Drainages (SANT) as part of the National Water Quality Assessment Program	Celeste Journey Columbia, SC
Sabina Kraushaar BS Environmental Geology Fort Lewis College	Geophysical investigations related to geothermal, mineral, and water resources and to natural hazards in the western U.S.	Victoria Langenheim Menlo Park, CA
Evan Larsell BS Geology Western Washington University	Noninvasive Grizzly Bear Population Monitoring in Northwestern Montana	Katherine Kendall West Glacier, MT
Evin Maguire BS Geology University of Michigan	Identification of Biological Methods for Evaluating Wetland Water Quality Conditions in Arkansas	David Friewald Little Rock, AR
Cody Mason BS Geology Fort Lewis College	Geologic Mapping, Neotectonics, and Global Climate Change within the Northern Rio Grande Rift	Cal Ruleman Denver, CO
Kelly McHugh BS Geology Miami University	Investigation of eruptive processes during the 2006 eruption of Augustine Volcano	Michelle Coombs Anchorage, AK
Amelia McMillin BA Geology Western State College of Colorado	Combining Borehole Strainmeter and Tide Gauge Data to Study Vertical Deformation During Slow Slip Events in the Cascadia Subduction Zone	Evelyn Roeloffs Vancouver, WA
Matthew Miller BS Geology University of Oklahoma	Fate and Transport of Biodegrading Contaminants in Fractured-Rock Aquifers	Thomas Imbrigiotta West Trenton, NJ
Patrick Norby BS Geology Brigham Young University	Rock Creek Fish Population and Life History Assessment	Brady Allen Cook, WA
Daven Quinn BS Geology and Economics University of North Carolina	Applied Hydrogeophysics Research	John Lane Storrs, CT
Curtis Reid BA Geology Whitman College	Evaluation of the Exchanges of Greenhouse Gases, Energy, and Evapotranspiration Over Forest, Grasslands, and Urban Ecosystems	Dean Anderson/Edwin Weeks Lakewood, CO
Nicole Rockentine	Cape Cod Toxic Substances Hydrology Field Research	Denis LeBlanc

BA Geological Science Albion College	Project	Northborough, MA
Diana Rotter BS Earth Science George Mason University	George Washington National Forest	James Coleman Monterey, VA; Reston, VA
Andrew Schneider BA Geology University of Cincinnati	Evaluating the Water Budget of the Torres Martinez Desert Cahuilla Indians Wetlands	Tracy Nishikawa San Diego, C A
Courtney Sprain BS Geophysics and Geology University of Minnesota	Microgravity measurements to characterize groundwater storage in caves, fractures, and other voids, Black Hills of South Dakota	Andrew Long Black Hills, SD
Jonathon Stautberg BS Geology Texas A&M University	Quaternary mapping and Geomorphology Studies Along the Columbia River Corridor	James O'Connor Portland, OR
Elizabeth Studebaker BS Geology University of Arkansas	Monitoring Urban Green Treefrog Populations and Their Environment	Jacoby Carter Lafayette, LA
Helen Thomas BS Geological Sciences University of California	Geological and Geophysical Studies of the San Andreas Fault System, California	Shane Detweiler Menlo Park, CA
Peter Tierney BA Geosciences and Art Williams College	Computer analysis of digital seafloor imagery in support of Ridge-to-Reef studies of Hawaiian coral reefs	Michael Field Santa Cruz, CA
Sara Ulrich BA Geology University of Wisconsin	Stream-bank Vegetation Characteristics and Bank Erosion Rates	Nancy Rybichi Reston, VA
Jillian Votava Senior, Geology Michigan Technological University	Dominance in Late Succession in the Alaskan Boreal Forest	Kirsten Barrett Fairbanks, AK
Evan Wolf Senior, Earth Sciences University of California	Paleoseismology: the Geologic Study of Active Faults	Carol Prentice Menlo Park, CA
Donald Yezerski BS Geosciences Denison University	Geochemical Processes Relating to Aquatic Health and Resource Extraction	Curtis Schreffler Harrisburg, PA

Building Strong Departments
Annual Report
August 2011

Activities:

In this project, we proposed to take strategies that have successfully supported faculty in improving their teaching and apply them to issues facing departments in designing and evaluating their departmental curricula. We proposed to enhance the design and implementation of geoscience programs and majors across the country through a series of workshops and on-line resources that foster sharing of information and resources among geoscience departments; bring education research and the experiences of other STEM disciplines into these discussions; and build skills in program design, assessment, and leadership.

In particular, we proposed to demonstrate the pathway from workshops focused on collecting examples of strategies used by departments to address common challenges to broad dissemination and adoption of these ideas. In year 1 we completed a topical workshop, a dissemination workshop, and planning for a travelling workshop program. In year 2 we implemented the travelling workshop program, provided a day of programming for the AGU Heads and Chairs workshop, and initiated a longitudinal study of the impact of workshop participation on departmental activities. In addition, we enhanced the website both to support the travelling workshop program more effectively and to assist departments who are under threat of closure, met with the advisory board, and engaged in several dissemination activities including participation in the AGI webinar series. This year, we offered a second round of travelling workshops and documented resource needs as a foundation for sustaining the program without NSF funding. We also participated in the AGU Heads and Chairs workshop at the Fall Meeting and presented information on the project at GSA, AGU, the American Evaluation Association, AAC&U, the CCLI PI meeting and as part of an invited presentation at the grand opening of the Trail of Time at the Grand Canyon. We have extended the evaluation effort to collect additional information on program impact. The development of final publications is underway.

Travelling Workshop Program

The travelling workshop program is designed to bring the resources and expertise developed through the previous topical workshops (and disseminated last year in the dissemination workshop) to a specific campus. This year we ran 8 visiting workshops which had in total 83 participants. Workshops were implemented at the University of the Pacific, the University of Delaware, Brooklyn College, Western Washington University, the University of Alaska-Fairbanks, Bloomsburg University, Grand Valley State University, and Clemson University. We had 22 applications for the 8 spots.

For each workshop, a team of two leaders worked with a contact person in the department (usually the chair) to customize an agenda based on our program offerings that would meet the department's needs. Our goal was to leave the department with knowledge of

strategies that have worked for other geoscience departments, information about where to find resources from other geoscience departments on the topics of interest (for example: curricula, student learning outcomes statements, program assessment instruments, recruitment strategies, etc.), and a departmental action plan for moving forward toward their goals. Each workshop combined exercises to engage department members in reflection and active discussion, presentations by the leaders incorporating concrete examples drawn from the leaders' experiences and from the collective experiences of the geoscience community, and time dedicated to action planning to scaffold the department's implementation of their plans. All workshops also incorporated information on building departmental consensus and assessing departmental efforts. Leaders: Dave Bice and Tim Bralower, Penn State University; Diane Clemens-Knott, Cal State Fullerton; Diane Doser, University of Texas, El Paso; Geoff Feiss, retired from College of William and Mary; Dallas Rhodes, Georgia Southern University; Randy Richardson, University of Arizona; Mary Savina, Carleton College.

Presentations about the project and its impact:

Iverson, E. and S. Lee (2010). Using Evaluation to Help Transform Departments in the Challenging Economic Environment of Higher Education. Evaluation 2010: American Evaluation Association Annual Meeting. San Antonio, TX.

Savina, Mary, Cherry Danielson, Deborah Gross, and Carol Ormand (2011). [Imagining the "Ideal Student": Helping Faculty Focus on What's Really Important to Assess](#): Association of American Colleges and Universities meeting on General Education and Assessment 3.0: Next-Level Practices Now. Chicago, IL.

Ormand, C.J., C.A. Manduca, R.H. Macdonald, G.P. Feiss, R.M. Richardson, S. Lee, and E. Iverson (2010). Impacts of the Building Strong Geoscience Departments Visiting Workshop Program. Geological Society of America *Abstracts with Programs*, Vol. 42, No. 5, p. 531

Ormand, C.J., H. Macdonald, and C.A. Manduca (2010), The Role of Geoscience Departments in Preparing Future Geoscience Professionals, Abstract ED13A-0597 Poster presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.

Manduca, C.A. - New Directions in Geoscience Education, Invited Presentation for the Grand Opening of the Trail of Time at the Grand Canyon

Findings:

Travelling workshop program:

Of the 83 participants in this year's series of visiting workshops, 69 completed an end of workshop evaluation survey, with an overall satisfaction rating of 8.9 out of a possible 10 points. Respondents overwhelmingly agree that the goals of the workshops were met, that the workshops were well-facilitated, and that the onsite format of the workshop was useful in engaging the entire department in the workshop program. Comments focused on the value of getting the entire faculty together to hear about what works from the experts

and to discuss their specific situation in detail. The whole-department exercises (ideal student, curriculum matrix, and SWOT analysis) were seen as particularly valuable in building departmental consensus.

"Some sort of high-inertia barrier between the two sides of the department (geography and geosciences) seems to be crumbling, and we are realizing that we don't have to do things the same way they have always been done simply because of tradition."

"As a result of the workshop, we are looking at a TOTAL revamping of our curriculum...we're aiming BIG!"

"We had stalled on our assessment efforts- we put together a decent plan, but had not been able to move forward to implement the assessment process, or to use the information from assessment to inform department plans. Now, with the discussions we've had, and our action plans, I think the department faculty are ready to move forward on this. Also, the "ideal student" letter is an exercise that left a strong and positive impression on many of us."

"Our department has already been involved with identifying program outcomes and course outcomes. The workshop helped me realize that these don't have to be extensive and overwhelming."

"It has made the reformulation of our curriculum to incorporate an environmental science and sustainability component into the original geological curriculum a realistically attainable goal."

Leaders are unanimous in agreeing that the visiting workshops achieve their potential only when the entire department cancels all other commitments for the duration. Other factors affecting the effectiveness of the workshop include advance preparation and a clear sense of what the department wants and needs to accomplish. In some cases, leaders needed to adapt the pre-formed agenda on the fly to accommodate the needs of the department when they recognized that the agenda wasn't really what the department needed.

Building Strong Geoscience Departments Website:

Use of the website remains strong. In the past 12 months there were 25,000 visits to the site, of which 3,700 saw three or more pages. For those seeing at least three pages, the average session depth was six pages, indicating robust use of the content.

ELI goes from strength to strength: update on this global educational project – **Earthlearningidea**
<http://www.earthlearningidea.com>

By autumn 2011, more than 100 Earth-related activities have been published in English and we are currently planning ideas for 2013! We continue to publish at the rate of one a fortnight.

ELI activities are being translated into Chinese (Mandarin), German, Italian, Norwegian, Portuguese, Spanish, and Tamil. By September 2011, they had been accessed in 167 countries and 8579 towns/cities globally.

The activities are free to download in pdf format; nearly 480,000 have been downloaded so far averaging nearly 20,000 per month over the past year.

ELIs have been used as the basis of teacher education workshops in Argentina, India, Italy, South Africa, Taiwan, UK and the USA.

We think that most Earth-related science and geography topics have, or will be, covered. To find a topic, go to the top of our home webpage and click on 'Search activities' or 'Search topics'. If you are teaching a particular subject e.g. evolution of life or natural hazards, then you will find a list of suggested activities by clicking on 'Search categories'.

You can receive notification of new ELIs either by subscribing to the blog

<http://earthlearningidea.blogspot.com> or by sending your email address to us -

info@earthlearningidea.com. We shall be very pleased to hear any suggestions, comments or good ideas for more activities.

Chris King, Peter Kennett, Elizabeth Devon
Earthlearningidea team

JOIN THE COLLABORATION

Teaching about Earthquakes with Data and 3D Visualizations serc.carleton.edu/NAGTWorkshops/visualization/examples/57568.html

Three new activities, created by the KeckCAVES group, that allow students to visualize and experience complex and highly visual geologic concepts.

Resources from Workshops and Webinars

Catch up with career advice, emerging science, and effective pedagogy by viewing the webcast files for webinars offered by On the Cutting Edge and others during the 2010-2011 academic year.

Pursuing an Academic Career in the Geosciences Webinar Series

serc.carleton.edu/NAGTWorkshops/careerdev/AcademicCareer2011

Resources for and insights into effective teaching, career planning, the job search, and faculty positions in different types of institutions.

Climate and Energy Climate and Webinar Series serc.carleton.edu/NAGTWorkshops/climatechange/webinar

Quickly evolving and constantly in the news, these topics are ones which our students find to be both relevant and interesting. This monthly series explored the science of energy and climate, along with promising teaching approaches for these topics.

CLEAN Workshops and Webinars cleanet.org/clean/community#events

Upcoming events plus webcasts of past workshops and webinars, including talks by Richard Alley and John Cook, author of the Skeptical Science website.

InTeGrate serc.carleton.edu/integrate

This NSF STEP center, opening in 2012, is a community effort to improve geoscience literacy and build a workforce prepared to tackle societal issues. In addition to a workshop series, it includes opportunities for faculty to collaborate on the development of teaching materials. Check the website for information on how to be involved.

Share ideas, activities, and materials you have developed and tested in your classes — and receive recognition for that development process.

The website content at Teach the Earth is developed by projects and individuals who believe we can improve geoscience teaching by learning from one another.

For a full list of collaborators, go to: serc.carleton.edu/serc/site_guides/projects.html

We invite you to join the collaboration. For information on the types of materials you can share and the procedures for doing so, visit:

serc.carleton.edu/teachearth/contribute.html

In most cases, authors retain their copyrights and receive acknowledgement on resulting webpages or descriptions. To facilitate reuse and redistribution with attribution, they agree to offer their work under a Creative Commons license Attribution-NonCommercial-ShareAlike 3.0.

Teach the Earth is maintained by the Science Education Resource Center (SERC), an office of Carleton College funded by grants from NSF and others.

For More Information:

Science Education Resource Center
Carleton College
Northfield, MN 55057

Phone: 507 222-5634

E-mail: serc@carleton.edu

Web: serc.carleton.edu/teachearth

(Background Cover Image) Namib Desert, Namibia, where coastal winds create sand dunes as much as 980 feet high. Image courtesy of USGS National Center for EROS and NASA Landsat Project Science Office

<http://serc.carleton.edu/teachearth>

WHAT'S NEW AT Teach the Earth

Online Resources for Geoscience Educators





Thousands of pages of online activities, workshops, and course descriptions. The work of more than a dozen projects. The contributions of more than 1,000 faculty, teachers, and researchers. That is **Teach the Earth**.

Teach the Earth knows that the crucial work of educating students about Earth science is made significantly more effective when geoscience educators share their ideas and resources with one another. Teach the Earth was created to help make that happen—by providing access to leading-edge geoscience content and in-depth information on the methods that excellent teachers use to connect with their audiences.

Developed by experienced educators, the materials, ideas, and activities at Teach the Earth are ideal for use by faculty, teachers, students, and future teachers. And use them they do! Each year, some 100,000 individuals visit the site repeatedly. If you haven't visited recently, we invite you to do so now. The collection adds new materials monthly.

(Above) Photo by Cathy Connor, from In The Trenches

(Right) Photo courtesy of KeckCAVES, UC Davis [all rights reserved]



Pedagogic Guidance

Teaching Large Classes

serc.carleton.edu/NAGTWorkshops/intro/large_classes.html

This popular site has added a new section with ideas on how to keep large classes engaging, relevant, and accessible to a student population with diverse interests and experiences. Active learning strategies are also provided.

Designing Online Courses

serc.carleton.edu/NAGTWorkshops/online/design.html

Are you adapting an existing course to an online format or designing a new online course? These pages offer concrete strategies for designing courses specifically for the online classroom.

Teaching about Hazards in Geoscience

serc.carleton.edu/NAGTWorkshops/hazards/index.html

Major hazardous events and natural disasters provide powerful opportunities to engage students with class content and demonstrate how the geosciences impact everyday lives. This new module from On the Cutting Edge provides resources and advice for effectively teaching about hazards.

It's About Time: Teaching the Temporal Aspects of Geoscience

serc.carleton.edu/NAGTWorkshops/time

Expanded resources, including a list of barriers to learning about time, with summaries of research and strategies for improving student understanding of Deep Time and related topics.

Developing Strong Writing Assignments

serc.carleton.edu/sp/library/writing_assignments

Writing assignments provide a means of demonstrating learning as well as a method to stimulate learning. Writing instruction emphasizes both learning to write and writing to learn. This module, part of the Pedagogy in Action teaching methods collection, offers information, advice, examples, and references that can help you integrate strong writing assignments into your classroom.

Teaching Metacognition in Large Classes

serc.carleton.edu/NAGTWorkshops/metacognition/largeclasses.html

Metacognition allows students to be more aware of how they learn. This site offers practical advice, tools,

and examples for improving students' ability to reflect on the state of their learning. New information geared towards large classes has been added to this popular site.

Interactive Lectures

serc.carleton.edu/introgeo/interactive

Draw students into your lectures by interspersing short individual, pair, or small-group activities. Updated material in this popular module includes new ideas, advice, and an expanded array of examples.

Collections of Teaching Materials

The CLEAN Collection

cleanet.org/clean/educational_resources

Over 300 reviewed and annotated classroom activities, visuals, and short videos for teaching about climate and energy.

Resources for Two-Year College (2YC) Faculty

serc.carleton.edu/geo2yc/index.html

Essays on the state of 2YC education, teaching activities, and course descriptions submitted by 2YC faculty, discussion and networking venues, and links to workshops, 2YC efforts in other disciplines, and the new Two-Year College Division of the National Association of Geoscience Teachers.

K-12 Science Portal

serc.carleton.edu/k12

Hundreds of lessons, activities, lab investigations, and field trip ideas covering biology, chemistry, Earth and space science and environmental science, plus web resources to improve teaching and build understanding of how students learn.

New Earth Exploration Toolbook Chapters

serc.carleton.edu/eet/index.html

New activities include: How Permanent is Permafrost?, Investigating Climate Change Using Observed Temperature Data, Tsunami Run-up Prediction for Seaside Oregon, Protecting Wetlands from Exurban Development, Climate History from Deep Sea Sediments, and Exploring NCAR Climate Change Data Using GIS.

Geology of National Parks Spreadsheets Across the Curriculum Collection

http://serc.carleton.edu/sp/ssac/national_parks/

This collection of modules engages students using the geologic wonders of the national parks. Self-paced activities allow students to apply core mathematics to the science behind decision-making.