

NOAA Education Council Meeting

Date/Time: March 24, 2010 (1:00–4:00 pm)
 Location: SSMC3, Room 14836
 Dial-in: 866.901.0711
 Passcode: 8134683
 Contact: Luis Leandro - work: (202) 482-3139

AGENDA

- 1:00 Welcome/Opening Remarks
- 1:10 Connects working group report out (*input request*)
 (15 min presentation and discussion)
- 1:25 NAS review discussion and next steps – John Farrington and Michael Feder (*informational*)
 (30 min presentation/65 min discussion)
- 3:00 Education.NOAA.Gov discussion – Steve Storck (*input request*)
 (15 min presentation/15 min discussion)
- 3:30 Updates & Announcements

Upcoming Council Meetings:

April 21, 2010

May 19, 2010

Attendance

In person: Louisa Koch (LK), Jeremy Andrucyk (JA), Courtney Barry (CB), Kirk Beckendorf (KB), John Farrington (JF), Michael Feder (MF), Ron Gird (RG), Jennifer Hammond (JH), Bob Hansen (BH), Atziri Ibanez (AI), Nina Jackson (NJ), Marlene Kaplan (MK), Judy Koepsell (JK), Jaime Kruse (JKr), Luis Leandro (LL), Chelsea Lowes (CL), Paulo Maurin (PM), Carrie McDougall (CMc), Bruce Moravchik (BM), Maria Murray (MM), Rob Ostheimer (RO), Dan Pisut (DP), Dana Prince (DP), Steve Roda (SR), Irelene Ricks (IR), Jacqueline Rousseau (JR), Steve Springer (SSpringer), Peg Steffen (PS), Steve Storck (SSt), Martin Storksdieck (MS), Kate Thompson (KT), Sharon Walker (SW).

On the phone: Lexie Brown (LB), Claire Fackler (CF), Paula Keener-Chavis (PKC), Gordon Kingsley (GK), John McLaughlin (JMC), Christos Michalopoulos (CM), Frank Niepold (FN), a representative from B-WET, a representative from Office of Education.

Announcements (MK/LK)

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- Chelsea Lowes will be the interim replacement for SW as the Sea Grant Education Council member. CL was a 2009 Knauss Fellow in Sea Grant. This will be SW's last Education Council meeting. SW will pursue an opportunity to work with the Institute of Marine Mammal Studies—Center for Education and Outreach.
 - In response to the Program Decision Memorandum task, the Education Council will work with The Human Capital Council (HCC) to produce a plan for assessing the science workforce needs out to 2015. There is a short turn-around time of July 2010 for reporting the plan to the NEP. Jeremy Andrucyk, from the Human Resources Management office will join the Education Council as an ex officio. MK will attend the HCC meeting tomorrow. Steve Springer, the Director of the Human Capital Planning Division is also in attendance today. This is an opportunity to address the PK-20 request to engage workforce management.
 - Courtney Barry, from the Budget Office, will be our new budget analyst. We will be working with her as we revise the Blue Book for next year.
 - Dana Prince will be taking over as the Program Analysis and Evaluation (PA&E) representative to the Education Council.
 - Jamie Kruse is NOAA's chief economist. She is leading the portfolio on the Science Advisory Board Review of Social Science.
 - JKr: I consider NOAA Education to be part of the social sciences. We need to think about how humans fit into the natural sciences. I am working on a survey of the Gulf of Mexico Engagement pilot. I hope there were specific recommendations in the NAS report. There needs to be an appreciation that there will be outside influences on what you are measuring in evaluation. This will be important when you start evaluating your ultimate outcomes.

Connects working group report out (input request)

This working group is charged with better connecting NOAA to the public. SSt will give a presentation to update us on the accomplishments of the Connects working group to date. See PowerPoint slides.

- PS: Will there be a definition of what is considered 'technology?' SSt: Yes.
- PKC: We also have discussed a definition of 'innovative technology.'
- PS: What is the audience for ScienceEducation.gov? KB: Educators.
- FN: Who is the leader on the ocean acidification module? PM: I am. FN: I wanted to know with whom to coordinate for the climate portal.
- MK: Our next speaker is not here yet. I want to talk about a few other things.
 - National Lab Day – Dr. Lubchenco will send out email to all NOAA employees this week or next week, encouraging people to get involved with National Lab Day. Who has farmed this out to their groups? Has there been any interest?
 - FN: What does it mean to say I want to participate?
 - MK: You go to the site and sign up. Then you are matched with a teacher to do an activity. The teachers say what they need. If your background matches the requested activity, you are paired to go to the classroom. It is a pairing software.
 - JH: If you have projects already happening, you can populate the database with those. Teacher at Sea will populate the database.
 - DP: Will the email explain support from HR? MK: Yes, as long as your supervisor approves you can go. It has been cleared with Human Resources and the Ethics office. It will be considered outreach.
 - On the phone: There has been encouragement in other agencies to take two hours per week.
 - MK: NOAA will encourage people to participate, but not requiring a certain amount of time.
 - KT: Once Dr. Lubchenco sends the letter of support, we will send out an email to our staff.
 - JA: How are you measuring the number of hours and how effective the participation is? MK: We are not sure yet. The National Lab Day site should be able to provide us with statistics on how many volunteer hours NOAA contributes, provided people register their NOAA affiliation.
 - FN: Has the email been crafted and reviewed? Will there be instruction on how to attribute your registration to NOAA or a specific office?
 - MK: The email will not provide specific instructions. As people farm this out to their offices and networks, we should encourage people to put NOAA and their offices.
 - NJ: Did National Lab Day ever develop the one-pager for us to distribute? MK: A two-page flier is on the Office of Education website. We will contact them to check on the one-pager and then send it out.
 - MK: Can we use SG network? SW: Certainly.
 - MK: And NERRs as well? Al: Yes.
 - The B-WET-Environmental Literacy Grants bill passed the House. We don't know what will happen with the Senate. Maybe it will be added to the America COMPETES bill.
 - MK: There has been an increase in taskers from OMB and Department of Commerce with short turn-around time. Thank you for your help with input. This is a sign of interest. Much of it is budget related.
 - Department of Commerce wants to see some NOAA Education funding for FY12. This is a bit outside of the regular process. It is an opportunity to for us to put something on the table.
 - CM: I would like to provide an update on our meeting with OMB and the National Academy of Sciences committee. NAS did a fantastic job representing the report. There is still skepticism from OMB and DOC. NAS was realistically supportive of NOAA Education programs and good at addressing some of the concerns raised by OMB and DOC. However, OMB and DOC still have some questions about our efforts. We are happy to share information with them, but we need to do work to smooth things out behind the scenes.
 - FN: Is there a way we can find out what some of the issues are so we can address them?
 - CM: Some issues are out of our control. LK and MK will need to provide advice on which we can address. We need time to process and disseminate the information.
 - MK: Who was there from OMB? CM: Randy Lyons, Stuart Levenbach, and an analyst.

NAS review discussion and next steps – John Farrington and Michael Feder (informational)

The National Research Council of the National Academies has released a pre-publication copy of their report on NOAA's education program. They are here to present a summary of their findings and engage in discussion about a path forward and how we can engage them most productively in the future. See PowerPoint slides.

- LK: This morning we had a meeting with the NAS committee and OMB. There was a lot of good discussion.
- Dr. John Farrington (JF) was the chair of the committee for the NAS study.
- Martin Storksdieck (MS) is the Director of the Board on Science Education at the National Academies. The Board on Science Education was responsible for this study.
- Michael Feder (MF) is with the National Research Council and is on the Board on Science Education. He was the study director.
- Gordon Kingsley (GK) is a committee member who is at Georgia Tech.
- JF: The committee was very pleased with the input and cooperation that NOAA Education provided.
- MF: Gordon, on the phone, is one of the evaluation experts.
- JF: Some things in the report have already been addressed. In these cases, the report will support the work NOAA is doing.
- JF: Addressing participation of underrepresented groups should be infused into all programs.

- JF: There is a need to assess workforce needs for NOAA and for the country, at all higher education levels.
- MK: Thank you for your presentation. I would like to open up for discussion of the presentation and conclusions of the study. You can forward questions about specific programs later. (See PowerPoint slide for a list of questions.)
- How can we best work with the committee and the Academies in the future?
 - JF: The committee is finished, but access to individual members is open. JF is available. MF and MS are available from the NRC. There may be some opportunities at conferences to get together, for example ASLO.
 - MF: Part of the budget is for dissemination. Some ideas for follow-up are regional briefings and an expert meeting focused on evaluation to provide guidance.
 - LK: I would like a more detailed discussion, particularly with the evaluation working group.
 - AI: There will be NERRS meeting in October. Maybe we can have a presentation and discussion there.
 - MF: We need to prioritize the events that we schedule with consideration of the committee's availability, the funds available, etc.
 - MS: It would be useful for the Education Council to internally develop a comprehensive plan that can be discussed with the committee and NRC staff.
- GK: Regarding the outcome measures question, we read evaluation reports, then distilled them to 18 reports for outside review. One conclusion was that you need to frame evaluation questions and outcomes clearly at the front of the report. In particular, stewardship outcomes were not clear. You need to explicitly frame these in evaluations. Many evaluations were satisfaction-based, were formative at higher levels, and were not thinking about the outputs and outcomes from the programs. They were not thinking far enough down the value chain.
 - MS: Outcomes were actually outputs in the strategic plan. This is an important distinction. Think about the people you impact and your audience, not just your accomplishments. To what degree have you influenced what is in their hearts and heads.
 - MF: Use a logic model to provide clearer, measurable outcomes in the strategic plan. This will provide cues to help evaluators and reviewers. Assessments should be around these outcomes.
 - MK: We do not always fully understand how to measure things.
 - MS: You do not have to know how to measure it. You need to know what you want to happen beyond the product. Someone else may want to measure it. You can have someone else do evaluation. There are resources that the Board recommends, but these cost money. There is also some expertise on the Education Council.
 - GK: If you are defaulting to an evaluator, you must frame outputs, outcomes, and impacts specifically for the best product. There needs to be more cross-fertilization between agencies on ways to measure and evaluate STEM education. There have been a lot of developments in this field in the last ten years.
 - FN: How do we ferret this out?
 - GK: I've been engaged with the NSF Math-Science Partnership program and the NSF G-K-12 program. They have online resources for measures and evaluations studies. Cosmos Corporation has a contract with MSP to be their meta-evaluator and have a storehouse of their evaluations. MSP has produced books. Many resources are electronic and online. You need peer-to-peer conversations with program officers across agencies to find where people's storehouses are.
 - MS: You still have to practice and learn how to ask a good question for your own program, how to come up with good outcomes down value chain for impacts, and how to formulate it so that it is a meaningful statement.
 - GK: I agree. The TOP model will force you to think about the value chain. Push yourself down chain. If you are thinking very consciously about outcome statements and particularly stewardship as an outcome statement, you can get more yield from evaluations.
 - JF: You can expand on these things in an evaluation workshop. Both the committee and you think this is important.
- JF: On the partnership question, partners must be willing to undertake your requested evaluations.
 - MS: There is a lot of literature on how to consider and assess partnerships. Make sure a partnership actually works. This is part of the evaluation in the formative sense. Form priorities around what qualities make the best partnerships.
 - LK: In deciding on evaluations, it may inform us on the type of partnerships we want to form. They should fill gaps and bring value to the types of things we want to accomplish.
 - GK: You have a whole suite of very different activities that you call partnerships. In evaluating a partnership, decide what you are evaluating? This will depend on the length of time of partnerships. Most have short life span (e.g. grants). Distinguish these from longer-term partnerships. Evaluation of these two categories is very different.
- JF: Let's address the underrepresented groups question.
 - JF: There was a lot of discussion in the committee, informed by the literature, experience, and the paper that was commissioned. Use the paper as a frame. You need to get to students and teachers, but also to families, communities, and cultures. There is a wonderful explanation in the paper about how the challenges depend on with which community you are dealing. Go to specific areas where the communities are concentrated, e.g., Native American Reservations and urban areas. Get to the families. Have newsletters to families. This is a shared goal across agencies and the nation. You need to figure out how to bring NOAA's specific mission to these communities in conjunction with work done at other agencies.
 - MF: There is a national need to support underserved populations in their educational needs because they are getting less from the formal system. What NOAA has in particular are really engaging environments where you can engage them in topics that schools do not. By turning them on early on, you have a larger population of interested people as they enter higher education. For the question of equity and access: a resource made in one area, might not be engaging in or aligned to other communities.

- JF: There are already some NOAA people that are really active in this area and may have better recommendations. Don't make the assumption that there has to be some fancy gimmick to get their attention. Just get them into the environments; this may be engaging enough.
- IR: The issues are really income disparities that play out in how resources are doled out to the schools. You might not need to do anything different. You just need to bring in the resource.
- JF: I agree.
- IR: Bayer just released a report commissioned by the American Chemical Society. It found that teachers have a significant role in how students perceive their performance. Do we assess how teachers are interacting with students? This starts very young. There needs a paradigm shift. How can we do something to assess and impact how teachers interact with students?
- MS: It is more than teachers and classrooms that NOAA covers. Who has access to NOAA assets outside the classroom? How can you access people that come from all different directions? This translates into socioeconomic status and into culturally sensitive education practices.
- KT: In our needs assessment of the Latino population in California, we found that they learn totally differently than other cultures. Cartoons were the best way to reach adult Latinos, so we did a cartoon contest. Who is participating in our programs? How do we reach them most effectively?
- IR: We need to be aware of how we frame the questions. We can't treat the populations the same.
- AI: I was surprised there was no discussion in the recommendations or conclusions of going deeper versus going broader. With a reduced budget, how do we prioritize and be effective? It is also difficult to measure the impact on a broader audience.
 - JF: The report provides recommendations on strategy and organization. We do not presume to sit in your shoes. You should use your own experience to make your decisions. There is a recommendation that sometimes you will have to say no. You can point to that if you need cover.
 - MF: Breadth versus depth is discussed in the portfolio balance chapter. There might be a way to have national impact while keeping deep experiences that people get from place-based programs. These decisions are based on the values of NOAA and the Education Council.
 - GK: You are a confederation of programs. How do you maximize efforts across a confederation? When thinking about evaluations, take advantage of clusters among you to align common metrics. In the meeting with OMB, we heard a lot about place-based programs. We think you have a national impact. You can demonstrate this by showing your collective punch and the commonalities across programs.
 - JF: OMB wanted to know why you can't just disseminate on the web to provide national impact. I disagree. You need to put your feet in mud. No Child shall be Left Inside. Have a logic framework: why are you doing these things; how are we addressing these across programs?
 - KT: How would OMB answer to a congressman about what is happening in their district? They do not have to discuss programs in districts on the Hill.
 - MS: You need to be able to address this argument. You need to be able to say something in aggregate about the value of on-the-ground programs. OMB is challenging you to answer this. It is a value judgement between depth and breadth.
 - JF: You are a continuing council. We are a one-time committee.
- FN: On a related note, we have the problem of budget versus the scope and complexity of the country. We must be successful with the resources we have, but it is not enough to succeed at the mission.
 - GK: I agree. You have a budget that is too small for too big of a mission. However, the report suggests where opportunities exist. Tell your story of the wonderful things you do. Show the common stories across programs. This provides an idea of breadth. This provides a collective punch bigger than the one you are telling right now.
 - LK: For example, many programs do teacher PD and systems thinking. We are talking about having a common metric that would draw across all programs that do this. Is this the kind of thing you are talking about?
 - GK: Yes. Combine across programs for the numbers affected and geographic impact. You might want to display this in GIS. Impacts might be small in one site, but compiled across sites it might be big.
 - MS: Think about prudence in resources. Use an indicator and literature to support assumptions that if you do one thing, it will lead to a certain result.
 - JF: Use strategic leveraging and strategic partnerships to spread your budget further.
 - AI: On Chapter 5 page 8, using common metrics might potentially homogenize our programs.
 - MS: That which is measured is done. At what grain size do you have common metrics? It is a value question that you must determine. As you aggregate, are you aggregating over individual participant level or a higher grain size?
 - GK: I agree.
 - LK: Thanks for coming, for making yourselves available, and for the report.
 - MF: Although the committee has officially disbanded, you should think about this as the beginning of the discussion with the Academies and the NRC.
 - JF: Thanks again. The committee was not made of only white men.

Education.NOAA.Gov discussion – Steve Storck (input request)

SS: We would like to provide a brief background on how we arrived at the current prototype. Then we would like to have a discussion about how the Education Council can be involved in shaping the process and sustainability of the website. Specifically, we would like to discuss the formation of an advisory board. See PowerPoint slides.

- SS: KB has drafted a white paper on how teachers use online resources. We will send that out when it is in final form.
- SS: We want to encourage you to look at the prototype and provide feedback.
- PKC: I think it looks really good. I would like to see more diversity in front page photo.

- SSt: It is a rotating flash.
- The meeting took a break in this presentation to accommodate NAS report presentation and discussion.
- SSt: We are proposing that the website advisory board be composed of the Connects working group or a smaller group.
- SR: Are we working with the drive for a one NOAA presence in website design?
 - SSt: We used it as a template.
 - LK: SSt serves on the web committee and will be our connection to the CIO working group.
- SSt: Do we need or want an advisory board?
- BM: Will there be an educators advisory board?
 - SSt: There will possibly be a review team of educators. The advisory board could help shape this.
- LK: We need to hear from you. We know we are tapping on Education Council members for a lot of things. This is a NOAA Education website, not an Office of Education website. It must represent all of NOAA Education well.
- FN: We should have advisory board. This is an important portal to all of our activities.
- PKC: We have a web team for our website. Maybe they should represent our office on the board.
- KT: Are we looking for content or web design?
- CF: We could look outside the Education Council. Other education staff could be helpful. How have you been gathering NOAA resources?
 - SSt: Slide 17 shows the plan. For seeding the prototype, it was just resources of which we were aware. We would like to have a calendar of topics, send that out to the committee, and have people respond with resources addressing the topic.
- SSt: The advisory board would be for content. Some technical expertise may be needed from offices, but that would be a different group that meets less frequently. The advisory board would address higher level components and contents.
- PS: What is the selection process for choosing materials?
 - SSt: We have a proposal of a resource selection rubric. We will try to get viewers out to as many resources as possible. It is not political. A teacher group can help with quality control later.
- JA: The Academy wants us to focus on what outcomes we want to achieve. I support an advisory board. It needs to be strategic, particularly in partnerships. You still need to better define the role of the advisory board and the touch points of the members that you desire. Members could be representatives from groups or people with particular expertise.
- FN: High quality should be prioritized over even distribution for material. I recommend a thematic representation on the board.
 - SW: I like options 2 and 3 (slide 16), based on how they fit on workflow chart. The website still has to come to Education Council for input. Members can self-select.
- LK: I will poll Education Council members. Is this a group that should form? If so, are we ready to talk about membership, or do we need to better define what the advisory board will do first?
 - JH: Yes, there should be a board, but I am not volunteering. I am not ready to talk about membership.
 - PS: Yes there should be a board. However, website management by board is tough. You need to define the ultimate purpose of board. Canvass where resources are. Decide if you are you a portal or a resource?
 - SSt: That's for the NOAA Education Community Program Contacts group.
 - PS: Resources should be distributed across programs to provide representation from those offices.
 - NJ: I agree with a board. What will the board do? How much time will be involved? What kind of decisions will it make? NESDIS should select someone.
 - CL: I agree with an option 2-3 combo.
 - RG: I like the advisory board idea. We need more detail before deciding member composition. Outside members should include industry members with good best practices.
 - MK: I will go with the group.
 - KT: I agree with a board and thematic representation. The board should focus on content. Addressing the idea of partnering with outside groups, I would like to add caution due to all the government restrictions. For a representative, I nominate Claire (CF).
 - AI: I agree with a board based on themes. I have a concern about getting good resources. Have a person that can package resources better.
 - PM: There should be an advisory board. I do not need definition of what group will do. The group should decide where the website will go. I don't want to restrict the group's flexibility too early. It could be part of Connects group.
 - DP: Get input from people that manage large network websites. How do they identify, consolidate, and incorporate resources?
 - SSt: The Content Developer would do this, but be guided by board.
 - DP: The advisory board would provide expertise on how collections are presented.
 - JR: There does not need to be another advisory board. We need an expert group of people that know the mechanics. I want to see more content. The group should decide on subject areas and work with people in those areas to provide content. The board should be less than seven members. There needs to be flexibility in membership and expertise where and when needed. I need more information
 - PKC: I am confused about the function of the advisory board. I see two roles: the technical focus on content and innovative technology and another on providing guidance. In OE, we gather statistics and brief or report out. I would like to see this info provided to the Education Council.
 - LK: In summary: we want an advisory board, but not the composed of the Connects group. We need more information on role and purpose of board (technical, content, overall guidance, performance metrics) and on the website impact. We should populate the board with volunteers, not necessarily Education Council members. SSt should gather this info and send it out.
 - JR: I don't think this should be a stagnant group. I have some ideas.

- SSt: We will continue to move forward with the site. We want to incorporate the advisory board for guidance as soon as possible.
- PS: Please send out theme ideas. SSt: We have a draft for that.
- LK: SSt can use the Connects working group as an interim advisory board.
- SSt: In the next week, please visit the website and complete the SurveyMonkey.

Updates and Announcements

- PS: I attended the Council of State Science Supervisors meeting last week. I also attended the update on the core framework for the new science education standards. I will send my notes on these meetings.
- JH: Speaking for Molly, Fisheries put out the most recent Current issue. Fisheries Education Council is having an education workshop first week of April, April 6-8. She will send the agenda. You are invited to participate. The Turtle Game with NOS launch in May.
 - For Teacher at Sea, we supported 11 teachers to represent at NSTA. They have become ambassadors for many of your products.
- PM: NSTA was a success. We got good feedback and interactions with teachers.
- KT: We had a very successful NODE workshop. We had 20 teachers. They all had very positive feedback. They said this was the best way they've seen on how to use live data.
- BH: We have a new Einstein Fellow. The Office of Education got our first selection, Lindsay Knippenberg.
- FN: NSTA was wonderful and had a strong climate focus.
- PKC: The Indonesian mission with Okeanos Explorer is moving along. Obama's schedule has changed. He is going over in June. Thanks to SW for all her work.
- LK: Continued thanks and best wishes to SW.
- SW: Thanks. I will be keeping in contact.