

WICCI Science Council Meeting

Monday, November 7, 2011
DNR Science Operations Center
12:00 PM – 3:00 PM

ATTENDANCE

MEMBERS

- Dick Lathrop (Co-Chair)
- John Magnuson (Co-Chair)
- Tim Asplund
- Sharon Dunwoody
- Erin Crain
- Barry Johnson
- George Kraft
- John Kutzbach
- Jim LaGro
- Pat Levenworth
- David Liebl
- Phil Moy
- Pete Nowak
- Ken Potter
- Paul Strong
- Jack Sullivan
- Bill Walker
- Dan Vimont
- Darrell Zastrow

STAFF AND GUESTS

- Carolyn Betz
- Sally Kefer
- Steve Pomplun
- Drew Watermolen

ABSENT MEMBERS

- Chris Kucharik
- Bud Harris
- Kristen Malecki
- Sandra McLellan
- Jonathan Patz

WELCOME AND INTRODUCTIONS

Meeting called to order by Dick Lathrop at 12:10.

APPROVAL OF SEPTEMBER 12, 2011 MINUTES

Minutes from the September 12th meeting were approved

ANNOUNCEMENTS

Jack Sullivan

- The Department of the Interior has released a draft of the *National Fish, Wildlife, and Plants Climate Adaptation Strategy*, five states collaborated on this, including Wisconsin. Jack is on the National Steering Team. Dick Lathrop and Gregor Schuurman (both DNR) were on working groups. The report focuses on climate change at a much larger scale

than WICCI. The national plan is out for internal review, and will then go out for external review, starting in January. [[Click here](#) ; See page 33 for a case study taken from the WICCI report.] A public meeting is scheduled for Feb. 2nd in Madison. Unfortunately, since the report was prepared so quickly, the Great Lakes are not particularly well-covered.

- There will be a briefing about climate change and adaptation to the DNR's Secretary and staff on November 16th. [Note this meeting was rescheduled until Dec. 5th.] Jack, Dan Vimont, and Ken Potter will be the presenters; they will meet after today's meeting to prepare for the presentation.

Pete Nowak

- Pete and George Kraft are working on an outreach project related to climate change in the central sands areas of Wisconsin. Conflicting uses of water in the area are causing community conflict. Trout streams and lakes are going dry. They hosted the first community meeting on Aug. 26th, bringing together people from both sides of the issues for a discourse. The second meeting is scheduled for December 8th. Pete is interested in inviting some of WICCI's climate specialists to present to the public at this meeting. George will also be on a panel.

John Magnuson

- John, Lewis Gilbert and Dan Vimont participated in a luncheon briefing at the Johnson Foundation at Wingspread in Racine. Roger Dower (President) called the meeting attended by Ralph Pomerance, Peter Annin and others (John has a list of attendees). They were impressed with sea level rise in Florida and wanted to see what was going on in Wisconsin. They are interested in both mitigation and adaptation. The Johnson Foundation already has a policy on aquatic freshwater systems, but now they are gathering information on climate change. They could use some more information, including downscaled climate data for their area. Issues in the Great Lakes region are more complex than just sea level rise. Carolyn Betz will mail copies of the WICCI report to all of the participants.

John Kutzbach

- John reported that as a member of a National Academy of Sciences committee that is reviewing the planned activities of the United States Global Change Program (USGCP), he has been trying to emphasize that coordination and cooperation between the federal government and the states regarding climate adaptation planning should be a two-way street rather than primarily a top-down approach. He has suggested that language to this effect should be part of the official document. In his effort, he cited the WICCI program as an example of innovative work being initiated by states - and that state/regional efforts should be receiving more attention at the federal level.

Dick Lathrop

- Lewis Gilbert has taken a new position with the University of Minnesota's Institute on the Environment. He would like to stay associated with WICCI. Can we make him an affiliate member of WICCI, like Pat L. is? She doesn't have voting rights. This item was discussed later in the agenda.

CONTINUED FUNDING SUPPORT FOR WICCI

Steve Pomplun was not able to join the meeting in time for this discussion. A question was asked: When WICCI members write grants, can they include support for WICCI in their proposals? Can we put together a flier or other tools that show how we can do things for other people? Can we charge the outreach group with the idea of coming up with some of these materials?

During a discussion a few weeks back with Greg Mittman, it was agreed that the current funding model (the one where “it will all just work out”) is not practical. The Science Council should have a serious discussion about continued funding at some point, including asking the question of whether researchers should contribute to WICCI.

What are the financial needs to maintain WICCI? What do we have and what do we need? The Nelson Institute had a Baldwin Grant, which has been used. Jack Sullivan and Science Services at DNR contributed \$10,000 to the Nelson Institute for 3 years of match to the Baldwin grant. Jack’s program should not be the only DNR program that contributes to this program. DNR should be asked to do contribute and told what the needs are.

George Kraft asked how much do we need? Dan explained that the new Climate Science Center that has been awarded to the UW will allow for a grad student or two, but not staff funding for WICCI.

Jim LaGro explained that he is involved in the development of a NSF grant on sustainability. Three to four centers will be funded around the country; he is interested in working with WICCI under this sustainability heading. Steve needs to provide a budget to Jim to allow Jim’s effort to move forward. The sustainability project grant is supposed to be place-based, holistic, across the board, and includes economic, water, and everything else interdisciplinary, including climate change.

Action Item: a budget needs to be prepared and brought before the coordinating committee to articulate the financial status and needs to run the day-to-day operations of WICCI. Jim L’s pre-proposal is due Dec. 1st, full proposal by April, so there is a sense of urgency to this task.

CLIMATE WORKING GROUP – UPDATE PRESENTED BY DAN VIMONT

Dan made a presentation as an update from the Climate Working Group; this presentation is on the WICCI website [[click here](#)]. The projects underway focus on Statistical Downscaling; Dynamical Downscaling; and Climate Analysis.

The downscaling for the Upper Midwest Great Lakes region includes a large geographic region of the country, including the Mississippi River basin, but only east of the Rockies. Dan expects the products for this project to be completed by early spring, 2012. He is still using the 14 models that were used for the earlier products.

Sharon asked about an article in Science Magazine that suggested that downscaling may not really be accurate? [[read it here](#)] Dan wasn't familiar with the article, but he suggested that in the predictions of 2-6° C increase in temperature, the low end (2°C) is better quantified than the high end (6°C); i.e. the probability distribution of climate sensitivity is positively skewed. His suggestion is that the projections that are being developed may be enough to take action. Our downscaling is useful for exploring, and it allows for new research to occur. Are the data sophisticated enough to provide guidance on what to do at the community level? Dan thinks it is a good way to narrow the uncertainty.

The FOCUS on Energy Project's objective is to develop new downscaled variables--wind, humidity, and evapotranspiration. The model is looking good right now. This looks promising right now, and the distribution works well. There are only eight stations because wind isn't tracked through the co-op stations; they just measure precipitation and temperature. They would have to go to airport data to collect wind data. This is just a proof of concept right now.

Other Projects : Dan mentioned the four other projects that are outlined in his presentation.

Dick Lathrop brought up a recent news release that suggested that Great Lakes water levels may not change as much as had been expected. This paper was by Brent Lofgren at GLRL. [The paper was emailed to the Science Council on Monday, Nov. 21st.] It is difficult to send a consistent message to the public when there is conflicting scientific data (lakes going up or down?).

Dick suggested that the trend maps for observed temperature/precipitation be updated so that they go through the present, not just 2006. We would need to use data different from Chris Kucharik's dataset to accomplish this.

Dan Vimont says this can be done. The new maps would look a little smoother than Kucharik's maps. The product will be completed in the next few months. David Liebl asked that these maps be produced using English units as well; Dan has agreed to do that.

George Kraft asked, Can you have trends since the 1950s? Dan said, yes, but these won't look all that different than the maps we have now.

John Magnuson asked if climate scientists are arguing about which models are the best ones. Dan thinks everyone has their preferences; ours is flexible to allow for specific uses. Different data sets are used based on what the needs are. It's hard to please everyone, so we are doing well with what we have. Temperature data are likely to show agreement with data on global warming. Precipitation is still much more variable than temperature, so climate change may fall

within seasonal standard deviations. We are more cautious with the precipitation data. We may not be able to use all of the scenarios used by IPCC.

David Liebl asked about the Berkley which generally confirms the IPCC results. Our downscaling has an automated QC process, for example, a way to identify that different people collect data at different times of the day. A computer can determine what time the data were collected. [Two papers on this subject were sent to the Science Council on Nov. 21st.]

Bill Walker suggested that since there are more and more models being used, we will need to be careful to articulate which one(s) we are using.

John Kutzbach commented on how very impressive Dan's work is and emphasized its excellent quality. He asked if, on a larger scale – eastern north America – has Dan given thought about what other people are doing? Is there a reason to approach this with other people so everyone can learn from each other? Dan answered that yes, we have talked to other people who are doing other downscaling projects.

NORTHERN FORESTED LANDSCAPE PROPOSED WORKING GROUP – UPDATE BY PAUL STRONG

Paul joined us by LiveMeeting and could see us sitting in the conference room while he was in Rhinelander. He gave feedback after the meeting that this worked well and he appreciated not having to add the drive time to attend. He asked if there had been any word from the Sigurd Olson Institute but Steve P. was not in the room at the time of the question.

The Town of Melon is the location of a climate change adaptation process on a property owned by The Nature Conservancy (TNC). Here is the link to their website: <http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/wisconsin/placesweprotect/caroline-lake-preserve.xml>. Paul is interested in working with these folks since the process has already been initiated.

The Northern Great Lakes Visitor Center has unveiled a climate change exhibit. We are not clear if Lewis talked with them about shared values and creating workshops. Lewis met with Cathy Techmann who is with UW-Extension.

Dick Lathrop suggested that a smaller group of people should get together to help Paul get the working group going. He thinks there is a lot of potential for this group. Paul wants to stay in touch with the group focusing around Melon, WI and work through a process of using science support tools. This could be key for being on the leading edge. Paul needs to find out more about what drives a community to allow them to move forward on climate change adaptation strategies.

John Magnuson: TNC has holdings all across all of northern Wisconsin. There is a lot of variation across the state, so how can this variability can be captured? Maria Janowiak (Northern Institute of Applied Climate Science, Houghton, Michigan) gave a presentation last week but Paul didn't get a sense from the county foresters that there is a sense of urgency to

take action around climate change. Maybe it is better to start with the TNC property around Melon. It is about 1000+ acres; a discreet parcel of land. Who participates, what they do etc. remains to be seen.

Dan Vimont said that he would like to develop a stronger communications link between the outreach and science parts of WICCI, including a scenario-building process. What are the stakeholder needs? Chris Swantson (U.S. Forest Service, Houghton, MI) is interested in looking at things at a broader scale. What are the effects of the decisions at a landscape level?

Dan Vimont will be in touch with Paul on this idea of looking at things at the landscape level. Networks that have been put together are to our advantage. Paul is receptive to that idea of getting communities together. People are having problems getting their heads around the idea that things will be different 60 years from now from a forestry point of view. People need to have a better understanding of changes, for example, in paper birch and sugar maples that will affect their ability to make paper. We need to create a better understanding on how to make choices with an uncertain future. Let's put a lot of effort into scenario building to do things differently.

Darrel Zastrow thought it is a good idea to build on momentum, particularly with landowners and the county foresters. The Advisory Committee is a good group to bring into the conversation because of the forestry interest within that group. We need to bridge economic interests. Darrel will provide assistance where he can, like through the shared landscape initiative. We need to learn to have a dialogue about climate change on the ground, using things that people can relate to in order to have successful engagement.

John Magnuson asked if there are there some lakes or streams within the TNC property? In the Vilas County area, high in the landscape lakes are vulnerable with lake level falling. John says there is a lot to be said for local energy. John thinks the Mellon case study may not cover the range of impacts that fall within this geographic region. There are a variety of problems in this area.

Action Item: A smaller group of people will organize to help Paul Strong. Dick Lathrop, John Magnuson, Darrell Zastrow have expressed an interest. Paul should contact them and others before the next Science Council Meeting.

UPPER MISSISSIPPI RIVER PROPOSED WORKING GROUP – UPDATE BY BARRY JOHNSON

Twenty people were on a conference call about this proposed working group, although no one from the DNR was available. Barry passed out a handout that lists all those who attended the conference call and notes from the meeting [[Click here](#)]. His group will need downscaled modeling relative to the river basin including discharge and temperature changes. His handout describes three different scenarios, including asking how changes in the basin would affect the river.

John Magnuson asked how snowfall can change the river? Barry said that is a good example of what could be done with modeling. He also asked about changes in land use vs. climate change. Land use changes are more immediate than climate change.

Conclusions are that there is an interest group, but not a working group. We need to find a focus of the group. What questions are we trying to answer? We need a strong leading organization to back this working group to provide the continuity that this group needs. University of Minnesota is really interested in getting involved.

Barry says there isn't much of a link to WICCI yet because of the large scale of this project, but this group is interested in moving forward with or without WICCI. Barry suggests we need people backed by institutions that are able to bring the money and commitment forward.

Dick Lathrop asked about the Army Corps of Engineers. They could be a key player on this project. Barry says that the Corps doesn't do anything that the Congress doesn't tell them to do. They are not being directed to work on climate change. They are not a science organization. They are more concerned with navigation and other missions assigned by Congress.

David Liebl says studies are not showing flows are changing enough. [Johnson followed up on this and incorporated information from recent studies in the work group notes meeting [Click here](#)] This group may be beyond the scope of WICCI because it is so geographically broad. Sharon Dunwoody says the McKnight Foundation is interested in coalition-building on the Mississippi River and was wondering if they could they help move this forward.

Jack Sullivan asked if they could we work with the LCCs? Tim Asplund asked if it would be helpful for DNR people to participate? There is a DNR vacancy in LaCrosse, and when that position is filled, that person might become more involved. The regional director may also become more involved. Tim could encourage these relationships. Lewis Gilbert is interested in building relationships with Minnesota. When he gets more established, we could take advantage of Minnesota's interests.

John Magnuson said that at this scale, WICCI's mission needs to be flexible. Pat Leavenworth suggested Barry be in touch with the driftless area subworking group. NRCS wasn't in on this call, but they should become more involve, also suggested by Pete Nowak. Barry was not able to get all interested parties in on the call, but he knows that there are lots of other active groups out there.

What should be done to move this forward? Barry would like more downscaled information. Dan Vimont said he could get this done by next spring. The co-chairs indicated that they will pursue discussions with groups in Minnesota (Institute on the Environment, Lewis Gilbert; Water Resources Center, Deb Swackhamer) regarding their interest in participating in this effort.

PROPOSED ECONOMIC WORKING GROUP – UPDATE BY BILL WALKER

Bill has a detailed draft charter for the proposed Economic Working Group. He has incorporated comments from several people. Dick asked if he is still interested in pursuing places or topics related to economic impacts and thinks the northern forested landscape would be a good topic for this group. Bill agreed that he is looking for a specific topic to really move this group forward.

Pete Nowak asked if economics could be one way of presenting risks associated with climate change. It can really help bring the message of risk and uncertainty into a place that people can really understand. Bill thinks this is true. There is a toolkit that can be used. The group wants to present more than just a white paper; he wants something real by taking some tools and applying them to a place.

Paul Strong suggested that there is a group of scientists in St. Paul that might be interested, and he will send these names to Bill Walker to pull them in. Darrell Zastrow said that the Northern Highlands would be a good place to pursue economic interests. George Kraft suggests that a group be convened to focus on the northern highlands and economic impacts. Dick Lathrop suggested 4 years ago that a place-based group be formed in northern Wisconsin. The time may be right now to move this forward, and he is willing to help.

Action Item: As Bill Walker transitions to his new job as economist at the DNR, he should network with interested groups to bring a specific area of focus to the proposed economic working group, particularly forestry impacts.

PROPOSED COMMUNITY ADAPTATION WORKING GROUP – UPDATE BY SALLY KEFER

At the September Science Council meeting, Sally made a presentation about this proposed new working group. Sally has since hosted a meeting. She passed out a handout with the draft charter [[click here](#)]. Workshops were held this past spring around the state. Community leaders who did attend indicated they were ready to get on board with climate change. They want information and guidance, and we are positioned to give it to them. We need to help communities realize what their greatest vulnerabilities are and where they lie and what they can do about them. They need to know where in the decision-making processes they can make changes. This group recognizes that we need to know what communities are currently doing relative to adaptation to climate and what their current plans say.

The mission of the working group is listed in the handout, as are the goals, objectives and deliverables. The deliverables reflect knowledge and willingness to make changes. Sally sees writing up white papers to report back to WICCI and to communities where opportunities exist.

Initially, Sally had 13 major work products, but realized that was too many, so this draft charter is a more narrowly defined list of expectations. She is interested in feedback from the group.

Pete Nowak: There is debate in communities on whether climate change is occurring. How much is normal variation? Climate change is not recognized as a major player. When there is an anomaly, communities tend to respond. It is difficult to convince people that climate change is real. We need to pick communities where there have been documented impacts. Sally thinks this is a good idea because it is better to deal with people who are already involved. LaCrosse, River Falls and Eau Claire may be good places to start, as well as South Central Wisconsin. It may be more productive to start with those who are already showing an interest.

Jack Sullivan said he would like to do a survey to find out where our communities are in terms of the debate. What are they thinking already? Perhaps we should hold this effort until January, based on what happens with the Governor's recall.

Sharon Dunwoody talked about how difficult it is to communicate risk to the public, rather than to individuals. It is important to bring experts in social science into this working group who may know how to jumpstart these kinds of community efforts. She finds this charter fascinating and says change needs to happen at the aggregate.

Dan Vimont said that dealing with groups that are already engaged are different from engaging a group who is not engaged. It is difficult to create a metric to measure Communications, outreach and engagement.

Jim LaGro talked about the World Bank's analysis on cognitive responses to climate change, and helplessness. The human dimensions are difficult. There are overlaps between outreach and economic groups within WICCI. Jim would like to be involved in things like quantifying climate change impacts. He likes to focus on the early adopters, rather than on those who show no interest. Maybe it would be better to focus on one or two pilot communities.

David Liebl has worked on these topics and has a good feel for community outreach, particularly with stormwater groups. There are lots of things that have already happened. But, the community aggregate is also an interesting approach. There is some overlap between the Outreach Group and this new working group. Bringing Extension in will also help move some things forward.

John Magnuson said that this proposal would be working with specific communities whereas the outreach group is broader. This is a different level of intensity. Case histories will be the opportunity to learn. This will be most effective if a few communities are engaged.

Dick Lathrop asked if we might want to wait until January before adopting this charter.

Phil Moy asked how this charter interacts with the Coastal Communities working group and also with the Outreach group? Is the Community Adaptation group more of an inland group? Should they be combined with the Coastal Communities Group? Where does adaptation fail across the state? This is more at the planning phase, rather than action phase.

John Magnuson reminded the group that DNR has a leader through Sally and UW does, too, through Jim LaGrow.

Sally said that Shelly Shaw from Department of Health Services is also willing to lead. Jack Sullivan mentioned the legislative review of Pittman-Robertson funding, which includes climate change. Thus far, there is a green light on DNR's involvement on climate change adaptation.

Action Item: Sally is comfortable with waiting until January before the Science Council will adopt the Charter for the Community Adaptation Working Group.

COMMUNICATIONS AND OUTREACH GROUP UPDATE – STEVE POMPLUN AND DAVID LIEBL

Steve Pomplun said that the Provost's office is interested in the WICCI report, as is Sean Carrol's office (Department of Genetics). He also mentioned that the WICCI report is used as an example in a report called, [Higher Education's Role in Adapting to a Changing Climate](#).

David had sent out a summary of all Outreach presentations.

SCIENCE COUNCIL CO-CHAIR NOMINATIONS –SESSION CLOSED/SESSION THEN REOPENED

The group thanked John Magnuson for his years of service as co-chair of the Science Council. Dan Vimont is now the second co-chair of the WICCI Science Council. Dick Lathrop is serving the second year of his second two-year term as Science Council co-chair. He will serve this role as long as he has a LTE position with the DNR, until his term is up.

Action Item: The Coordinating Council will take up the question of what it means to be an Affiliate Member of the WICCI Science Council, like Pat Leavenworth is. Lewis Gilbert would like to have that title.

There was a discussion about whether the Science Council should meet only every other month, but for four, rather than three hours. Most agreed that every two months is adequate but four hours may be too long. A poll that was circulated revealed that Mondays from 12-3 p.m. were still the best times for all but two people, and that lunch will continue to be served.

A question was raised as to the strategic direction of the Science Council. Are we aiming for another report? It was decided that this is an important discussion for the next Science Council meeting. Sharon Dunwoody said we should spend time planning how to have this discussion. We need to bring in some starter thoughts to help shape the discussion.

It was also suggested for the next meeting to bring in the working groups to help them provide direction. We might also want to bring in a facilitator. Tim Asplund also suggested that we should better articulate other things like how to influence belief about climate change.

Jack Sullivan suggested that we should focus some discussion on funding support. We need to get some assignments made to assure that we continue to get funding for WICCI.

MEETING ADJOURNED

The meeting was adjourned at 3:30 p.m. The next meeting will be Monday, January 9th, 2012.

Science Council Meeting Agenda

Monday, November 7, 2011
DNR Science Operations Center
12:00 PM – 3:00 PM

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| 12:00 | 1 – Welcome and introductions |
| 12:05 | 2 – Approval of September 12 th meeting minutes |
| 12:10 | 3 – Announcements |
| 12:20 | 4 – Continued funding support for WICCI (Steve Pomplun) |
| 12:30 | 5 – Climate Working Group update and potential new analyses (Dan Vimont) |
| 12:50 | 6 – Discussion of proposed Northern Forested Landscape working group (Paul Strong) |
| 1:10 | 7 – Discussion of proposed Upper Mississippi River Basin working group (Barry Johnson) |
| 1:30 | 8 – Discussion of proposed Economics working group (Bill Walker) |
| 1:50 | 9 – Break |
| 2:00 | 10 – Discussion of proposed Community Adaptation working group (Sally Kefer) |
| 2:20 | 11 – Communications and Outreach Group update (Steve Pomplun/David Liebl) |
| 2:35 | 12 – Science Council Co-Chair nominations for UW-Madison and DNR representatives (closed session) |
| 2:50 | 13 – Science Council meeting schedule and agenda items |
| 3:00 | 14 – Adjourn |